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## INTRODUCTION

### Course Objectives

1. Environment and risks
2. Relationships between risk components
3. Decision makers and risk management
4. Systems engineering and risk management
5. Risks in simple, dynamic and systemic contexts
6. Insurance and legal implications for risk management
7. Defining context including organizational and behavioral considerations
8. Relationship between environment and risk identification and treatment
9. Generic and specific causes of risk
10. Qualitative and quantitative risk management techniques
11. Causation and mitigation techniques

Risk management is a key process often aligned with either project management or systems engineering. On the surface it appears to be a relatively simple process, but achieving effective risk management is often illusive. This course offers a comprehensive look at the risk management process, including tips to succeed and traps to avoid based upon a number of lessons learned from actual projects.

Throughout the course, we explore how state of the art concepts can be applied to project risk management across a variety of industries to make it effective.

The course provides practical, ready-to-use approaches using examples from actual programs, for risk planning, identifying and analyzing project risks, developing and implementing risk handling strategies, and monitoring progress in reducing risks to anticipated levels.

You'll gain a solid foundation in the basic elements, strategies, and implications of derivatives, their products and terminology, as well as a better understanding of the effects of financial risk management on a firm's investment and financing decisions and on its overall profitability.

### Learning Objectives

#### Concept of Risk

Understand the concept of risk management and how to use a variety of derivative financial strategies to manage risk. Learn how hedging can positively affect an organization's risk exposure.

#### Risk Goals

1. Formulate and implement risk management strategies that are consistent with corporate goals.
2. Exploit hedging as a positive risk management tactic
3. Reduce the likelihood of financial distress
4. Use your organization's special skills and knowledge to optimize risk exposure

### Course Contents

1. What is credit
2. Credit Score
3. Credit History
4. Credit Rating
5. Principles for the Management of Credit Risk
6. Individual Credit Lending
7. The role of professional Financial Advisor
8. The Role of the Financial Advisor, To Sell or Advice?
9. Role of Personal Financial advisor in the life of a common person.

### Credit Risk & Credit Approval Process

1. Credit Approval Process
2. Process Steps Leading up to the Credit Review

3. Preparation of Offers, Credit Decision, and Documentation
4. Continuous Monitoring of Credit Exposures,
5. Intensive Servicing and Handling of Troubled Loans
6. Credit Risk Management
7. Combination of Risk Management and Value Management
8. Risk-bearing Capacity
9. Risk Strategy
10. Capital Allocation
11. Limits
12. Risk Controlling
13. Risk Management Systems

### **Organizational Structure & Risk Management**

1. Management
2. Processing
3. Risk Management
4. Internal Auditing
5. Significance and Tasks of Internal Auditing
6. Internal Auditing and Basel II

### **The Standardized Approach to Credit Risk**

1. THE RISK WEIGHTS IN THE STANDARDISED APPROACH INDIVIDUAL CLAIMS.
2. EXTERNAL CREDIT ASSESSMENTS
3. IMPLEMENTATION CONSIDERATIONS
4. CREDIT RISK MITIGATION IN THE STANDARDISED APPROACH
5. COLLATERAL
6. NETTING
7. GUARANTEES AND CREDIT DERIVATIVES
8. MATURITY MISMATCHES
9. CURRENCY MISMATCHES
10. DISCLOSURE REQUIREMENTS

### **Basic Concepts of Risk Management and Insurance**

1. Risk in Our Society
2. Insurance and Risk
3. Introduction to Risk Management
4. Types of Insurers and Marketing Systems
5. Insurance Company Operations

### **Basel II Accord & Risk Management**

1. Basel II Accord & Risk Management
2. Credit Risk — The Standardized Approach
3. External credit assessments
4. The standardized approach — credit risk mitigation
5. Rules for Retail Exposures
6. Rules for Equity Exposures
7. Rules for Purchased Receivables
8. Recognition of credit risk mitigates
9. Treatment of Expected Losses and Recognition of Provisions
10. Minimum Requirements for IRB Approach
11. Credit Risk — Securitization Framework
12. Operational requirements for use of external credit assessments
13. Standardized approach for securitization exposures
14. Internal ratings-based approach for securitization exposures

**LECTURE – 02****UNDERSTANDING THE WORD “CREDIT”**

- As a financial term, used in such terms as credit card, it refers to the granting of a loan and the creation of debt. Any movement of financial capital is normally quite dependent on credit, which in turn is dependent on the reputation or creditworthiness of the entity which takes responsibility for the funds. A similar usage is in commercial trade, where credit is used to refer to the approval for delayed payments for goods purchased. Credit is denominated by a unit of account. Unlike money (strict definition) credit can not itself act as a unit of account.
- A privilege granted for the purpose of extending time to make payment on a debt
- Borrowed money or other finance (e.g. Hire purchase) to be paid back under an arrangement with a lender.

The money a lender extends to a buyer for a commitment to repay the loan within a certain time frame. You are granted credit when an organization or individual makes a sum available for you to borrow. There are two main types of credit.

1. Home loans, or mortgages, and personal or shop loans are linked to a specific item or items – for example, a new kitchen, or a house
2. Revolving credit on payment cards can give you access to a fixed amount of money that you can spend as you wish, in a wide range of retailers and other outlets

**Repayment**

Loans are normally repaid in regular installments over an agreed period of time. Mortgages, or home loans, can be repaid in variable installments but most personal loans specify fixed repayments of approximately equal amounts.

If you want to make another major purchase when you have finished paying off one loan, you need to negotiate a new loan. Revolving credit means that you always have access to the amount of your line of credit that remains unspent. And every time you pay off some of the outstanding amount, that proportion of your credit limit becomes available for you to spend again.

So if you have a credit limit of Rs 1,000, spend Rs 300 and repay Rs 100, you have Rs 800 available to spend. Whatever type of loan you choose, be certain to make your repayments on time, or you can face financial penalties

**Interest**

In order to cover the lending risk and to make a profit on their money, lenders generally charge interest on loans and revolving credit. You must remember this when you are calculating your repayments.

For example, if you borrow Rs 100 and interest is payable at an annual rate of ten per cent, the total cost is Rs 110. This is known as simple interest. It is rarely charged on borrowings. Compound interest is more common. It means that interest is charged on the interest at regular intervals.

For example – if you owe Rs 100 and are charged ten per cent compound interest each year, at the end of year one you will owe Rs 110. In year two, the lender will charge ten per cent of this sum and add it to the outstanding amount, so you will owe Rs 121, and so on.

Interest may be compounded after any period – a day, a week, a month and so on. With fixed repayment loans, the amount of interest is worked out in advance and added into the repayments. There is often a penalty if you want to repay the outstanding amount earlier than agreed.

With revolving credit, you can repay as much or as little as you want, at any point. You can often avoid paying any interest at all if you repay the total amount you have borrowed on the date when the first repayment is due.

**Credit Score**

- A **credit score** is a numerical expression based on a statistical analysis of a person's credit files, to represent the creditworthiness of that person, which is the perceived likelihood that the person will pay debts in a timely manner. A credit score is primarily based on credit report information typically sourced from credit bureaus / credit reference agencies

- Lenders, such as banks and credit card companies, use credit scores to evaluate the potential risk posed by lending money to consumers and to mitigate losses due to bad debt. Lenders use credit scores to determine who qualifies for a loan, at what interest rate, and what credit limits.
- The use of credit or identity scoring prior to authorizing access or granting credit is an implementation of a trusted system. Credit scoring is not limited to banks. Other organizations, such as mobile phone companies, insurance companies, employers, and government departments employ the same techniques.
- Credit scoring also has a lot of overlap with data mining, which uses many similar techniques.

### Identity Score

An **identity score** is a system for tagging and verifying the legitimacy of an individual's public identity. Identity scores are increasingly being adopted as a means to prevent fraud in business and as a tool to verify and correct public records.

Identity scores incorporate a broad set of consumer data that gauges a person's legitimacy. Identity score components can include (but are not limited to) personal Identifiers , public records, Internet data, government records, corporate data, predicted behavior patterns based on empiric data, self-assessed behavior patterns, and credit records.

### Credit Bureau or Credit Reference Agency

A **credit bureau** (U.S.) or **credit reference agency** (UK) is a company that provides consumer credit information on individual borrowers. This helps lenders assess credit worthiness, the ability to pay back a loan, and can affect the interest rate applied to loans. Interest rates are not the same for everyone, but instead are based on risk-based pricing, a form of price discrimination based on the different expected costs of different borrowers, as set out in their credit rating.

Credit bureaus collect and collate personal financial data on individuals and businesses from data furnishers with which the bureaus have a relationship. Data furnishers are businesses, utilities, debt collection agencies, public institutions, and the courts (i.e. public records) that a consumer or business has had a relationship or experience with. Data furnishers report the experience with the consumer or business to the credit bureaus. The data provided by the data furnishers as well as collected by the bureaus are then aggregated into the credit bureaus data repository or files.

The resulting information is made available on request to contributing companies for the purposes of credit assessment and credit scoring. Given the large number of consumer borrowers, these credit scores tend to be mechanistic.

In other words, the different credit bureaus collect data from a variety of sources and then apply a mathematical algorithm to assess the likelihood that an individual will repay a given debt given the frequency that other individuals in similar situations have defaulted.

Most consumer welfare advocates advise individuals to review their credit reports at least once per year, in order to ensure that the reports are accurate.

Commercial credit reports and scoring, which report the statistic likelihood of a business paying creditors, also exist, such as the Paydex score from Dun and Bradstreet and the Experian Intelliscore.

## CREDIT HISTORY

**Credit history** or **credit report** is, in many countries, a record of an individual's or company's past borrowing and repaying, including information about late payments and bankruptcy. The term "**credit reputation**" can either be used synonymous to *credit history* or to *credit score*.

When a customer fills out an application for credit from a bank, store or credit card company, their information is forwarded to a credit bureau, along with constant updates on the status of their credit accounts, address or any other changes made since the last time they applied for any credit.

This information is used by lenders such as credit card companies to determine an individual's or entity's credit worthiness; that is, determining an individual's or entity's means and willingness to repay an indebtedness. This helps determine whether to extend credit, and on what terms.

With the adoption of risk-based pricing on almost all lending in the financial services industry, this report has become even more important since it is usually the sole element used to choose the annual percentage rate

### How credit rating is determined

Credit ratings are determined differently in each country, but the factors are similar, and may include:

Payment record - a record of bills being overdue will lower the credit rating.

Control of debt - Lenders want to see that borrowers are not living beyond their means. Experts estimate that non-mortgage credit payments each month should not exceed more than 15 percent of the borrower's after tax income.

Signs of responsibility and stability - Lenders perceive things such as longevity in the borrower's home and job (at least two years) as signs of stability. Having a respected profession can improve a credit rating.

Credit inquiries – An inquiry is a notation on a credit history file. There are several kinds of notations that may or may not have an adverse effect on the credit score. Soft pulls don't affect the credit score and are characteristic of the following examples:

A credit bureau may sell a person's contact information to an advertiser purchasing a list of people with similar characteristics, like homeowners with excellent credit. A creditor can check a person's credit periodically. Or, a credit counseling agency, with the client's permission, can obtain a client's credit report with no adverse action. Each of the preceding examples is commonly referred to as a "soft" credit pull.

However "hard" credit inquiries are made by lenders. Lenders, when granted a permissible purpose by a borrower for the purposes of extending his credit, can check his credit history. Hard inquiries from lenders directly affect the borrower's credit score.

Keeping credit inquiries to a minimum can help a person's credit rating. A lender may perceive many inquiries on a person's report as a signal that the person is looking for loans and will possibly consider that person a poor credit risk.

### Understanding credit reports and scores

The information in a credit report is sold by credit agencies to organizations that are considering whether to offer credit to individuals or companies. It is also available to other entities with a "permissible purpose." The consequence of a negative credit rating is typically a reduction in the likelihood that a lender will approve an application for credit under favorable terms, if at all. Interest rates on loans are significantly affected by credit history—the higher the credit rating, the lower the interest while the lower the credit rating, the higher the interest. The increased interest is used to offset the higher rate of default within the low credit rating group of individuals.

### International issues

Credit history is typically local to one country. Even within the same credit card network information is not shared for different countries. For example, a person who has been using Visa credit cards issued by banks in China or Canada for many years who moves to the United States and immediately applies for a Visa will not be approved because of lack of credit history.

An immigrant must establish a credit history from scratch in the new country, which can take years. New immigrants are forced to seek loans from irregular channels, which can create social problems.

**Adverse credit history** also called **sub-prime credit history**, **non-status credit history**, **impaired credit history**, **poor credit history**, and **bad credit history**, is a negative credit rating. A negative credit rating is often considered undesirable to lenders and other extenders of credit for the purposes of loaning money or capital.

### **Adverse Credit**

A consumer or business' **credit history** is regularly tracked by credit rating agencies. The data reported by these agencies is primarily provided to them by creditors and includes detailed records of the relationship a person or business has with the lender.

Detailed account information, including payment history, credit limits, high and low balances, and any aggressive actions taken to recover overdue debts, are all reported regularly (usually monthly). This information can be quite detailed and arduous to navigate by a potential lender dealing with a new applicant. To address this issue, credit scoring was invented.

Credit scores allege to assess the likelihood that a borrower will repay a loan or other credit obligation. The higher the score, the better the credit history and the higher the probability that the loan will be repaid on time; this theory purports.

When creditors report an excessive number of late payments, or trouble with collecting payments, a "hit" on the score is suffered. Similarly, when adverse judgments and collection agency activity are reported, even bigger "hits" on this score are suffered. Repeated hits can lower the score and trigger what is called a negative credit rating or adverse credit history.

## CREDIT RATING

A **credit rating** assesses the credit worthiness of an individual, corporation, or even a country. Credit ratings are calculated from financial history and current assets and liabilities. Typically, a credit rating tells a lender or investor the probability of the subject being able to pay back a loan.

However, in recent years, credit ratings have also been used to adjust insurance premiums, determine employment eligibility, and establish the amount of a utility or leasing deposit.

A poor credit rating indicates a high risk of defaulting on a loan, and thus leads to high interest rates or the refusal of a loan by the creditor.

### Personal credit ratings

In countries such as the United States, an individual's credit history is compiled and maintained by companies called credit bureaus. In the United States, credit worthiness is usually determined through a statistical analysis of the available credit data.

A common form of this analysis is a 3-digit credit score provided by independent financial service companies such as the FICO credit score. (The term, a registered trademark, comes from Fair Isaac Corporation, which pioneered the credit rating concept in the late 1950s.)

An individual's credit score, along with his or her credit report, affects his or her ability to borrow money through financial institutions such as banks.

The factors which may influence a person's credit rating are

1. ability to pay a loan
2. interest
3. amount of credit used
4. saving patterns
5. spending patterns
6. debt

### Corporate credit ratings

The credit rating of a corporation is a financial indicator to potential investors of debt securities such as bonds. These are assigned by credit rating agencies such as Standard & Poor's or Fitch Ratings and have letter designations such as AAA, B, and CC.

### Sovereign credit ratings

A **sovereign credit rating** is the credit rating of a sovereign entity, i.e. a country. The sovereign credit rating indicates the risk level of the investing environment of a country and is used by investors looking to invest abroad. It takes political risk into account.

### Short term rating

A short term rating is a probability factor of an individual going into default within a year. This is in contrast to long-term rating which is evaluated over a long timeframe.

### Credit rating agencies

- Credit scores for individuals are assigned by credit bureaus (US; UK: credit reference agencies). Credit ratings for corporations and sovereign debt are assigned by credit rating agencies.
- In the United States, the main credit bureaus are Experian, Equifax, and TransUnion. A relatively new credit bureau in the US is Innovis.
- In the United Kingdom, the main credit reference agencies for individuals are Experian, Equifax, and Callcredit.
- In Canada, the main credit bureaus for individuals are Equifax, TransUnion and Northern Credit Bureaus/ Experian.

### **Credit Information Bureau & State Bank of Pakistan**

- The bureau is a repository of credit information of borrowers. The member lending institutions provide credit data (personal and loan information) of their borrowers to the bureau which consolidates, updates, and stores the same and provides this information to its members FIs in the form of credit worthiness reports (CWR).
- The Credit Information Bureau also aid financial institutions to make well informed credit decisions in timely manners minimizing the credit risk.
- The Credit Information Bureau (CIB) is a public sector credit bureau of Pakistan. It was established in 1992 by the State Bank of Pakistan (SBP) under Section 25(A) of Banking Companies Ordinance-1962.
- The CIB is a part of Banking Surveillance Department of the State Bank of Pakistan. All fund and non-fund base credit facilities irrespective of any outstanding amount are being reported to the CIB. Reporting to the CIB is mandatory for all member financial institutions (FIs).
- There are three privately owned credit bureaus in Pakistan: Data check, News-VIS Credit Information Systems and ICIL/ Pak Biz Info.
- The CIB gets information on borrowers from all the member financial institutions.
- All Banks, Development Financial Institutions (DFIs), Non- Bank Financial Institutions (NBFIs), Modarabas and Micro Finance Banks operating in Pakistan are members of the CIB. Only the financial institutions operating in Pakistan are entitled to become member of the CIB. The membership with CIB, as per instructions of SBP and SECP, is mandatory for all Banks/DFIs and NBFIs respectively. No financial institution can access the CIB database without having its membership.

### **What is Credit Worthiness Report (CWR)?**

A credit worthiness report (CWR) is a factual statement of the borrowers' credit position, on a certain date, compiled on the basis of information received from the member financial institutions. The CWR contains certain financial and non-financial information on borrowers. The CWR only shows the total liabilities (both fund & non-fund based) but does not reflect the names of lending financial institutions.

### **What is not included in CWR?**

A CWR does not include race, income, religion, political affiliation, ethnic background, medical history, private affairs details, bank deposit accounts details or other information not related to credit.

### **What is the definition of “consumer” and “corporate” for CIB reporting purposes?**

For CIB reporting purposes, credit data of individuals and sole-proprietorships is reported under consumer category whereas credit data of all other business concerns like partnerships, private limited companies, public limited companies and corporations etc. is reported under corporate category.

### **Can a borrower prevent the CIB from having his/her information?**

No. The CIB is legally empowered to collect credit information. The member financial institutions are bound to share their credit information with the CIB.

### **Is any financial institution allowed to access a credit worthiness report (CWR) of a person who is not its customer?**

Yes. The financial institutions are allowed to access the credit worthiness report (CWR) of any person in the CIB database even if he or she is not its customer. This arrangement is necessary in order to enable the financial institutions to have the CWR of their prospective customer.

### **Why has the CIB placed my name as defaulter?**

The CIB does not name any borrower as a defaulter at its own. The concerned FIs have reported your name as a defaulter to the CIB. If you want to make correction in the CIB record, please contact the reporting institution.

**How the negative credit worthiness report (CWR) can be improved?**

The negative CIB report may be due to some outstanding liabilities of financial institutions that were either not paid or paid after due date. You should discuss the matter with your lending financial institutions and work out a repayment/settlement plan with them. Once your loan account is regular, your credit worthiness report (CWR) will reflect the improved position.

**How groups are formed and group liabilities determined?**

The responsibility of formation of group and consequent group liabilities rests with the reporting financial institutions in line with the definition of group and the criteria laid down vide Prudential Regulation for Corporate Commercial Banking.

## PRINCIPLES FOR THE MANAGEMENT OF CREDIT RISK

While financial institutions have faced difficulties over the years for a multitude of reasons, the major cause of serious banking problems continues to be directly related to lax credit standards for borrowers and counterparties, poor portfolio risk management, or a lack of attention to changes in economic or other circumstances that can lead to a deterioration in the credit standing of a bank's counterparties.

Credit risk is most simply defined as the potential that a bank borrower or counterparty will fail to meet its obligations in accordance with agreed terms. The goal of credit risk management is to maximize a bank's risk-adjusted rate of return by maintaining credit risk exposure within acceptable parameters.

Banks need to manage the credit risk inherent in the entire portfolio as well as the risk in individual credits or transactions. Banks should also consider the relationships between credit risk and other risks. The effective management of credit risk is a critical component of a comprehensive approach to risk management and essential to the long-term success of any banking organization.

For most banks, loans are the largest and most obvious source of credit risk; however, other sources of credit risk exist throughout the activities of a bank, including in the banking book and in the trading book, and both on and off the balance sheet.

Banks are increasingly facing credit risk (or counterparty risk) in various financial instruments other than loans, including acceptances, inter-bank transactions, trade financing, foreign exchange transactions, financial futures, swaps, bonds, equities, options, and in the extension of commitments and guarantees, and the settlement of transactions.

Since exposure to credit risk continues to be the leading source of problems in banks world-wide, banks and their supervisors should be able to draw useful lessons from past experiences.

Banks should now have a keen awareness of the need to identify, measure, monitor and control credit risk as well as to determine that they hold adequate capital against these risks and that they are adequately compensated for risks incurred. The Basel Committee is issuing this document in order to encourage banking supervisors globally to promote sound practices for managing credit risk.

Although the principles contained in this paper are most clearly applicable to the business of lending, they should be applied to all activities where credit risk is present.

The sound practices set out in this document specifically address the following areas:

- (i) Establishing an appropriate credit risk environment;
- (ii) Operating under a sound credit-granting process;
- (iii) Maintaining an appropriate credit administration, measurement and monitoring process;

These practices should also be applied in conjunction with sound practices related to the assessment of asset quality, the adequacy of provisions and reserves, and the disclosure of credit risk, all of which have been addressed in other recent Basel Committee documents.

While the exact approach chosen by individual supervisors will depend on a host of factors, including their on-site and off-site supervisory techniques and the degree to which external auditors are also used in the supervisory function, **all members of the Basel Committee agree that the principles set out in this paper should be used in evaluating a bank's credit risk management system.**

Supervisory expectations for the credit risk management approach used by individual banks should be commensurate with the scope and sophistication of the bank's activities. For smaller or less sophisticated banks, supervisors need to determine that the credit risk management approach used is sufficient for their activities and that they have instilled sufficient risk-return discipline in their credit risk management processes.

The Committee stipulates in Sections II through VI of the paper, principles for banking supervisory authorities to apply in assessing bank's credit risk management systems. In addition, the appendix provides an overview of credit problems commonly seen by supervisors.

A further particular instance of credit risk relates to the process of settling financial transactions. If one side of a transaction is settled but the other fails, a loss may be incurred that is equal to the principal amount of the transaction.

Even if one party is simply late in settling, then the other party may incur a loss relating to missed investment opportunities. Settlement risk (i.e. the risk that the completion or settlement of a financial transaction will fail to take place as expected) thus includes elements of liquidity, market, operational and reputational risk as well as credit risk.

The level of risk is determined by the particular arrangements for settlement. Factors in such arrangements that have a bearing on credit risk include: the timing of the exchange of value; payment/settlement finality; and the role of intermediaries and clearing houses.

### **Principles for the Assessment of Banks Management of Credit Risk**

- **Principle 1:** The board of directors should have responsibility for approving and periodically reviewing the credit risk strategy and significant credit risk policies of the bank. The strategy should reflect the bank's tolerance for risk and the level of profitability the bank expects to achieve for incurring various credit risks.
- **Principle 2:** Senior management should have responsibility for implementing the credit risk strategy approved by the board of directors and for developing policies and procedures for identifying, measuring, monitoring and controlling credit risk. Such policies and procedures should address credit risk in all of the bank's activities and at both the individual credit and portfolio levels.
- **Principle 3:** Banks should identify and manage credit risk inherent in all products and activities. Banks should ensure that the risks of products and activities new to them are subject to adequate procedures and controls before being introduced or undertaken, and approved in advance by the board of directors or its appropriate committee.

### **Operating under a sound credit granting process**

- **Principle 4:** Banks must operate under sound, well-defined credit-granting criteria. These criteria should include a thorough understanding of the borrower or counterparty, as well as the purpose and structure of the credit, and its source of repayment.
- **Principle 5:** Banks should establish overall credit limits at the level of individual borrowers and counterparties, and groups of connected counterparties that aggregate in comparable and meaningful manner different types of exposures, both in the banking and trading book and on and off the balance sheet.
- **Principle 6:** Banks should have a clearly-established process in place for approving new credits as well as the extension of existing credits.
- **Principle 7:** All extensions of credit must be made on an arm's-length basis. In particular, credits to related companies and individuals must be monitored with particular care and other appropriate steps taken to control or mitigate the risks of connected lending.

**LECTURE – 06****CREDIT ADMINISTRATION, MEASUREMENT AND MONITORING PROCESS****Maintaining an appropriate credit administration, measurement and monitoring process**

- **Principle 8:** Banks should have in place a system for the ongoing administration of their various credit risk-bearing portfolios.
- **Principle 9:** Banks must have in place a system for monitoring the condition of individual credits, including determining the adequacy of provisions and reserves.
- **Principle 10:** Banks should develop and utilize internal risk rating systems in managing credit risk. The rating system should be consistent with the nature, size and complexity of a bank's activities.
- **Principle 11:** Banks must have information systems and analytical techniques that enable management to measure the credit risk inherent in all on- and off-balance sheet activities. The management information system should provide adequate information on the composition of the credit portfolio, including identification of any concentrations of risk.
- **Principle 12:** Banks must have in place a system for monitoring the overall composition and quality of the credit portfolio.
- **Principle 13:** Banks should take into consideration potential future changes in economic conditions when assessing individual credits and their credit portfolios, and should assess their credit risk exposures under stressful conditions.

**Ensuring adequate controls over credit risk**

- **Principle 14:** Banks should establish a system of independent, ongoing credit review and the results of such reviews should be communicated directly to the board of directors and senior management.
- **Principle 15:** Banks must ensure that the credit-granting function is being properly managed and that credit exposures are within levels consistent with prudential standards and internal limits. Banks should establish and enforce internal controls and other practices to ensure that exceptions to policies, procedures and limits are reported in a timely manner to the appropriate level of management.
- **Principle 16:** Banks must have a system in place for managing problem credits and various other workout situations.

**The role of supervisors**

- **Principle 17:** Supervisors should require that banks have an effective system in place to identify, measure, monitor and control credit risk as part of an overall approach to risk management. Supervisors should conduct an independent evaluation of banks strategies, policies, practices and procedures related to the granting of credit and the ongoing management of the portfolio. Supervisors should consider setting prudential limits to restrict bank exposures to single borrowers or groups of connected counterparties.

**Establishing an Appropriate Credit Risk Environment**

The board of directors should have responsibility for approving and periodically reviewing the credit risk strategy and significant credit risk policies of the bank. The strategy should reflect the bank's tolerance for risk and the level of profitability the bank expects to achieve for incurring various credit risks.

As with all other areas of a bank's activities, the board of directors<sup>3</sup> has a critical role to play in overseeing the credit-granting and credit risk management functions of the bank. Each bank should develop a credit risk strategy or plan that establishes the objectives guiding the bank's credit-granting activities and adopt the necessary policies and procedures for conducting such activities. The credit risk strategy, as well as significant credit risk policies, should be approved and periodically reviewed by the

board of directors. The board needs to recognize that the strategy and policies must cover the many activities of the bank in which credit exposure is a significant risk.

The strategy should include a statement of the bank's willingness to grant credit based on type (for example, commercial, consumer, and real estate), economic sector, geographical location, currency, maturity and anticipated profitability. This would include the identification of target markets and the overall characteristics that the bank would want to achieve in its credit portfolio (including levels of diversification and concentration tolerances).

The credit risk strategy should give recognition to the goals of credit quality, earnings and growth. Every bank, regardless of size, is in business to be profitable and, consequently, must determine the acceptable risk/reward trade-off for its activities, factoring in the cost of capital. A bank's board of directors should approve the bank's strategy for selecting risks and maximizing profits.

The board should periodically review the financial results of the bank and, based on these results, determine if changes need to be made to the strategy. The board must also determine that the bank's capital level is adequate for the risks assumed throughout the entire organization.

The credit risk strategy of any bank should provide continuity in approach. Therefore, the strategy will need to take into account the cyclical aspects of any economy and the resulting shifts in the composition and quality of the overall credit portfolio. Although the strategy should be periodically assessed and amended, it should be viable in the long-run and through various economic cycles.

The credit risk strategy and policies should be effectively communicated throughout the banking organization. All relevant personnel should clearly understand the bank's approach to granting credit and should be held accountable for complying with established policies and procedures.

The board should ensure that senior management is fully capable of managing the credit activities conducted by the bank and such activities are done within the risk strategy, policies and tolerances approved by the board. The Board should also regularly (i.e. at least annually), either within the credit risk strategy or within a statement of credit policy, approve the bank's credit granting criteria (including terms and conditions). In addition, it should approve the manner in which the bank will organize its credit-granting functions, including independent review of the credit function and the overall portfolio.

While members of the board of directors, particularly outside directors, can be important sources of new business for the bank, once a potential credit is introduced, the bank's established processes should determine how much and at what terms credit is granted. In order to avoid conflicts of interest, it is important that board members not override the credit-granting and monitoring processes of the bank.

The board of directors should ensure that the bank's remuneration policies reflect its credit risk strategy. Remuneration policies that reward unacceptable behavior such as generating short-term profits while deviating from credit policies or exceeding established limits, weaken the bank's credit processes.

Senior management should have responsibility for implementing the credit risk strategy approved by the board of directors and for developing policies and procedures for identifying, measuring, monitoring and controlling credit risk. Such policies and procedures should address credit risk in all of the bank's activities and at both the individual credit and portfolio levels.

Senior management of a bank is responsible for implementing the credit risk strategy approved by the board of directors. This includes ensuring that the bank's credit-granting activities conform to the established strategy, that written procedures are developed and implemented, and that loan approval and review responsibilities are clearly and properly assigned. Senior management must also ensure that there is a periodic independent assessment of the bank's credit-granting functions.

A cornerstone of safe and sound banking is the design and implementation of written policies and procedures related to identifying, measuring, monitoring and controlling credit risk. Credit policies establish the framework for lending and guide the credit-granting activities of the bank.

Credit policies should address such topics as target markets, portfolio mix, price and non-price terms, the structure of limits, approval authorities, exception reporting, etc. Such policies should be clearly defined, consistent with prudent banking practices and relevant regulatory requirements, and adequate for the nature and complexity of the bank's activities.

The policies should be designed and implemented within the context of internal and external factors such as the bank's market position, trade area, staff capabilities and technology. Policies and procedures that are properly developed and implemented enable the bank to:

- (i) maintain sound credit-granting standards;

- (ii) monitor and control credit risk;
- (iii) properly evaluate new business opportunities; and
- (iv) identify and administer problem credits.

As discussed further, banks should develop and implement policies and procedures to ensure that the credit portfolio is adequately diversified given the bank's target markets and overall credit strategy. In particular, such policies should establish targets for portfolio mix as well as set exposure limits on single counterparties and groups of connected counterparties, particular industries or economic sectors, geographic regions and specific products. Banks should ensure that their own internal exposure limits comply with any prudential limits or restrictions set by the banking supervisors.

## ESTABLISHING AN APPROPRIATE CREDIT RISK ENVIRONMENT

In order to be effective, credit policies must be communicated throughout the organization, implemented through appropriate procedures, and periodically revised to take into account changing internal and external circumstances.

They should be applied, where appropriate, on a consolidated basis and at the level of individual affiliates. In addition, the policies should address equally the important functions of reviewing credits on an individual basis and ensuring appropriate diversification at the portfolio level

When banks engage in granting credit internationally, they undertake, in addition to standard credit risk, risk associated with conditions in the home country of a foreign borrower or counterparty. Country or sovereign risk encompasses the entire spectrum of risks arising from the economic, political and social environments of a foreign country that may have potential consequences for foreigners' debt and equity investments in that country. Transfer risk focuses more specifically on a borrower's capacity to obtain the foreign exchange necessary to service its cross-border debt and other contractual obligations. In all instances of international transactions, banks need to understand the globalization of financial markets and the potential for spillover effects from one country to another or contagion effects for an entire region.

Banks that engage in granting credit internationally must therefore have adequate policies and procedures for identifying, measuring, monitoring and controlling country risk and transfer risk in their international lending and investment activities.

The monitoring of country risk factors should incorporate the potential default of foreign private sector counterparties arising from country-specific economic factors. This function is often the responsibility of a specialist team familiar with the particular issues related to country and transfer risk.

Banks should identify and manage credit risk inherent in all products and activities. Banks should ensure that the risks of products and activities new to them are subject to adequate procedures and controls before being introduced or undertaken, and approved in advance by the board of directors or its appropriate committee.

The basis for an effective credit risk management process is the identification of existing and potential risks inherent in any product or activity. Consequently, it is important that banks identify all credit risk inherent in the products they offer and the activities in which they engage. Such identification stems from a careful review of the credit risk characteristics of the product or activity.

Banks must develop a clear understanding of the credit risks involved in more complex credit-granting activities (for example, loans to certain industry sectors, asset securitization, customer-written options, credit derivatives, credit-linked notes).

This is particularly important because the credit risk involved, while not new to banking, may be less obvious and require more analysis than the risk of more traditional credit-granting activities. Although more complex credit-granting activities may require tailored procedures and controls, the basic principles of credit risk management will still apply.

New ventures require significant planning and careful oversight to ensure the risks are appropriately identified and managed. Banks should ensure that the risks of new products and activities are subject to adequate procedures and controls before being introduced or undertaken, and approved in advance by the board of directors or its appropriate delegated committee.

It is critical that senior management determine that the staff involved in any activity where there is borrower or counterparty credit risk, whether established or new, basic or more complex, be fully capable of conducting the activity to the highest standards and in compliance with the bank's policies and procedures.

Banks must operate under sound, well-defined credit-granting criteria. These criteria should include a thorough understanding of the borrower or counterparty, as well as the purpose and structure of the credit, and its source of repayment.

Establishing sound, well-defined credit-granting criteria is essential to approving credit in a safe and sound manner. The criteria should set out who is eligible for credit and for how much, what types of credit are available, and under what terms and conditions the credits should be granted.

Banks need to understand to whom they are granting credit. Therefore, prior to entering into any new credit relationship, a bank must become familiar with the borrower or counterparty and be confident that they are dealing with an individual or organization of sound repute and creditworthiness.

In particular, strict policies must be in place to avoid association with individuals involved in fraudulent activities and other crimes. This can be achieved through a number of ways, including asking for references from known parties, accessing credit registries, and becoming familiar with individuals responsible for managing a company and checking their personal references and financial condition. However, a bank should not grant credit simply because the borrower or counterparty is familiar to the bank or is perceived to be highly reputable.

Banks should have procedures to identify situations where, in considering credits, it is appropriate to classify a group of obligors as connected counterparties and, thus, as a single obligor. This would include aggregating exposures to groups of accounts, corporate or non corporate, under common ownership or control or with strong connecting links (for example, common management, familial ties). Banks should also have procedures for aggregating exposures to individual clients across business activities.

Many banks participate in loan syndications or other such loan consortia. Some institutions place undue reliance on the credit risk analysis done by the lead underwriter or on commercial loan credit ratings. All syndicate participants should perform their own independent credit risk analysis and review of syndicate terms prior to committing to the syndication. Each bank should analyze the risk and return on syndicated loans in the same manner as other loans.

Granting credit involves accepting risks as well as producing profits. Banks should assess the risk/return relationship in any credit as well as the overall profitability of the account relationship. Credits should be priced in such a way as to cover all of the imbedded costs and compensate the bank for the risks incurred.

In evaluating whether, and on what terms, to grant credit, banks need to assess the risks against expected return, factoring in, to the greatest extent possible, price and non-price (e.g. collateral, restrictive covenants, etc.) terms.

In evaluating risk, banks should also assess likely downside scenarios and their possible impact on borrowers or counterparties. A common problem among banks is the tendency not to price a credit or overall relationship properly and therefore not receive adequate compensation for the risks incurred.

In considering potential credits, banks must recognize the necessity of establishing provisions for expected losses and holding adequate capital to absorb risks and unexpected losses. The bank should factor these considerations into credit-granting decisions, as well as into the overall portfolio monitoring process.

Netting agreements are an important way to reduce credit risks, especially in Inter-bank transactions. In order to actually reduce risk, such agreements need to be sound and legally enforceable.

Where actual or potential conflicts of interest exist within the bank, internal confidentiality arrangements (e.g. “Chinese walls”) should be established to ensure that there is no hindrance to the bank obtaining all relevant information from the borrower.

**ESTABLISHING AN APPROPRIATE CREDIT RISK ENVIRONMENT (CONT.)**

Banks should establish overall credit limits at the level of individual borrowers and counterparties, and groups of connected counterparties that aggregate in comparable and meaningful manner different types of exposures, both in the banking and trading book and on and off the balance sheet.

An important element of credit risk management is the establishment of exposure limits on single counterparties and groups of connected counterparties. Such limits are usually based in part on the internal risk rating assigned to the borrower or counterparty, with counterparties assigned better risk ratings having potentially higher limits.

Limits should also be established for particular industries or economic sectors, geographic regions and specific products. Such limits are needed in all areas of the bank's activities that involve credit risk.

These limits will help to ensure that the bank's credit-granting activities are adequately diversified. As mentioned earlier, much of the credit exposure faced by some banks comes from activities and instruments in the trading book and off the balance sheet.

Limits on such transactions are particularly effective in managing the overall credit risk or counterparty risk of a bank. In order to be effective, limits should generally be binding and not driven by customer demand.

Effective measures of potential future exposure are essential for the establishment of meaningful limits, placing an upper bound on the overall scale of activity with, and exposure to, a given counterparty, based on a comparable measure of exposure across a bank's various activities (both on and off-balance-sheet).

Banks should consider the results of stress testing in the overall limit setting and monitoring process. Such stress testing should take into consideration economic cycles, interest rate and other market movements, and liquidity conditions.

Bank's credit limits should recognize and reflect the risks associated with the near term liquidation of positions in the event of counterparty default. Where a bank has several transactions with a counterparty, its potential exposure to that counterparty is likely to vary significantly and discontinuously over the maturity over which it is calculated.

Potential future exposures should therefore be calculated over multiple time horizons. Limits should also factor in any unsecured exposure in a liquidation scenario.

Banks should monitor actual exposures against established limits and have in place procedures for increasing monitoring and taking appropriate action as such limits are approached.

Many individuals within a bank are involved in the credit-granting process. These include individuals from the business origination function, the credit analysis function and the credit approval function. In addition, the same counterparty may be approaching several different areas of the bank for various forms of credit.

Banks may choose to assign responsibilities in different ways; however, it is important that the credit granting process coordinate the efforts of all of the various individuals in order to ensure that sound credit decisions are made.

In order to maintain a sound credit portfolio, a bank must have an established formal evaluation and approval process for the granting of credits. Approvals should be made in accordance with the bank's written guidelines and granted by the appropriate level of management.

There should be a clear audit trail documenting that the approval process was complied with and identifying the individual (s) and/or committee (s) providing input as well as making the credit decision.

Banks often benefit from the establishment of specialist credit groups to analyze and approve credits related to significant product lines, types of credit facilities and industrial and geographic sectors. Banks should invest in adequate credit decision resources so that they are able to make sound credit decisions consistent with their credit strategy and meet competitive time and structuring pressures.

Each credit proposal should be subject to careful analysis by a credit analyst with expertise commensurate with the size and complexity of the transaction. An effective evaluation process establishes minimum requirements for the information on which the analysis is to be based.

There should be policies in place regarding the information and documentation needed to approve new credits, renew existing credits and/or change the terms and conditions of previously approved credits. The information received will be the basis for any internal evaluation or rating assigned to the credit and

its accuracy and adequacy is critical to management making appropriate judgments about the acceptability of the credit.

Banks must develop a corps of experienced officers who have the experience, knowledge and background to exercise prudent judgment in taking credit risks. A bank's credit-granting approval process should establish accountability for decisions taken and designate who has the authority to approve credits or changes in credit terms.

Banks typically utilize a combination of individual signature authority, dual or joint authorities, and a credit approval group or committee, depending upon the size and nature of the credit. Approval authorities should be commensurate with the expertise of the individuals involved.

All extensions of credit must be made on an arm's-length basis. In particular, credits to related companies and individuals must be monitored with particular care and other appropriate steps taken to control or mitigate the risks of connected lending.

Extensions of credit should be made subject to the criteria and processes described above. These create a system of checks and balances that promote sound credit decisions. Therefore, directors, senior management and other influential parties (e.g. shareholders) should not seek to override the established credit-granting and monitoring processes of the bank.

A potential area of abuse arises from granting credit to connected and related parties, whether companies or individuals. Consequently, it is important that banks grant credit to such parties on an arm's-length basis and that the amount of credit granted is monitored. Such controls are most easily implemented by requiring that the terms and conditions of such credits not be more favorable than credit granted to non-related borrowers under similar circumstances and by imposing strict limits on such credits. Another method of control is the public disclosure of the terms of credits granted to related parties. The bank's credit-granting criteria should not be altered to accommodate related companies and individuals.

Material transactions with related parties should be subject to the approval of the board of directors (excluding board members with conflicts of interest), and in certain circumstances (e.g. a large loan to a major shareholder) reported to the banking supervisory authorities.

**CREDIT ADMINISTRATION, MEASUREMENT & MONITORING PROCESS****Principle 1: Banks should have in place a system for the ongoing administration of their various credit risk-bearing portfolios.**

Credit administration is a critical element in maintaining the safety and soundness of a bank. Once a credit is granted, it is the responsibility of the business function, often in conjunction with a credit administration support team, to ensure that the credit is properly maintained. This includes keeping the credit file up to date, obtaining current financial information, sending out renewal notices and preparing various documents such as loan agreements.

Given the wide range of responsibilities of the credit administration function, its organizational structure varies with the size and sophistication of the bank. In larger banks, responsibilities for the various components of credit administration are usually assigned to different departments. In smaller banks, a few individuals might handle several of the functional areas.

Where individuals perform such sensitive functions as custody of key documents, wiring out funds, or entering limits into the computer database, they should report to managers who are independent of the business origination and credit approval processes.

**In developing their credit administration areas, banks should ensure:**

1. the efficiency and effectiveness of credit administration operations, including monitoring documentation, contractual requirements, legal covenants, collateral, etc.;
2. the accuracy and timeliness of information provided to management information systems;
3. the adequacy of controls over all “back office” procedures; and
4. compliance with prescribed management policies and procedures as well as applicable laws and regulations.

For the various components of credit administration to function appropriately, senior management must understand and demonstrate that it recognises the importance of this element of monitoring and controlling credit risk.

The credit files should include all of the information necessary to ascertain the current financial condition of the borrower or counterparty as well as sufficient information to track the decisions made and the history of the credit.

For example, the credit files should include current financial statements, financial analyses and internal rating documentation, internal memoranda, reference letters, and appraisals. The loan review function should determine that the credit files are complete and that all loan approvals and other necessary documents have been obtained.

**Principle 2: Banks must have in place a system for monitoring the condition of individual credits, including determining the adequacy of provisions and reserves.**

Banks need to develop and implement comprehensive procedures and information systems to monitor the condition of individual credits and single obligors across the bank’s various portfolios.

These procedures need to define criteria for identifying and reporting potential problem credits and other transactions to ensure that they are subject to more frequent monitoring as well as possible corrective action, classification and/or provisioning.

An effective credit monitoring system will include measures to:

- (i) ensure that the bank understands the current financial condition of the borrower or counterparty;
- (ii) ensure that all credits are in compliance with existing covenants;
- (iii) follow the use customers make of approved credit lines;
- (iv) ensure that projected cash flows on major credits meet debt servicing requirements;
- (v) ensure that, where applicable, collateral provides adequate coverage relative to the obligor’s current condition; and
- (vi) identify and classify potential problem credits on a timely basis.

Specific individuals should be responsible for monitoring credit quality; including ensuring that relevant information is passed to those responsible for assigning internal risk ratings to the credit. In addition, individuals should be made responsible for monitoring on an ongoing basis any underlying collateral and guarantees.

Such monitoring will assist the bank in making necessary changes to contractual arrangements as well as maintaining adequate reserves for credit losses. In assigning these responsibilities, bank management should recognize the potential for conflicts of interest, especially for personnel who are judged and rewarded on such indicators as loan volume, portfolio quality or short-term profitability.

**Principle 3: Banks should develop and utilize internal risk rating systems in managing credit risk. The rating system should be consistent with the nature, size and complexity of a bank's activities.**

An important tool in monitoring the quality of individual credits, as well as the total portfolio, is the use of an internal risk rating system. A well-structured internal risk rating system is a good means of differentiating the degree of credit risk in the different credit exposures of a bank.

This will allow more accurate determination of the overall characteristics of the credit portfolio, concentrations, problem credits, and the adequacy of loan loss reserves.

More detailed and sophisticated internal risk rating systems, used primarily at larger banks, can also be used to determine internal capital allocation, pricing of credits, and profitability of transactions and relationships.

Typically, an internal risk rating system categorizes credits into various classes designed to take into account the gradations in risk. Simpler systems might be based on several categories ranging from satisfactory to unsatisfactory; however, more meaningful systems will have numerous gradations for credits considered satisfactory in order to truly differentiate the relative credit risk they pose. In developing their systems, banks must decide whether to rate the riskiness of the borrower or counterparty, the risks associated with a specific transaction, or both.

Internal risk ratings are an important tool in monitoring and controlling credit risk. In order to facilitate early identification, the bank's internal risk rating system should be responsive to indicators of potential or actual deterioration in credit risk.

Credits with deteriorating ratings should be subject to additional oversight and monitoring, for example, through more frequent visits from credit officers and inclusion on a watchlist that is regularly reviewed by senior management. The internal risk ratings can be used by line management in different departments to track the current characteristics of the credit portfolio and

Help determine necessary changes to the credit strategy of the bank. Consequently, it is important that the board of directors and senior management also receive periodic reports on the condition of the credit portfolios based on such ratings.

The ratings assigned to individual borrowers or counterparties at the time the credit is granted must be reviewed on a periodic basis and individual credits should be assigned a new rating when conditions either improve or deteriorate.

Because of the importance of ensuring that internal ratings are consistent and accurately reflect the quality of individual credits, responsibility for setting or confirming such ratings should rest with a credit review function independent of that which originated the credit concerned.

**Principle 4: Banks must have information systems and analytical techniques that enable management to measure the credit risk inherent in all on- and off-balance sheet activities. The management information system should provide adequate information on the composition of the credit portfolio, including identification of any concentrations of risk.**

Banks should have methodologies that enable them to quantify the risk involved in exposures to individual borrowers or counterparties. Banks should also be able to analyze credit risk at the portfolio level in order to identify any particular sensitivities or concentrations.

The measurement of credit risk should take account of:

- (i) the specific nature of the credit (loan, derivative, facility, etc.) and its contractual and financial conditions (maturity, reference rate, etc.);
- (ii) the exposure profile until maturity in relation to potential market movements;
- (iii) the existence of collateral or guarantees; and

(iv) the internal risk rating and its potential evolution during the duration of the exposure.

The analysis of credit risk should be undertaken at an appropriate frequency with the results reviewed against relevant limits. Banks should use measurement techniques that are appropriate to the complexity and level of the risks involved in their activities, based on robust data, and subject to periodic validation.

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**LECTURE – 10****CREDIT ADMINISTRATION, MEASUREMENT & MONITORING PROCESS (CONT.)**

The effectiveness of a bank's credit risk measurement process is highly dependent on the quality of management information systems. The information generated from such systems enables the board and all levels of management to fulfill their respective oversight roles, including determining the adequate level of capital that the bank should be holding.

Therefore, the quality, detail and timeliness of information are critical. In particular, information on the composition and quality of the various portfolios, including on a consolidated basis, should permit management to assess quickly and accurately the level of credit risk that the bank has incurred through its various activities and determine whether the bank's performance is meeting the credit risk strategy.

It is also important that banks have a management information system in place to ensure that exposures approaching risk limits are brought to the attention of senior management. All exposures should be included in a risk limit measurement system.

The bank's information system should be able to aggregate credit exposures to individual borrowers and counterparties and report on exceptions to credit risk limits on a meaningful and timely basis.

Banks should have information systems in place that enable management to identify any concentrations of risk within the credit portfolio. The adequacy of scope of information should be reviewed on a periodic basis by business line managers, senior management and the board of directors to ensure that it is sufficient to the complexity of the business. Increasingly, banks are also designing information systems that permit additional analysis of the credit portfolio, including stress testing.

**Principle 5: Banks must have in place a system for monitoring the overall composition and quality of the credit portfolio.**

Traditionally, banks have focused on oversight of individual credits in managing their overall credit risk. While this focus is important, banks also need to have in place a system for monitoring the overall composition and quality of the various credit portfolios.

A continuing source of credit-related problems in banks is concentrations within the credit portfolio. Concentrations of risk can take many forms and can arise whenever a significant number of credits have similar risk characteristics.

Concentrations occur when, among other things, a bank's portfolio contains a high level of direct or indirect credits to

- (i) a single counterparty,
- (ii) a group of connected counterparties<sup>11</sup>,
- (iii) a particular industry or economic sector,
- (iv) a geographic region,
- (v) an individual foreign country or a group of countries whose economies are strongly interrelated,
- (vi) a type of credit facility, or
- (vii) a type of security.

Concentrations also occur in credits with the same maturity. Concentrations can stem from more complex or subtle linkages among credits in the portfolio. The concentration of risk does not only apply to the granting of loans but to the whole range of banking activities that, by their nature, involve counterparty risk. A high level of concentration exposes the bank to adverse changes in the area in which the credits are concentrated.

In many instances, due to a bank's trade area, geographic location or lack of access to economically diverse borrowers or counterparties, avoiding or reducing concentrations may be extremely difficult. In addition, banks may want to capitalize on their expertise in a particular industry or economic sector.

A bank may also determine that it is being adequately compensated for incurring certain concentrations of risk. Consequently, banks should not necessarily forego booking sound credits solely on the basis of concentration. Banks may need to make use of alternatives to reduce or mitigate concentrations.

Such measures can include pricing for the additional risk, increased holdings of capital to compensate for the additional risks and making use of loan participations in order to reduce dependency on a particular sector of the economy or group of related borrowers. Banks must be careful not to enter into transactions with borrowers or counterparties they do not know or engage in credit activities they do not fully understand simply for the sake of diversification.

Banks have new possibilities to manage credit concentrations and other portfolio issues. These include such mechanisms as loan sales, credit derivatives, securitization programs and other secondary loan markets. However, mechanisms to deal with portfolio concentration issues involve risks that must also be identified and managed. Consequently, when banks decide to utilize these mechanisms, they need to have policies and procedures, as well as adequate controls, in place.

**Principle 7: Banks should take into consideration potential future changes in economic conditions when assessing individual credits and their credit portfolios, and should assess their credit risk exposures under stressful conditions.**

An important element of sound credit risk management involves discussing what could potentially go wrong with individual credits and within the various credit portfolios, and factoring this information into the analysis of the adequacy of capital and provisions. This “what if” exercise can reveal previously undetected areas of potential credit risk exposure for the bank.

The linkages between different categories of risk that are likely to emerge in times of crisis should be fully understood. In case of adverse circumstances, there may be a substantial correlation of various risks, especially credit and market risk. Scenario analysis and stress testing are useful ways of assessing areas of potential problems.

Stress testing should involve identifying possible events or future changes in economic conditions that could have un-favourable effects on a bank’s credit exposures and assessing the bank’s ability to withstand such changes. Three areas that banks could usefully examine are:

- (i) economic or industry downturns;
- (ii) market-risk events; and
- (iii) liquidity conditions.

Stress testing can range from relatively simple alterations in assumptions about one or more financial, structural or economic variables to the use of highly sophisticated financial models. Typically, the latter are used by large, internationally active banks.

Whatever the method of stress testing used, the output of the tests should be reviewed periodically by senior management and appropriate action taken in cases where the results exceed agreed tolerances. The output should also be incorporated into the process for assigning and updating policies and limits.

The bank should attempt to identify the types of situations, such as economic downturns, both in the whole economy or in particular sectors, higher than expected levels of delinquencies and defaults, or the combinations of credit and market events that could produce substantial losses or liquidity problems.

Such an analysis should be done on a consolidated basis. Stress-test analyses should also include contingency plans regarding actions management might take given certain scenarios. These can include such techniques as hedging against the outcome or reducing the size of the exposure.

**Ensuring Adequate Controls over Credit Risk**

**Principle 8: Banks should establish a system of independent, ongoing credit review and the results of such reviews should be communicated directly to the board of directors and senior management.**

Because individuals throughout a bank have the authority to grant credit, the bank should have an efficient internal review and reporting system in order to manage effectively the bank’s various portfolios. This system should provide the board of directors and senior management with sufficient information to evaluate the performance of account officers and the condition of the credit portfolio.

Internal credit reviews conducted by individuals independent from the business function provide an important assessment of individual credits and the overall quality of the credit portfolio. Such a credit review function can help evaluate the overall credit administration process, & determine the accuracy of internal risk ratings and judge whether the account officer is properly monitoring individual credits. The credit review function should report directly to the board of directors, a committee with audit responsibilities, or senior management without lending authority.

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## LECTURE – 11

**CREDIT ADMINISTRATION, MEASUREMENT & MONITORING PROCESS (CONT.)**

**Principle 9: Banks must ensure that the credit-granting function is being properly managed and that credit exposures are within levels consistent with prudential standards and internal limits. Banks should establish and enforce internal controls and other practices to ensure that exceptions to policies, procedures and limits are reported in a timely manner to the appropriate level of management.**

The goal of credit risk management is to maintain a bank's credit risk exposure within parameters set by the board of directors and senior management. The establishment and enforcement of internal controls, operating limits and other practices will help ensure that credit risk exposures do not exceed levels acceptable to the individual bank. Such a system will enable bank management to monitor adherence to the established credit policies.

Limit systems should ensure that granting of credit exceeding certain predetermined levels receive prompt management attention. An appropriate limit system should enable management to control credit risk exposures, initiate discussion about opportunities and risks, and monitor actual risk taking against predetermined credit risk tolerances.

Internal audits of the credit risk processes should be conducted on a periodic basis to determine that credit activities are in compliance with the bank's credit policies and procedures, that credits are authorized within the guidelines established by the bank's board of directors and that the existence, quality and value of individual credits are accurately being reported to senior management. Such audits should also be used to identify areas of weakness in the credit administration process, policies and procedures as well as any exceptions to policies, procedures and limits.

**Principle 10: Banks must have a system in place for managing problem credits and various other workout situations.**

One reason for establishing a systematic credit review process is to identify weakened or problem credits. A reduction in credit quality should be recognized at an early stage when there may be more options available for improving the credit.

A bank's credit risk policies should clearly set out how the bank will manage problem credits. Banks differ on the methods and organization they use to manage problem credits. Responsibility for such credits may be assigned to the originating business function, a specialized workout section, or a combination of the two, depending upon the size and nature of the credit and the reason for its problems.

Effective workout programs are critical to managing risk in the portfolio. When a bank has significant credit-related problems, it is important to segregate the workout function from the area that originated the credit. The additional resources, expertise and more concentrated focus of a specialized workout section normally improve collection results.

A workout section can help develop an effective strategy to rehabilitate a troubled credit or to increase the amount of repayment ultimately collected. An experienced workout section can also provide valuable input into any credit restructurings organized by the business function.

**The Role of Supervisors**

**Principle 1: Supervisors should require that banks have an effective system in place to identify, measure, monitor and control credit risk as part of an overall approach to risk management. Supervisors should conduct an independent evaluation of a bank's strategies, policies, practices and procedures related to the granting of credit and the ongoing management of the portfolio. Supervisors should consider setting prudential limits to restrict bank exposures to single borrowers or groups of connected counterparties.**

Although the board of directors and senior management bear the ultimate responsibility for an effective system of credit risk management, supervisors should, as part of their ongoing supervisory activities, assess the system in place at individual banks to identify, measure, monitor and control credit risk.

This should include an assessment of any measurement tools (such as internal risk ratings and credit risk models) used by the bank. In addition, they should determine that the board of directors effectively

oversees the credit risk management process of the bank and that management monitors risk positions, and compliance with and appropriateness of policies.

Supervisors should take particular note of whether bank management recognises problem credits at an early stage and takes the appropriate actions. Supervisors should monitor trends within a bank's overall credit portfolio and discuss with senior management any marked deterioration. Supervisors should also assess whether the capital of the bank, in addition to its provisions and reserves, is adequate related to the level of credit risk inherent in the bank's various on- and off-balance sheet activities.

In reviewing the adequacy of the credit risk management process, home country supervisors should also determine that the process is effective across business lines, subsidiaries and national boundaries. It is important that supervisors evaluate the credit risk management system not only at the level of individual businesses or legal entities but also across the wide spectrum of activities and subsidiaries within the consolidated banking organization.

Supervisors should consider setting prudential limits (e.g., large exposure limits) that would apply to all banks, irrespective of the quality of their credit risk management process. Such limits would include restricting bank exposures to single borrowers or groups of connected counterparties. Supervisors may also want to impose certain reporting requirements for credits of a particular type or exceeding certain established levels. In particular, special attention needs to be paid to credits granted to "connected" counterparties.

### Common Sources of Major Credit Problems

Most major banking problems have been either explicitly or indirectly caused by weaknesses in credit risk management. In supervisors' experience, certain key problems tend to recur. Severe credit losses in a banking system usually reflect simultaneous problems in several areas, such as concentrations, failures of due diligence and inadequate monitoring.

Banking supervisors should have specific regulations limiting concentrations to one borrower or set of related borrowers, and, in fact, should also expect banks to set much lower limits on single-obligor exposure. Most credit risk managers in banks also monitor industry concentrations. Many banks are exploring techniques to identify concentrations based on common risk factors or correlations among factors.

While small banks may find it difficult not to be at or near limits on concentrations, very large banking organizations must recognize that, because of their large capital base, their exposures to single obligors can reach imprudent levels while remaining within regulatory limits.

### Credit Process Issues

Many credit problems reveal basic weaknesses in the credit granting and monitoring processes. While shortcomings in underwriting and management of market-related credit exposures represent important sources of losses at banks, many credit problems would have been avoided or mitigated by a strong internal credit process.

Many banks find carrying out a **thorough credit assessment** (or basic due diligence) a substantial challenge. For traditional bank lending, competitive pressures and the growth of loan syndication techniques create time constraints that interfere with basic due diligence.

Globalization of credit markets increases the need for financial information based on sound accounting standards and timely macroeconomic and flow of funds data. When this information is not available or reliable, banks may dispense with financial and economic analysis and support credit decisions with simple indicators of credit quality, especially if they perceive a need to gain a competitive foothold in a rapidly growing foreign market.

Finally, banks may need new types of information, such as risk measurements, and more frequent financial information, to assess relatively newer counterparties, such as institutional investors and highly leveraged institutions.

The absence of **testing and validation of new lending techniques** is another important problem. Adoption of untested lending techniques in new or innovative areas of the market, especially techniques

that dispense with sound principles of due diligence or traditional benchmarks for leverage, have led to serious problems at many banks.

Sound practice calls for the application of basic principles to new types of credit activity. Any new technique involves uncertainty about its effectiveness. That uncertainty should be reflected in somewhat greater conservatism and corroborating indicators of credit quality. An example of the problem is the expanded use of credit-scoring models in consumer lending in the United States and some other countries.

Large credit losses experienced by some banks for particular tranches of certain mass-marketed products indicate the potential for scoring weaknesses.

Some credit problems arise from **subjective decision-making by senior management** of the bank. This includes extending credits to companies they own or with which they are affiliated, to personal friends, to persons with a reputation for financial acumen or to meet a personal agenda, such as cultivating special relationships with celebrities.

## MARKET AND LIQUIDITY SENSITIVE CREDIT EXPOSURES

Market and liquidity-sensitive exposures pose special challenges to the credit processes at banks. Market-sensitive exposures include foreign exchange and financial derivative contracts. Liquidity-sensitive exposures include margin and collateral agreements with periodic margin calls, liquidity back-up lines, commitments and some letters of credit, and some unwind provisions of securitizations.

The contingent nature of the exposure in these instruments requires the bank to have the ability to assess the probability distribution of the size of actual exposure in the future and its impact on both the borrower's and the bank's leverage and liquidity.

An issue faced by virtually all financial institutions is the need to develop **meaningful measures of exposure** that can be compared readily with loans and other credit exposures. This problem is described at some length in the Basel Committee's January 1999 study of exposures to highly leveraged institutions.

Market-sensitive instruments require a **careful analysis of the customer's willingness and ability to pay**. Most market-sensitive instruments, such as financial derivatives, are viewed as relatively sophisticated instruments, requiring some effort by both the bank and the customer to ensure that the contract is well understood by the customer.

The link to changes in asset prices in financial markets means that the value of such instruments can change very sharply and adversely to the customer, usually with a small, but non-zero probability. Effective stress testing can reveal the potential for large losses, which sound practice suggests should be disclosed to the customer.

Banks have suffered significant losses when they have taken insufficient care to ensure that the customer fully understood the transaction at origination and subsequent large adverse price movements left the customer owing the bank a substantial amount.

Liquidity-sensitive credit arrangements or instruments require a **careful analysis of the customer's vulnerability to liquidity stresses**, since the bank's funded credit exposure can grow rapidly when customers are subject to such stresses.

Such increased pressure to have sufficient liquidity to meet margin agreements supporting over-the-counter trading activities or clearing and settlement arrangements may directly reflect market price volatility.

In other instances, liquidity pressures in the financial system may reflect credit concerns and a constricting of normal credit activity, leading borrowers to utilize liquidity backup lines or commitments. Liquidity pressures can also be the result of inadequate liquidity risk management by the customer or a decline in its creditworthiness, making an assessment of a borrower's or counterparty's liquidity risk profile another important element of credit analysis.

Market- and liquidity-sensitive instruments change in riskiness with changes in the underlying distribution of price changes and market conditions. For market-sensitive instruments, for example, increases in the volatility of price changes effectively increases potential exposures. Consequently, banks should conduct **stress testing of volatility assumptions**.

Market- and liquidity-sensitive exposures, because they are probabilistic, can be correlated with the creditworthiness of the borrower. This is an important insight gained from the market turmoil in Asia, Russia and elsewhere in the course of 1997 and 1998. That is, the same factor that changes the value of a market- or liquidity-sensitive instrument can also influence the borrower's financial health and future prospects.

Banks need to **analyze the relationship between market- and liquidity-sensitive exposures and the default risk of the borrower**. Stress testing shocking the market or liquidity factors — is a key element of that analysis.

### Credit Approval Process

The individual steps in the process and their implementation have a considerable impact on the risks associated with credit approval. Therefore, this chapter presents these steps and shows examples of the shapes they can take.

However, this cannot mean the presentation of a final model credit approval process, as the characteristics which have to be taken into consideration in planning credit approval processes and which usually stem from the heterogeneity of the products concerned are simply too diverse.

That said, it is possible to single out individual process components and show their basic design within a credit approval process optimized in terms of risk and efficiency. Thus, the risk drivers in carrying out a lending and rating process essentially shape the structure of this chapter.

First of all, we need to ask what possible sources of error the credit approval process must be designed to avoid. The errors encountered in practice most often can be put down to these two sources:

**Substantive errors:** These comprise the erroneous assessment of a credit exposure despite comprehensive and transparent presentation.

**Procedural errors:** Procedural errors may take one of two forms: On the one hand, the procedural-structural design of the credit approval process itself may be marked by procedural errors.

These errors lead to an incomplete or wrong presentation of the credit exposure. On the other hand, procedural errors can result from an incorrect performance of the credit approval process. These are caused by negligent or intentional misconduct by the persons in charge of executing the credit approval process.

In the various instances describing individual steps in the process, this chapter refers to the fundamental logic of error avoidance by adjusting the risk drivers; in doing so, however, it does not always reiterate the explanation as to what sources of error can be reduced or eliminated depending on the way in which they are set up.

While credit review, for example, aims to create transparency concerning the risk level of a potential exposure (and thus helps avoid substantive errors), the design of the other process components laid down in the internal guidelines is intended to avoid procedural errors in the credit approval process.

Still, both substantive and procedural errors are usually determined by the same risk drivers. Thus, these risk drivers are the starting point to find the optimal design of credit approval processes in terms of risk.

### **Segmentation of Credit Approval Processes**

In order to assess the credit risk, it is necessary to take a close look at the borrowers' economic and legal situation as well as the relevant environment (e.g. industry, economic growth).

The quality of credit approval processes depends on two factors, i.e. a transparent and comprehensive presentation of the risks when granting the loan on the one hand, and an adequate assessment of these risks on the other. Furthermore, the level of efficiency of the credit approval processes is an important rating element.

Due to the considerable differences in the nature of various borrowers (e.g. private persons, listed companies, sovereigns, etc.) and the assets to be financed (e.g. residential real estate, production plants, machinery, etc.) as well as the large number of products and their complexity, there cannot be a uniform process to assess credit risks.

Therefore, it is necessary to differentiate, and this section describes the essential criteria which have to be taken into account in defining this differentiation in terms of risk and efficiency.

## BASIC SITUATION OF CREDIT APPROVAL PROCESS

The vast majority of credit institutions serve a number of different customer segments. This segmentation is mostly used to differentiate the services offered and to individualize the respective marketing efforts.

As a result, this segmentation is based on customer demands in most cases. Based on its policy, a bank tries to meet the demands of its customers in terms of accessibility and availability, product range and expertise, as well as personal customer service.

In practice, linking sales with the risk analysis units is not an issue in many cases at first. The sales organization often determines the process design in the risk analysis units. Thus, the existing variety of segments on the sales side is often reflected in the structure and process design of the credit analysis units.

While classifications in terms of customer segments are, for example, complemented by product-specific segments, there appears to be no uniform model. Given the different sizes of the banks, the lack of volume of comparable claims in small banks renders such a model inadequate also for reasons of complexity, efficiency, and customer orientation.

Irrespective of a bank's size, however, it is essential to ensure a transparent and comprehensive presentation as well as an objective and subjective assessment of the risks involved in lending in all cases. Therefore, the criteria that have to be taken into account in presenting and assessing credit risks determine the design of the credit approval processes.

If the respective criteria result in different forms of segmentation for sales and analysis, this will cause friction when credit exposures are passed on from sales to processing. A risk analysis or credit approval processing unit assigned to a specific sales segment may not be able to handle all products offered in that sales segment properly in terms of risk (e.g. processing residential real estate finance in the risk analysis unit dealing with corporate clients).

Such a situation can be prevented by making the interface between sales and processing more flexible, with internal guidelines dealing with the problems mentioned here. Making this interface more flexible to ease potential tension can make sense in terms of risk as well as efficiency.

### Accounting for Risk Aspects

The quality of the credit approval process from a risk perspective is determined by the best possible identification and evaluation of the credit risk resulting from a possible exposure. The credit risk can be distributed among four risk components which have found their way into the new Basel Capital Accord (in the following referred to as Basel II).

- a. Probability of default (PD)
- b. Loss given default (LGD)
- c. Exposure at default (EAD)
- d. Maturity (M)

### Probability of Default

Reviewing a borrower's probability of default is basically done by evaluating the borrower's current and future ability to fulfill its interest and principal repayment obligations. This evaluation has to take into account various characteristics of the borrower (natural or legal person), which should lead to a differentiation of the credit approval processes in accordance with the borrowers served by the bank.

Furthermore, it has to be taken into account that — for certain finance transactions — interest and principal repayments should be financed exclusively from the cash flow of the object to be financed without the possibility for recourse to further assets of the borrower.

In this case, the credit review must address the viability of the underlying business model, which means that the source of the cash flows required to meet interest and principal repayment obligations has to be included in the review.

**Loss Given Default**

The loss given default is affected by the collateralized portion as well as the cost of selling the collateral. Therefore, the calculated value and type of collateral also have to be taken into account in designing the credit approval processes.

**Exposure at Default (EAD)**

In the vast majority of the cases described here, the exposure at default corresponds to the amount owed to the bank.<sup>5</sup> Thus, besides the type of claim, the amount of the claim is another important element in the credit approval process. Thus, four factors should be taken into account in the segmentation of credit approval processes:

1. Type of borrower
2. Source of cash flows
3. Value and type of collateral
4. Amount and type of claim

**Approaches to the Segmentation of Credit Approval Processes**

The following subsections present possible segmentations to include the four factors mentioned above in structuring the credit approval process. The lending business in which banks engage is highly heterogeneous in terms of volume and complexity; this makes it impossible to define an optimal model, and therefore we will not show model segmentation.

After the description of possible segmentations, two principles are dealt with that have to be included in the differentiation of the credit approval processes along the four risk components to ensure an efficient structure of the credit approval processes.

1. Distinction between standard and individual processes in the various segments;
2. taking into account asset classes under Basel II

**Type of Borrower**

In general, type of borrower is used as the highest layer in credit approval processes. This is due to the higher priority of reviewing legal and economic conditions within the substantive credit review process. The way in which the economic situation is assessed greatly depends on the available data. The following segments can be distinguished:

1. Sovereigns
2. Other public authorities (e.g. regional governments, local authorities)
3. Financial services providers (incl. credit institutions)
4. Corporates
5. Retail

Usually, at least the segments of corporate and retail customers are differentiated further (e.g. by product category).

**Source of Cash Flows**

The distinction of so-called specialized lending from other forms of corporate finance is based on the fact that the primary, if not the only source of reducing the exposure is the income from the asset being financed, and not so much the unrelated solvency of the company behind it, which operates on a broader basis.

Therefore, the credit review has to focus on the asset to be financed and the expected cash flow. In order to account for this situation, the segmentation of the credit approval processes should distinguish between:

1. credits to corporations, partnerships, or sole proprietors; and
2. specialized lending

Credit institutions have to distinguish between the following forms of specialized lending in the calculation of regulatory capital.

1. Project finance
2. Object finance
3. Commodities finance
4. Finance of income-producing commercial real estate

This subdivision of Basel II primarily serves to determine the required capital correctly, but it can also prove useful from a procedural point of view. This chapter does not separately address the specific design of credit approval processes in specialized lending transactions. The general procedural provisions that should be heeded to minimize the risk also apply to the forms of finance collectively referred to as \_specialized lending.

### **Value and Type of Collateral**

Value and type of collateral have a significant impact on the risk involved in lending. Of particular relevance in this context are those types of collateral which afford the lender a claim in rem on the collateral, and those product constructions under which the lender has legal and economic ownership of the asset to be financed.

Two forms of finance are particularly relevant in practice:

- mortgage finance and
- leasing finance

Mortgage finance and leasing are those forms of finance which often give the lender a substantial degree of control over the asset being financed. The strong legal position resulting from such collateral may warrant special treatment of the relevant forms of finance.

**BASIC SITUATION OF CREDIT APPROVAL PROCESS (CONT.)****Level of Exposure**

The level of exposure has an immediate impact on the exposure at default (EAD). Therefore, any increase in the level of exposure should trigger a more detailed credit review of the respective borrower. This aspect and the risk minimization that can be achieved by standardization and automation are the rationale behind the separation of low-volume and high-volume lending business that can often be found in the way in which credit approval processes are designed. In practice, the ensuing sub-segmentation within the claims segments is now commonly referred to as standard process and individual process.

**Standard and Individual Processes**

The distinction between standard and individual processes does not create a separate segment. It is rather a common process differentiation within claims segments which are defined in accordance with the criteria described above. In the vast majority of cases, the level of engagement is the decisive element in the differentiation between standard and individual processes.

In addition to the level of exposure, it is possible to describe some general differentiating criteria that characterize the process type in question. Generally speaking, the objective of establishing standard processes is more efficient process execution. As most segments show concentrations of certain product specifications, it is possible to develop processes that specifically address these characteristics. Standard processes are characterized by the fact that they are only intended and suitable for handling certain credit products with limited features and options.

Limiting the process to certain products and maximum exposure volumes allows for simplifications and automations within the process (in particular with regard to credit decisions by vote and highly automated credit decisions). Individual processes are characterized by an adaptive design which makes it possible to deal with a variety of products, collateral, and conditions.

Typically, this will be required especially for high-volume corporate customer business, as both the borrowers' characteristics to be taken into account in the credit review and the specifics of the products wanted are very heterogeneous.

The higher risk involved with loans examined in an individual process should be addressed by using a double vote (one vote by the front office, and one vote by the back office).

**Asset Classes under Basel II**

As already mentioned above, the new Basel Capital Accord — in its incorporation into European and thus Austrian law — presents mandatory rules for the regulatory capital requirements of claims under any and all banking book transactions of credit institutions and investment firms.

**Basel II provides two approaches to determine the capital requirement:**

1. a standardized approach and
2. an internal ratings-based approach (IRB approach)

The IRB approach allows a more risk-sensitive calculation (based on the Bank's internal estimates) of the capital required to cover the risks associated with claims than was or will be possible under Basel I and the newly modified standardized approach.

The goal is to use the capital required from an economic point of view as the yardstick for the regulatory capital requirement. However, this will only happen if the banks measure the risks in accordance with the regulatory criteria.

**The IRB approach distinguishes & asset classes:**

1. sovereign exposures
2. bank exposures
3. corporate exposures
4. retail exposures
5. equity exposures

6. securitization
7. fixed assets

If banks decide to apply the IRB approach in calculating the capital requirements, these asset classes and the respective sub-segments of corporate and retail exposures have to be accounted for in the segmentation process. Thus, it would make sense to harmonize and match the segmentation and the asset classes mentioned above to allow an efficient design of credit approval processes.

In most cases, it will be necessary to refine the segmentation further to address a bank's business orientation. Under Basel II, type of borrower is the only criterion at first (asset classes 1—3), but this changes for retail exposures (asset class).

Claims on individuals belong to the retail portfolio. Besides loans to individuals, the retail portfolio can also contain credits to SMEs provided the total exposure of the bank, or more specifically of the credit institution group, vis-à-vis each of these enterprises is less than one million euro. Furthermore, such SMEs must not be treated in the same way as large enterprises within the bank's internal credit (risk) processes.

The allocation to the retail asset class is effected by means of the processes most appropriate in terms of business and from a risk perspective. Finally, retail exposures must also show a sufficient granularity. This means that an individual exposure needs to be part of a large number of exposures which are managed by the bank in the same way.

This differentiation of the retail segment from the other asset classes is highly significant, as Basel II allows a so-called pooling approach in meeting the capital requirements for retail exposures. Under this approach, deriving the risk parameters<sup>13</sup> is not based on an individual exposure, but on a pool of homogenous exposures. Simplified credit rating processes may be used (only) in this segment.

### **Object of Review and Exposure Management**

Credit approval processes are started on behalf of a credit applicant. Especially in the context of lending to corporate customers, it is often necessary to include several (natural or legal) persons in the credit rating process. This will be required if these (natural and legal) persons are to be considered one economic unit and would thus probably have a mutual impact on each others credit standing.

In practice, granting an individual loan often involves a large number of (natural and legal) persons. This has to be borne in mind throughout the entire credit approval process, but particularly in the course of the credit review.

Credit approval for groups of companies should be designed in a manner which is specific to the risk involved and efficient and should aim to focus the review on the actual risk-bearer, that (natural or legal) person whose legal and economic situation ultimately determines the ability to fulfill the obligations under the credit agreement.

In any case, Basel II requires the assessment of the borrower's credit standing. Especially in complex and far-reaching company networks, the link to the respective credit institution may often go beyond pure sales contacts (e.g. a foreign holding company and a domestic subsidiary).

In practice, this often results in vague guidelines in terms of exposure management within credit approval processes. From a risk perspective, the overall risk of the risk-bearer should always be aggregated over the bank as a whole and then presented to the decision makers; the internal guidelines should contain provisions which clearly define the risk-bearer.

This classification is usually based on loss-sharing arrangements or legal interdependences. Also, it should be stipulated whether aggregation should be effected by one person in charge (at group level) in processing or risk analysis, or in a decentralized fashion by each unit itself.

## OBJECT OF REVIEW AND EXPOSURE MANAGEMENT

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### Overview of the Credit Approval Process

The order of the following subsections reflects the sequence of steps in the credit approval process, with the credit approval process for new customers serving as the general framework. Credit approval processes for existing customers will be addressed explicitly if they contain process steps that are not found in the credit approval process for new customers at least in a similar form.

The definition of exposure segments is an important prerequisite to handle credit approval processes in a manner which is specific to the risk involved and efficient. Many of the risk mitigation measures described here can only take full effect if they account for the specific characteristics of the credit applicants.

Therefore, the segmentation of the credit approval processes is a central component of risk mitigation.

While the risk mitigation measures should be designed in accordance with the specifics of each segment, there is a uniform basic structure of these measures which are discussed in the following subchapters.

A presentation of the specific design of these measures would only be possible with reference to a detailed definition of the individual segments. Such a definition is impossible due to the great heterogeneity among the banks addressed by this guideline to begin with and can thus only be established for each bank separately. Thus, the following lectures will primarily discuss the basic structure of the risk mitigation measures and the way in which they work.

At some points, the distinction between standard and individual processes is pointed out as this distinction is a central element in the design of credit approval processes nowadays. In case differences in the process design are considered essential for the effectiveness of the risk mitigation measures, this design will be described in more detail.

### Integration of Sales and IT in the Process Design

An early integration of sales and IT is an essential prerequisite for the success of a reorientation of the credit approval process. In order to facilitate their implementation, changes in processes have to be reflected in the bank's IT structure.

The extensive planning and alignment effort involved in IT projects (in particular the coordination the IT interfaces to all organizational units that use data from the credit approval processes) makes it necessary to check at an early stage whether the project is feasible and can be financed. This depiction

of the credit approval processes is highly relevant not only for risk analysis and processing, but has a particular significance for sales. “and”

Changes in processes, in particular the introduction of mostly automated credit decisions, entail a considerable change in the user interface in sales applications. Therefore, the success of the implementation is highly dependent on the extent to which employees accept such changes.

### **Process Steps Leading up to the Credit Review**

The execution of the credit review is based on external and internal data on the credit applicant. Especially for extensive exposures, considerable resources may be tied up in the process of collecting the data, checking the data for completeness and plausibility, and passing on the data to people in charge of handling, analyzing, and processing the exposure within the bank.

These steps can also lead to a large number of procedural errors. As the data included form the basis for the credit review, errors in collecting, aggregating, and passing them on are especially relevant also from a risk perspective. The subchapter thus focuses on measures to avoid such procedural errors.

## DATA COLLECTION

The assessment of a credit applicant's credit standing is based on different data sources and data types in accordance with the type of borrower. In any case, a bank must always be interested in having comprehensive and current data on the economic and personal situation of the borrower.

In order to ensure consistent customer service, the respective account manager will typically coordinate the gathering of information. The credit review incorporates not only economic data but also qualitative information concerning the borrower.

The account manager should thus include a complete and critical picture of the borrower. In order to ensure that all the information gathered by the account manager is passed on to the person in charge of the credit review, it would be advisable to prepare standardized and structured reports on customer visits.

In practice, this has proven effective in directing conversations with customers as desired (function as conversation guide). This procedure ensures that information is gathered in its entirety and in an efficient manner. The layout of the visit reports should be specified for each segment and should be included in the internal guidelines.

To make sure that the data collected is complete, mandatory lists showing what data are required should be used. These lists then have to be adapted to the requirements of the credit review process conforming to the type of borrower in each case.

In addition to individual borrower data, many cases will require general information on the economic situation of a region or an industry to allow a comprehensive assessment of credit application; here, the bank can make use of external sources.

If a bank's credit portfolio shows a focus on certain industries or regions, banks are advised to conduct their own analyses of the economic situation in these fields — this is particularly true if the available external information lacks the necessary detail and/or currency.

### Plausibility Check and Preliminary Review

Before a credit exposure is subjected to a comprehensive credit review, the employee initially in charge should conduct a plausibility check and preliminary review. This check should look at the completeness and consistency of the documents filed by the borrower to minimize any process loops and the need for further inquiries with the customer.

In addition, sales should carry out an initial substantive check based on a select few relevant criteria. The objectives include the creation of awareness and active assumption of responsibility for credit risk on the part of the sales department.

The preliminary check is especially significant in segments with high rejection rates, as a comprehensive credit review ties up considerable resources in these segments. The preliminary check should prevent exposures which will most likely be rejected from tying up capacities in risk analysis.

The resulting reduction in number of cases dealt with by risk analysis allows a more detailed scrutiny of promising exposures and is thus desirable in terms of risk as well as efficiency.

In practice, the distinction between two types of check criteria has proven successful:

- **red criteria**, which, if fulfilled, lead to an outright rejection of the exposure (also referred to as knock-out criteria)
- **yellow criteria**, which, if fulfilled, require the sales staff to present a plausible and well, documented justification of the respective situation. If this justification cannot be made, the exposure also has to be rejected.

"Red criteria"	"Yellow criteria"
Transparency in organizational structures and liability arrangements cannot be established	Loan application is filed to switch banks and there is no adequate collateral
Intended use for the loan cannot be clearly established	Heavy fluctuations in the economic situation
Loan applicant has not generated a profit yet <sup>(1)</sup>	Insufficient capital

### Passing on Data

Making sure that information is passed on in its entirety is relevant from a risk perspective and concerns those processes in which the credit approval process is not concluded by the account manager himself. If the internal guidelines provide for a transfer of responsibility, or if the credit review is conducted by two or more people, it is necessary to ensure that the complete set of relevant documents is handed over.

It would be advisable to prepare handover reports for this purpose. Handover reports should fully reflect changes in responsibility in the course of the credit approval process as well as any interface occurring in the process.

In practice, a modular structure has proven particularly effective for such forms. If possible, they should be kept electronically<sup>18</sup> or, alternatively, as the first page of the respective credit folder.

The sales employee has to use the module (table or text module) provided for handing over the exposure to the respective process. This contains, among other things, an enumeration of the documents required for the respective risk analysis segment (completeness checklist).

On the one hand, this ensures a smooth transfer of the documents, and on the other, it prevents incomplete files from being handed over to risk analysis. In addition, further modules, e.g. notes taken during customer appointments, should be included in the handover reports.

Furthermore, appropriate modules should be included for all other interfaces between sales and risk analysis, or between different persons in processing.

To facilitate a consistent application of the handover reports, it would be advisable to prepare detailed interface plans, which should, in particular, show the interfaces between sales and risk analysis.

The internal guidelines have to stipulate the responsibilities along the interface plans in detail, which should ensure a consistent application and minimize the procedural risks resulting from the change in responsibility (e.g. loss of documents).

Furthermore, this list serves to clearly assign specific responsibilities. This can help avoid errors in the credit approval process that could result from unclear responsibilities (e.g. failure to carry out a required process step).

## CREDIT REVIEW AND VALUATION OF COLLATERAL

Exposure assessment involves the credit review and a valuation of the collateral based on the data provided by the credit applicant. These steps aim at making the risks resulting from the exposure transparent and allowing a final assessment of the exposure.

The credit review basically consists of two process components:

1. Standardized models of data evaluation
2. Documentation and evaluation of other credit assessment factors

Credit reviews are increasingly marked by standardized procedures. These procedures support and sometimes even replace the subjective decision making process in assessing credit standing.

In practice, we can also find credit review processes that are completely based on standardized and automated models and thus do not provide for any manual documentation and assessment of other credit assessment factors beyond that.

After establishing and assessing the risk involved in lending, the collateral offered by the applicant is examined and evaluated. The collateralized portion does not affect the applicant's probability of default<sup>19</sup>; and its impact on assessing the exposure thus has to be dealt with independently of the credit review.

### Standardized Models of Data Evaluation (Rating Models)

Today, we have many different models for the standardized evaluation of credit assessment data. These models can basically be divided into heuristic models, empirical statistical models, and causal models. In addition, hybrid models are used in practice that is based on two or three of the models mentioned.

Heuristic models attempt to take experiences and use them as a basis to methodically gain new insights.

These experiences can stem from:

- conjectured business interrelationships,
- subjective practical experiences and observations,
- business theories related to specific aspects.

In terms of credit review, this means that experience from the lending business is used to try to predict a borrower's future credit standing. Heuristic models thus depend on the fact that the subjective experiences of the credit experts are reflected appropriately. Thus, not only the credit assessment factors are determined heuristically, but also their impact and their weighting with reference to the final decision are based on subjective experiences.

Empirical statistical models, by contrast, try to assess a borrower's credit standing on the basis of objectifying processes. For this purpose, certain credit review criteria of the exposure under review are compared to the existing database which was established empirically. This comparison makes it possible to classify the credit exposure. The goodness of fit of an empirical statistical model depends to a great extent on the quality of the database used in developing the system. First, the database must be sufficiently large to allow significant findings.

In addition, it must be ensured that the data used also represent the credit institution's future business adequately. Causal models derive direct analytical Links to creditworthiness on the basis of finance theory. They do not use statistical methods to test hypotheses on an empirical basis.

Hybrid models try to combine the advantages of several systems. Empirical statistical models are used only for those assessment factors for which a database exists which is sufficient in terms of quality. The other credit assessment factors which have to be included in the model are assessed by means of heuristic systems, while causal analysis models are typically not used.

The following subsections deal with the integration of these models in credit decision processes. The basic distinction made here is whether further steps are carried out in addition to the standardized data evaluation to assess the credit standing (individual decision), or whether the standardized data evaluation essentially forms the basis for a credit decision (mostly automated decision).

### Individual Decision

In an individual decision, the standardized data evaluation is complemented by further process steps to assess the credit standing. After the credit review, the collateral is evaluated. An integrated look at the detailed results leads to an individual credit decision which is not directly contingent on the results of the individual process components.

### Standardized Credit Review (Rating)

A typical rating process consists of two components:

1. financial rating (or quantitative rating)
2. qualitative rating

Financial rating comprises an analysis of the financial data available for the credit applicant. The analysis of annual financial statements (backward-looking approach) has a central position in this context. Increasingly, however, the analysis of business planning (forward-looking approach) is being employed in the credit review process.

Usually, automated programs are used to calculate indicators from the annual financial statements or the business plan. In most cases, the financial rating is carried out by credit analysts that are not related to sales in terms of organizational structure. The degree of specialization of these employees depends on the volume and the complexity of each bank's business activities.

In the conventional corporate customer business most elements of the financial rating are carried out by specialized employees. There may be additional specialized units that furnish those employees which are primarily responsible with certain analyses (modular system). In many banks, for example, it is possible to find units specializing in the analysis of foreign companies or real estate finance.

Setting up a separate unit should be considered whenever the analysis requires the development of special know-how and the number of the analyses to be handled renders a complete specialization of employees feasible in terms of efficiency.

If analyses that were drawn up by employees other than those primarily responsible for the credit approval process, it is essential to make sure that the administrative process involved is as efficient as possible. There should be a general guideline stipulating that the analysis is confirmed by the person in charge of the organizational unit supplying the module for the credit analysis when this module is handed over to the credit officer managing the exposure.

The common practice of having the people in charge of every single organizational unit involved in the credit approval process also confirm the completed credit application is rejected as inefficient and does not seem necessary in terms of risk, either.

In contrast to financial rating, which requires specific technical know-how, qualitative rating requires comprehensive knowledge of the borrower to be successful.

In the course of the rating, the qualitative factors are also evaluated in a standardized fashion by means of one of the models described above.

Accordingly, this is typically done by the sales employee. As qualitative rating may be interested in characteristics that go beyond the borrower in question itself (e.g. product positioning within the competitive environment), it is possible to provide for the integration of additional organizational units within the bank.

This could, for example, be units specializing in the evaluation of product markets. What was said above also applies to the inclusion of these modules.

Using a weighting function, financial and qualitative ratings are combined, with the result usually referred to as base rating.

## LECTURE – 18

## CREDIT REVIEW AND VALUATION OF COLLATERAL (CONT.)

In addition to the process components discussed so far, it is possible to include further information in the credit rating process. In particular, this comprises a bank's internal information on the respective applicant's conduct in the past (e.g. overdrafts) as well as additional information concerning the industry in which the company operates.

In practice, the result is often referred to as company rating.

If companies are affiliated, it is necessary to look at possible loss-sharing arrangements in the rating process.

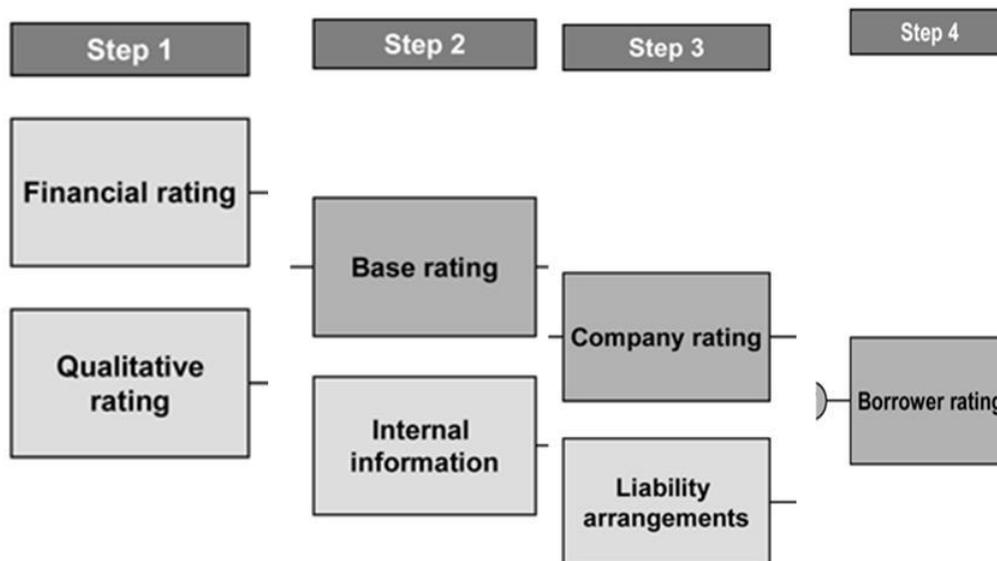
The inclusion of loss-sharing arrangements makes it possible to determine the risk-bearing entities. The inclusion of a loss sharing arrangement can affect the assessment of the probability of default of the company on which the rating is based positively and negatively.

- **Positive effect: assumption of support for the company in case of a crisis**
- **Negative effect: spillover of a crisis to the company**

The inclusion of loss-sharing arrangements should be done in accordance with the relevant members of the sales and credit analysis departments. This typically marks the end of the rating process. The final result is also referred to as borrower rating.

The final borrower rating should be awarded and confirmed together by the sales and risk analysis employees primarily in charge of the exposure. The employees should carry out mutual plausibility checks. In addition, external ratings should also be used in the plausibility check. If it is not possible to come to an agreement, the managers in charge look at the exposure, but the final decision should not be left in the hands of the front office.

The need for a formal arrangement is underscored by the significance which will be attributed to the rating under the IRB approach in the future.



### **Overriding Rating Results**

The internal guidelines should contain rules governing the circumstances under which it is permissible to interfere manually in the standardized credit rating models. This might, for example, be necessary in the course of a financial rating if a meaningful ratio analysis is precluded due to a special structure of the enterprise to be examined.

Any changes made must be subject to strict documentation requirements to ensure complete transparency of the process. The authority to do so must be stipulated in the decision-making structure. Furthermore, the number of overrides represents an indicator of the reliability of the credit rating processes. Therefore, the documentation is also required for validation purposes.

### **Documentation of Other Credit Assessment Factors**

In addition to the factors evaluated by means of the standardized credit rating process, the employees handling the exposure could include further data/factors in the credit review.

The need to offer at least the option to add a description and evaluation of the exposure results from the fact that the standardization of the credit rating process makes it necessary to limit the extent to which all existing credit assessment factors are presented.

Ideally, the processes should adequately reflect all factors necessary to assess the credit standing, and the need for a separate description should arise only as an exception. The description and assessment of these factors should be carried out in accordance with clear rules in the internal guidelines.

In practice, the credit applications show fields that help document these factors. Five categories are usually distinguished:

1. Legal situation
2. Market situation
3. Economic situation
4. Project evaluation
5. Debt service capacity

The documentation of the factors to be considered in these categories should contain clear and unambiguous statements describing their potential impact on credit standing. The design of the forms should already be apt to prevent or reduce longwinded descriptions of the factors and unclear assessments with regard to the impact on credit standing. This can be achieved by using standardized text modules and limited field sizes.

### **Valuation of Collateral**

The valuation of the collateral provided by the credit applicant is an essential element in the credit approval process and thus has an impact on the overall assessment of the credit risk involved in a possible exposure. The main feature of a collateralized credit is not only the borrower's personal credit standing, which basically determines the probability of default (PD), but the collateral which the lender can realize in case the customer defaults and which thus determines the banks loss.

Via the risk component of loss given default (LGD) and other requirements concerning credit risk mitigation techniques, the value of the collateral is included in calculating the capital requirement under Basel II.

In order to calculate the risk parameters under Basel II correctly, it is important for the valuation of the collateral to be effected completely independently of the calculation of the borrower's PD in the credit rating process.

This should ensure that the probability of default and the loss given default are shown separately in order to meet the Basel requirements of splitting up the review into a customer rating which reflects only the PD on the one hand, and a transaction valuation which also contains a valuation of the collateral to support the credit decision on the other.

Collateral is generally divided into personal and physical collateral.

In the case of personal collateral, the provider is basically liable with his entire fortune. Examples of personal collateral are the following:

- a. surety ship
- b. guarantee and letter of support
- c. collateral promise

In the case of physical collateral, the bank receives a specific security interest in certain assets of the borrower or the collateral provider. Examples of physical collateral are the following:

- a. mortgage
- b. pledge of movable assets (on securities, goods, bills of exchange)
- c. security assignment
- d. retention of title

The internal guidelines (collateral catalog) should lay down the type of collateral which each bank generally accepts. Banks should take a close look at that collateral whose value is subject to particularly strong fluctuations and/ or whose realization is longwinded or often cumbersome.

Liens, for example, usually pose relatively few problems for their holders and provide them with a rather strong creditor position, as the related value of the collateral given is generally easier to assess/value than the personal liability fund of a guarantor.

The collateral catalog has to include appropriate instructions on assessing the collateral potentially accepted by the bank as well as determining its collateral value. A description of the processes and principles in determining the collateral value for each type of collateral will primarily have to be drawn up in accordance with the business orientation of each bank and the complexity of the approved collateral.

General principles governing the valuation of collateral such as accounting for sustainable value or valuing the collateral based on the liquidation principle should be included in the determination of collateral value; similarly, it should also include general risk deductions (haircuts) as well as deductions for procedural cost (e.g. long time required to sell the collateral).

## EXPOSURE ASSESSMENT

After reviewing borrower rating, other credit assessment factors, and the collateral, it is possible to assess the borrower's creditworthiness with regard to the proposed exposure. The final assessment of the exposure risk can only be made (especially in the corporate customer business) after a comprehensive evaluation of all sub-processes of credit review.

The results of the valuation of the collateral will also be included in this assessment which has to be made by the employees handling the exposure. The credit form should thus provide appropriate fields. Here, it is important to make sure that the internal guidelines contain clear rules on the level of detail and the form in which the explanation has to be presented.

In practice, it has proven useful to compare the positive and negative assessment criteria. In addition, the form should provide a field for a concluding summary. Here, too, the use of text modules appears appropriate to avoid longwinded and vague statements.

The assessment of the employees in charge of processing the exposure is the basis for the subsequent credit decision. This must be done in line with the decision-making structure for the credit decision stipulated in the internal guidelines.

### Automated Decision

The standardized retail business in particular does mostly without individual interventions in the credit decision process, with the result of the standardized credit rating process being the major basis for the credit decision.

As these processes are used only for small credit volumes, the data are often entered by a sales employee. Deviations can be found mostly in residential real estate finance, as it is possible to set up specialized risk analysis units for this usually highly standardized process.

In both cases, the credit decision can be made by a single vote up to a volume to be defined in the internal guidelines in order to curb the complexity and thus increase the efficiency of the process.

Increasingly, mostly automated decision processes are also used in the small business segment. The prerequisite is a clear definition of and the data to be maintained for this customer segment. This makes it possible to create the conditions to derive a discriminatory analysis function.

In some cases, it is left to the credit applicant to enter the data necessary to carry out the credit review (so-called online applications). However, the limited database and lack of more personal contact with the credit applicant limit the application of this option.

The most important success factor in the use of mostly automated processes is the bank's ability to take precautions against the credit applicant entering wrong data or to identify such wrong entries in time. In Choosing a Process as the IRB approach provides for a calculation of the regulatory capital requirement on the basis of credit standing, the credit rating process has to be adapted to the requirements of the IRB approach.

The application of the formulas to calculate the regulatory capital requirement stipulated in the IRB approach under Basel II requires banks to derive the default parameters needed to quantify the risk. Both the basic approach and the advanced IRB approach require the calculation of the probability of default (PD) of a claim/a pool of claims.

Therefore, the credit rating of individual exposures has an immediate impact on the capital requirement. The probability of default of retail exposures can be determined on the basis of pools of claims which combine a number of comparable individual exposures. Thus, it is not necessary to classify every single borrower into different categories.

Under Basel II, it is possible — under certain circumstances — to treat corporate exposures with a total volume of no more than 1m as retail exposures. Based on what has been said so far, it would theoretically also be possible to assess such exposures by using a mostly automated credit decision process (at least from a perspective of compatibility of the credit rating process with the calculation of the capital requirement).

### In practice, this will have to be qualified for two major reasons:

1. The profitability of the small business segment is highly dependent on the price structure. This, in turn, is one of the decisive competitive factors. Therefore, it is necessary to

delineate the risk associated with an exposure as precisely as possible to be able to set a price commensurate with the risk involved.

2. Homogeneous data pools are required for the application of empirical statistical models. In practice, the borrowers in the small business segment show a high degree of heterogeneity, which means that this requirement can only be met by setting up many, thus smaller pools of claims. The decreasing size of pools of claims and the resulting increase in the processes to be applied thus effectively limit the application of this method. This is especially true for small institutions.

### **Preparation of Offers, Credit Decision and Documentation**

After reviewing and determining the applicant's creditworthiness in the course of assessing the exposure, the process leading up to disbursement of the credit can be initiated.

Thus, this covers all aspects ranging from preparing an offer to actually disbursing the amount stipulated in the credit agreement. With some restrictions, what was said in previous lectures also applies to the individual process steps in this context. These steps are basically designed in a way as to prevent procedural errors in the credit approval process. Therefore, this focuses on the risk-mitigating design of selected process components.

### **Preparation of Offers**

When preparing a firm offer, costing this offer plays a central role. From a procedural point of view, special emphasis has to be placed on clearly defining the authority to set conditions and the coordination process between sales and risk analysis.

### **Authority to Set Conditions**

The internal guidelines have to lay down the responsibility for the final decision concerning conditions. If a calculation of the conditions in line with the risk involved is carried out by automated systems, sales can have the sole authority to set conditions.

The sales department is fully responsible for earnings and should thus have the authority to decide on the conditions. If the systems do not allow a precise calculation of the risk-adequate conditions, the person in charge of risk analysis should be included in the final decision on the conditions.

The internal guidelines should contain specific instructions governing the assignment of responsibility for this case. This entails an explicit definition of the escalation criteria. These should be identical for sales and risk analysis. This helps avoid situations in which people at different hierarchical levels have to decide on conditions of an individual exposure.

If this is not done properly, such a hierarchical relation (even if it only exists indirectly) may have a negative impact on the required balance in forming an opinion. One of the prerequisites for the identical design of the authority to set conditions, viz. the congruent design of the sales and the risk analysis organization, is dealt with separately in next lectures.

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## CREDIT DECISION-MAKING STRUCTURE

If a set-up of the specific credit exposure was agreed upon in the course of preparing the offer, this is followed by a formal internal approval of the individual exposure as part of the credit approval process. The essential risk-related issue of this process step is the definition of credit authority, particularly with regard to the coordination of sales and risk analysis.

Credit authority describes the authorization granted by the management those discretion in making credit decisions up to a certain amount. In order to comply with the of our-eyes principle, this authority can as a rule only be exercised jointly by two or more decision makers. Moreover, a credit decision should always involve people that do not belong to the sales department (double vote).

In addition, the level of authority should be commensurate with the experience of the employees in charge of assessing the credit exposure. Looking at decision-making authority, we will now discuss an idealized decision- making structure. Special emphasis is placed on the determining factors to allow an adaptation to different business models.

### Basic Guidelines Covering the Creation of a Decision-making Structure

After looking at the risk level of the pending decision, the structure should be subdivided based on the nature of the object of the decision. Three categories are usually formed here:

1. non-standardized credits
2. standardized credits
3. short-term overdrafts (all instances in which credit lines are exceeded in the short term)

In addition, the decision-making structure may contain specific rules on further issues (e.g., authority to set conditions, minor changes within an exposure).

From a conceptual point of view, it makes sense to refer to the credit risk associated with the individual exposures when drawing up the decision-making structure for non-standardized credits.

Accordingly, the factors to be taken into account in drawing up the decision-making structure are the following:

1. level of exposure
2. value of collateral
3. type of borrower
4. probability of default

### Basel Accord & Credit Risk Management

Along the lines of the proposals in the consultative paper to the new capital adequacy framework issued in June 1999, the risk weighted assets in the standardized approach will continue to be calculated as the product of the amount of exposures and supervisory determined risk weights. As in the current Accord, the risk weights will be determined by the category of the borrower: sovereign, bank, or corporate.

Unlike in the current Accord, there will be no distinction on the sovereign risk weighting depending on whether or not the sovereign is a member of the Organization for Economic Coordination and Development (OECD).

Instead the risk weights for exposures will depend on external credit assessments. The treatment of off-balance sheet exposures will largely remain unchanged, with a few exceptions.

### Sovereign Risk Weights

The Committee retains its proposal to replace the current Accord with an approach that relies on the sovereign assessments of eligible ECAIs.

Claims on sovereigns determined to be of the very highest quality will be eligible for a 0% risk weight. The assessments used should generally be in respect of the sovereigns long-term domestic rating for domestic currency obligations and foreign rating for foreign currency obligations.

The Committee acknowledges the concerns expressed by some commentators regarding the use of external credit assessments, especially credit ratings. However, no alternative has been yet proposed that would be both superior to the current Accords OECD/non-OECD distinction and as risk-sensitive as the current proposal.

It has also been indicated that the Committee could mitigate concerns on the use of external credit assessments by providing strict guidance and explicit criteria governing the use of credit assessments. The Committee has clarified the criteria set out in the first Consultative Paper

Following the notation used in the June 1999 Consultative Paper, the risk weights of sovereigns would be as follows:

Credit Assessments	AAA To AA	A+ to A	BBB+ to BBB	BB+ to B	Below B	Unrated
Risk Weights	0%	20%	50%	100%	150%	100%

At national discretion, a lower risk weight may be applied to banks. Exposures to the sovereign of incorporation denominated in domestic currency and funded in that currency. Where this discretion is exercised, other national supervisory authorities may also permit their banks to apply the same risk weight to domestic currency exposures to this sovereign (or central bank) funded in that currency.

To address at least in part the concern expressed over the use of credit ratings and to supplement private sector ratings for sovereign exposures, the Committee is currently exploring the possibility of using the country risk ratings assigned to sovereigns by Export Credit Agencies (ECAs).

The key advantage of using publicly available export credit agencies. Risk scores for sovereigns are that ECA risk scores are available for a far larger number of sovereigns than are private ECAI ratings.

A primary function of the ECAs is to insure the country risk, and sometimes also the commercial risk, attached to the provision of export credit to foreign buyers. In April 1999 the OECD introduced a methodology for setting benchmarks for minimum export insurance premiums for country risk.

This methodology has been adopted by various countries. Based on an econometric model of three groups of quantitative indicators, the methodology produces a risk classification by assigning individual countries to one of seven risk scores.

The Committee proposes that supervisors may recognize the country risk scores assigned to sovereigns by Export Credit Agencies that subscribe to the OECD 1999 methodology and publish their risk scores. Banks may then choose to use the risk scores produced by an ECA (or ECAs) recognized by their supervisor.

The OECD 1999 methodology establishes seven risk score categories associated with minimum export insurance premiums. As detailed below, each of those ECA risk scores will correspond to a specific risk weight category. Where only a risk score which is not associated with a minimum premium is indicated, it will not be recognized for risk weighting purposes.

**The Committee is proposing that the risk scores will be slotted into the risk weighting categories as in the table.**

ECA risk Scores	1	2	3	4 to 6	7
Risk Weights	0%	20%	50%	100%	150%

Given the similarity in risk profiles, claims on central banks are assigned the same risk weight as that applicable to their sovereign governments. The Bank for International Settlements (BIS), the International Monetary Fund (IMF), the European Central Bank (ECB) and the European Community will receive the lowest risk weight applicable to sovereigns and central banks.

After further reflection, the Committee is no longer calling for adherence to the SDDS set out by the IMF as a pre-condition for preferential risk weights. Judging compliance with these standards is a qualitative exercise and an all-or-nothing judgment may be overly simplistic.

Therefore, the Committee does not wish to create a structure in which a sovereigns or supervisors compliance with these fundamental standards would be assessed in a purely mechanical fashion.

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**LECTURE – 21****RISK WEIGHTS FOR NON-CENTRAL GOVT. PUBLIC SECTOR ENTITIES (PSES)**

Claims on domestic PSEs will be treated as claims on banks of that country. Subject to national discretion, claims on domestic PSEs may also be treated as claims on the sovereigns in whose jurisdictions the PSEs are established. Where this discretion is exercised, other national supervisors may allow their banks to risk weight claims on such PSEs in the same manner.

Non-central government PSEs can include different types of institutions, ranging from government agencies and regional governments to government owned corporations.

In order to provide some guidance and to delineate the circumstances in which PSEs may receive the more favorable bank or sovereign treatment, the example below shows how PSEs might be categorized, looking at one particular aspect of the PSEs, the revenue raising powers.

It should be noted that, given the wide range of PSEs and the significant differences in government structures among different jurisdictions, this is only one example for supervisory authorities in exercising their national discretion.

There may be other ways of determining the different treatments for different types of PSEs, for example by focusing on the extent of guarantees provided by the central government.

1. **Regional governments and local authorities** could qualify for the same treatment as claims on the central government if these governments and local authorities have specific revenue-raising powers and have specific institutional arrangements the effect of which is to reduce their risks of default.
2. **Administrative bodies responsible to central governments, regional governments or to local authorities and other non-commercial undertakings** owned by the governments or local authorities may not warrant the same treatment as claims on their sovereign if the entities do not have revenue raising powers or other arrangements as described above. If strict lending rules apply to these entities and a declaration of bankruptcy is not possible because of their special public status, it may be appropriate to treat these claims in the same manner as claims on banks.
3. **Commercial undertakings** owned by central governments, regional governments or by local authorities may be treated as normal commercial enterprises. If these entities function as a corporate in competitive markets even though the state, a regional authority or a local authority is the major shareholder of these entities, supervisors may decide to attach the risk weights applicable to corporate.

**Risk weights for multilateral development banks (MDBs)**

The risk weights applied to MDBs will be based on external credit assessments as set out under option 2 for treating bank claims explained further. A 0% risk weight will be applied to claims on highly rated MDBs that fulfill to the Committees satisfaction the criteria provided below. The Committee will continue to evaluate eligibility on a case-by-case basis. The eligibility criteria for MDBs risk weighted at 0% are:

1. very high quality long-term issuer ratings, i.e. a majority of an MDBs external assessments must be AAA;
2. shareholder structure comprised of a significant proportion of high quality sovereigns with long term issuer credit assessments of AA or better;
3. strong shareholder support demonstrated by the amount of paid-in capital contributed by the shareholders; the amount of callable capital the MDBs have the right to call, if required, to repay their liabilities; and continued capital contributions and new pledges from sovereign shareholders;
4. adequate level of capital and liquidity (a case-by-case approach is necessary in order to assess whether each institutions capital and liquidity are adequate), and
5. strict statutory lending requirements and conservative financial policies, which would include among other conditions a structured approval process, internal creditworthiness and risk concentration limits (per country, sector, and individual exposure and credit category), large exposures approval by the board or a committee of the board, fixed repayment schedules,

effective monitoring of use of proceeds, status review process, and rigorous assessment of risk and provisioning to loan loss reserve.

The Committee considers that the MDBs currently eligible for a 0% risk weight are:

1. The World Bank Group comprised of the International Bank for Reconstruction and Development (IBRD) and the International Finance Corporation (IFC),
2. The Asian Development Bank (ADB),
3. The African Development Bank (AFDB),
4. The Council of Europe Development Bank (CEDB), and
5. The European Bank for Reconstruction and Development (EBRD),
6. The Inter-American Development Bank (IADB),
7. The European Investment Bank (EIB),
8. The Nordic Investment Bank (NIB),
9. The Caribbean Development Bank (CDB),

### Risk Weights for Banks

As was proposed in the June 1999 Consultative Paper, there will be two options for deciding the risk weights on exposures to banks. National supervisors will apply one option to all banks in their jurisdiction. No claim on an unrated bank may receive a risk weight less than that applied to its sovereign of incorporation.

Under this option, as shown in the table below, all banks incorporated in a given country will be assigned a risk weight one category less favorable than that assigned to claims on the sovereign of incorporation.

Credit Assessments	AAA to AA	A+ to A	BBB+ to BBB	BB+ to B	Below B	Unrated
Risk Weights	0%	20%	50%	100%	150%	100%

The Committee is reducing the scope of claims that would receive the preferential risk weight from those with original maturity of 6 months or less, as was proposed in the June 1999 Consultative Paper, to those with original maturity of 3 months or less. This change reflects analysis completed by the Committee which suggests that in practice the upper maturity bound in the short-term inter-bank market is generally three months.

The Committee understands that there are cases where a bank or a corporate can have a higher assessment than the sovereign assessment of its home country and that risk weighting exposures to those entities based on such assessments can be justified. Therefore, it will not retain the sovereign floor that was proposed in the June 1999 Consultative Paper.

### Risk weights for securities firms

Claims on securities firms may be treated as claims on banks provided they are subject to supervisory and regulatory arrangements comparable to those under the new capital adequacy framework (including, in particular, risk-based capital requirements).

The Committee is no longer proposing to include the implementation of the 30 Objective and Principles of Securities Regulation set out by IOSCO and referenced in the first consultative paper as a condition for receiving a risk weight less than 100%.

### Risk Weights for Corporates

The table provided below illustrates the risk weighting of rated corporate claims, including claims on insurance companies.

<b>Credit Assessment</b>	<b>AAA to AA</b>	<b>A+ to A</b>	<b>BBB+ to BB</b>	<b>Below BB</b>	<b>Unrated</b>
<b>Risk Weights</b>	20%	50%	100%	150%	100%

As with the case of exposure to banks, the Committee will not adopt the sovereign floor that was proposed in the June 1999 Consultative Paper, recognising that there are legitimate cases where a corporate can have a higher assessment than the sovereign assessment of its home country.

The standard risk weight for unrated claims on corporates will be 100%. No claim on an unrated corporate may be given a risk weight preferential to that assigned to its sovereign of incorporation.

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## COUNTERPARTY RISK WEIGHTINGS OF OTC DERIVATIVE

As stated in the June 1999 Consultative Paper, the 50% ceiling on counterparty risk weightings of OTC derivative transactions will no longer apply.

This ceiling was founded on the assumption that counterparties to OTC derivatives contracts tend to be first-class names; this assumption is no longer valid. Furthermore, the increased risk-sensitivity of the new standardized approach renders the ceiling needless.

### Credit Conversion Factor for Short term Commitments

The credit conversion factor for business commitments with original maturity up to one year will be 20% as proposed in the June 1999 Consultative Paper. As an exception, a 0% conversion factor will be applied to commitments that are unconditionally cancellable, or that effectively provide for automatic cancellation, due to deterioration in a borrower's creditworthiness, at any time by the bank without prior notice. The credit conversion factor for commitments with original maturity over one year will continue to be 50%.

### Guaranteed Repo-Style Transactions

A credit conversion factor of 100% will be applied to the lending of banks. Securities or the posting of securities as collateral by the bank, including instances where these arise out of repo-style transactions (i.e. repo / reverse repo and securities lending/securities borrowing transactions) where the credit converted exposure is secured by eligible collateral. When banks, acting as agents, arrange a repo-style transaction between a customer and a third party and provide a guarantee to the customer that the third party will perform on its obligations, then the risk to the banks is the same as if the banks had entered into a repo-style transaction as principal. In such circumstances, banks would be required to calculate capital requirements as if it were indeed a party to the transaction.

### Maturity

The Committee confirms the view expressed in the June 1999 Consultative paper that, although maturity is one factor that is relevant in the assessment of the credit risk of a claim, it is difficult to pursue greater precision in differentiating among the maturities of claims within the standardized approach given the broad-brush nature of the counterparty risk weighting.

The standardized approach is designed to be suitable for application by banks of varying degrees of size and sophistication, and the costs of increasing the complexity of the standardized approach are relatively high.

The standardized approach is designed to be suitable for application by banks of varying degrees of size and sophistication, and the costs of increasing the complexity of the standardized approach are relatively high.

The Committee has concluded that, in general, the benefits (of improved risk-sensitivity) would be outweighed by the costs (of greater complexity). Despite its improved risk sensitivity, the new standardized approach remains intentionally simple and broad-brush.

The Committee has concluded that, in general, the benefits (of improved risk-sensitivity) would be outweighed by the costs (of greater complexity). Despite its improved risk sensitivity, the new standardized approach remains intentionally simple and broad-brush.

Therefore, the Committee will not incorporate a maturity dimension throughout the standardized approach. As set out above, the only maturity elements to be included in the standardized approach are the distinction between short-term and long-term commitments, and the distinction between short-term and long-term lending between financial institutions. The other exception is the use of short-term assessments as is discussed below

### External Credit Assessment

The standardized approach draws on external credit assessments for determining risk weights. Therefore, the soundness and reliability of the institutions performing the assessments are vitally important for the new system to be effective. This section discusses the recognition process and the criteria for eligibility.

**The Recognition Process**

National supervisors are responsible for determining whether an ECAI meets the criteria listed below. Certain ECAIs may be recognized on a limited basis, e.g. by type of claims or by jurisdiction. Some supervisors may choose to disclose a list of all recognized ECAIs, plus any restrictions which may apply to the use of particular agencies for certain types of exposures.

The supervisory process for recognising ECAIs should be made public to avoid unnecessary barriers to entry. Supervisors will have to gain experience in reviewing and recognising rating agencies in the credit risk area. The Committee thus recognizes the importance for supervisors of sharing their experiences with the use of credit ratings and continuing dialogue with market participants.

**Objectivity**

The methodology for assigning credit assessments must be rigorous, systematic, and subject to some form of validation based on historical experience. Moreover, assessments must be subject to ongoing review and responsive to changes in financial condition.

Before being recognized by supervisors, an assessment methodology for each market segment, including rigorous back testing, must have been established for at least one year and preferably three.

**Independence**

An ECAI should be independent and should not be subject to political or economic pressures that may influence the rating. The assessment process should be as free as possible from any constraints that could arise in situations where the composition of the board of directors or the shareholder structure of the assessment institution may be seen as creating a conflict of interest.

**International Access / Transparency**

The individual assessments should be available to both domestic and foreign institutions with legitimate interests and at equivalent terms. In addition, the general methodology used by the ECAI should be publicly available.

**Disclosure**

An ECAI should disclose qualitative and quantitative information as set forth below. Disclosures by ECAIs have been designed to ensure that the ratings which banks employ in the allocation of risk weightings are compiled by reputable institutions. An absence of transparency in this context could lead to banks .assessment shopping.

For institutions which may give more favourable assessments, leading to misleading indicators of risk exposures and the potential for inadequate capital requirements. Furthermore, such disclosures will underpin the comparability of disclosures across banks

## QUALITATIVE DISCLOSURES

**Qualitative disclosures** enable users to compare assessment methods and put quantitative information into context. Thus information such as the definition of default, the time horizon, and the target of the assessment are all required.

**Quantitative disclosures** present information on the actual default rates experienced in each assessment category and information on assessment transitions i.e. the likelihood of an AAA credit transiting to AA etc over time.

The disclosure of certain aspects of ECAIs methodologies and definitions is important where differences in methodologies present the opportunity for exploitation by individual banks. The information that needs to be disclosed is presented in more detail in Basel II. The Committee will be carrying out further work on how to make disclosures by ECAIs comparable.

### Resources

An ECAI should have sufficient resources to carry out high quality credit assessments. These resources should allow for substantial on-going contact with senior and operational levels within the entities assessed in order to add value to the credit assessments. Such assessments should be based on methodologies combining qualitative and quantitative approaches.

### Credibility

To some extent, credibility is derived from the criteria above. In addition, the reliance on ECAIs external credit assessments by independent parties (investors, insurers, trading partners) is evidence of the credibility of the assessments of an ECAI.

The credibility of an ECAI is also underpinned by the existence of internal procedures to prevent the misuse of confidential information. In order to be eligible for recognition, an ECAI does not have to assess firms in more than one country.

### Implementation Considerations

#### *The mapping process*

Supervisors will be responsible for slotting ECAIs assessments into the standardized risk weighting framework, i.e. deciding which assessment categories correspond to which risk weights.

The mapping process should be objective and should result in a risk weight assignment consistent with that of the level of credit risk reflected in the tables above and should cover the full spectrum of risk weights.

These processes also need to be publicly disclosed. Other possibilities for slotting ECAIs assessment categories into the risk framework in an objective manner will be evaluated during the consultation period, for example basing the slotting on experienced default probabilities for individual rating categories of ECAIs.

The Committee has begun work in this area and has identified issues such as the definition of default and the types of assessment to be used.

Banks must use the chosen ECAIs and their ratings consistently for each type of claim, for both risk weighting and risk management purposes. In other words, banks will not be allowed to cherry-pick the assessments provided by different ECAIs.

Banks must disclose on at least an annual basis the credit assessment institutions that they use for the risk weighting of their assets by type of claims, the mapping process determined by supervisors. Other disclosures will also be required, including the percentage of their risk weighted assets that are based on the assessments of each eligible institution.

### Multiple Assessments

If there is only one assessment by an ECAI chosen by a bank for a particular claim, that assessment should be used to determine the risk weight of the claim.

If there are two assessments by ECAIs chosen by a bank corresponding to different risk weights, the higher risk weight will be applied.

If there are multiple assessments (more than two), the two assessments corresponding to the lowest risk weights referred to, and if they are different, the higher risk weight should be used. If the best two assessments are the same, that assessment should be used to determine the risk weight.

### **Issuer versus Issue Assessment**

Where a bank invests in a particular issue that has an issue-specific assessment, the risk weight of the claim will be based on this assessment. Where the bank's claim is not subject to an issue-specific assessment, the following general principles apply.

In circumstances where the borrower has a specific assessment for an issued debt

but the bank's claim is not an investment in this particular debt - a **high quality credit assessment** (one which maps into a risk weight lower than that which applies to an unrated claim) on that specific debt may only be applied to the bank's unassessed claim if this claim ranks *pari passu* or senior to the claim with an assessment in all respects. If not, the credit assessment cannot be used and the unassessed claim will receive the risk weight for unrated claims.

In circumstances where the borrower has an issuer assessment, this typically applies to senior unsecured claims on that issuer. Consequently, only senior claims on that issuer will benefit from a high quality issuer assessment.

Other unassessed claims of a highly assessed issuer will be treated as unrated. If either the issuer or a single issue has a **low quality assessment** (mapping into a risk weight equal or higher than that which applies to unrated claims), an unassessed claim on the same counterparty will be attributed the same risk weight applicable to the low quality assessment.

In order to avoid any double counting of credit enhancement factors, no supervisory recognition of credit risk mitigation techniques will be taken into account if the credit enhancement is already reflected in the issue specific rating.

### **Short Term / Long Term Assessments**

The Committee intends to carry out further work to consider the feasibility and desirability of using short-term assessments even in cases where there are long-term assessments. In doing so, it will explore the underpinning of the short-term assessments and evaluate the implication of extending the scope of the maturity dimension in this area against the considerations on maturity in general as previously illustrated.

As a general rule, if short-term claims receive a 150% risk weight, an unrated unsecured long-term claim should also receive a 150% risk weight, unless the bank uses recognized credit risk mitigation techniques on the long-term claim.

### CREDIT RISK MITIGATION IN THE STANDARDIZED APPROACH

Credit risk mitigation (CRM) relates to the reduction of by, for example, collateral, obtaining credit derivatives or guarantees, or taking an offsetting position subject to a netting agreement.

The 1988 Accord recognizes only collateral instruments and guarantees deemed to be reliably/identifiably of the very highest quality. The Accord takes an all-or-nothing approach to credit risk mitigates: some forms are recognized while others are not.

Since 1988, the markets for the transfer of credit risk have become more liquid and more complex. The number of suppliers of credit protection has increased, and new products such as credit derivatives have allowed banks to un-bundle their credit risks and to sell those risks that they do not wish to retain.

The Committee welcomes these innovations: greater liquidity in itself reduces the transaction costs of intermediating between borrowers and lenders, and it also encourages a more efficient allocation of risks in the financial system.

In designing the new framework for credit risk mitigation, the Committee has pursued three aims: improving the incentives for banks to manage credit risk in a prudent and effective manner;

1. continuing to offer a prudent and simple approach that may be adopted by a wide range of banks; and
2. relating capital treatments to the economic effects of different (CRM) Credit Risk Mitigation techniques, delivering greater consistency and flexibility in the treatment of different forms of CRM techniques.

The new framework for credit risk mitigation offers a choice of approaches that allow different banks to strike different balances between simplicity and risk-sensitivity. There are three broad treatments to CRM: in the standardized approach, the foundation IRB approach and the advanced IRB approach.

The treatments of CRM in the standardized and foundation IRB approaches are very similar. In the advanced IRB approach, banks are permitted to estimate a greater number of risk parameters, but the concepts on which the framework is based are the same.

The approach to CRM techniques is designed to focus on economic effect. However, collateral, netting and guarantees/credit derivatives typically have different risk characteristics. For example, collateral represents .funded. Protection whereas guarantees and most credit derivatives is unfunded.

Furthermore, whereas collateral instruments are subject to market risk, guarantees are not. Finally, credit derivatives are more likely than collateral to be subject to maturity or asset mismatches. Hence, although the treatments of collateral, netting and credit derivatives and guarantees are based on similar concepts, the risk weighting schemes are different.

While CRM techniques generally reduce credit risk, they do not fully eliminate it. In such transactions, banks - often for good business reasons - leave some residual risks un-hedged. Three forms of residual risk are explicitly addressed in the new proposed framework: asset mismatch, maturity mismatch and currency mismatch. The Committee's approach to maturity and currency mismatch is the same across all CRM techniques. The treatment for asset mismatch is provided in the area of credit derivatives.

The June 1999 Consultative Paper set out the Committee's intention to focus on the economic risks, and this intention received broad support among commentators. This document explains the proposed treatments of credit risk mitigate in much greater detail.

Also in the context of CRM, given the operational and capital requirements of the first pillar in BASEL Accord, the second pillar will be used to ensure that banks are sufficiently well equipped, *ex ante*, to control and manage the risks inherent in each business in which they are involved. Furthermore, Pillar 2 supervisory responses will have a role to play should it become apparent, *ex post*, that banks systems and controls are not adequate to capture and manage the risks of their business.

Some rated debt issues may contain credit risk mitigates. Where those mitigates are taken into account in the external credit assessment, they may not be granted regulatory capital relief under the framework set out in this part of the supporting document. If other risk mitigates are applied, then they may be recognized. In other words, no double counting of credit risk mitigation will be allowed

**Collateral**

This section covers collateralized transactions. A collateralized transaction is one in which

1. A bank has an credit exposure or potential credit exposure to another party by virtue of cash or financial instruments lent or posted as collateral, or an OTC derivatives contract; and
2. The exposure or potential exposure is hedged in whole or in part by collateral posted by the counterparty.

As a general rule, no secured claim should receive a higher capital requirement than an otherwise identical claim on which there is no collateral. Well-documented collateral agreements reduce credit risk to the lender. However, the near-collapse of LTCM “**Long-Term Capital Management**” in 1998 demonstrated that even a fully collateralized position is not without risk.

**Minimum Conditions**

Before capital relief will be granted to any form of collateral, the standards set out in this section must be met. Supervisors will monitor the extent to which banks satisfy these conditions, both at the outset of a collateralized transaction and on an on-going basis.

**Legal certainty**

- a. Collateral is effective only if the legal mechanism by which collateral is given is robust and ensures that the lender has clear rights over the collateral, and may liquidate or retain it in the event of the default, insolvency or bankruptcy (or otherwise-defined credit event set out in the transaction documentation) of the obligor and, where applicable, the custodian holding the collateral.
- b. A bank must take all steps necessary to fulfill local contractual requirements in respect of the enforceability of security interest, e.g. by registering a security interest with a registrar. Where the collateral is held by a custodian, the bank must seek to ensure that the custodian ensures adequate segregation of the collateral instruments and the custodian’s own assets.
- c. A bank must obtain legal opinions confirming the enforceability of the collateral arrangements in all relevant jurisdictions. Legal opinions should be updated at appropriate intervals (e.g. annually).
- d. The collateral arrangements must be properly documented, with a clear and robust procedure for the timely liquidation of collateral. A bank’s procedures should ensure that any legal conditions required for declaring the default of the customer and liquidating the collateral are observed.

***Low correlation with exposure***

In order for collateral to provide protection, the credit quality of the obligor and the value of the collateral must not have a material positive correlation. For example, securities issued by the collateral provider - or by any related group entity - would provide little protection and so would be ineligible.

***Robust risk management process***

While collateral reduces credit risk, it simultaneously increases other risks to which a bank is exposed, such as legal, operational, liquidity and market risks. Therefore, it is imperative that a bank employ robust procedures and processes to control these risks. The following is a list of sound practices relating to collateral management.

**Collateral Valuation**

Collateral should be revalued frequently, and the unsecured exposure should also be monitored frequently. More frequent revaluation is more prudent, and the revaluation of marketable securities should preferably occur on (at least) a daily basis. Furthermore, stressed and unstressed measures of the potential unsecured exposure under collateralized transactions should be calculated.

One such measure would take account of the time and cost involved if the borrower or counterparty was to default and the collateral had to be liquidated. Furthermore, the setting of limits for collateralized counterparties should take account of the potential unsecured exposure. Stress tests and scenario analysis should be conducted to enable the bank to understand the performance of its portfolio of

collateral arrangements under unusual market conditions. Any unusual or disproportionate risk identified should be managed and controlled.

**Roll-off Risks**

Where the bank obtains credit protection that differs in maturity from the underlying credit exposure, the bank must monitor and control its roll-off risks, i.e. the *fact* that the bank will be fully exposed when the protection expires, and the *risk* that it will be unable to purchase credit protection or ensure its capital adequacy when the credit protection expires.

### OPERATIONAL REQUIREMENTS FOR GUARANTEES

In order for a guarantee to be recognized, the following conditions must be satisfied:

1. on the qualifying default/non-payment of the obligor, the lender may in a timely manner pursue the guarantor for monies outstanding under the loan, rather than having to continue to pursue the obligor. The act of the guarantor making a payment under the guarantee grants the guarantor the right to pursue the obligor for monies outstanding under the loan;
2. the guarantee is an explicitly documented obligation assumed by the guarantor;
3. for the proportion of the exposure covered, the guarantor covers all payments the underlying obligor is expected to make under the loan/exposure, notional amount etc; and
4. the guarantee must be legally enforceable in all relevant jurisdictions.

### Operational Requirements for Credit Derivatives

In order for protection from a credit derivative to be recognized, the following conditions must be satisfied:

1. The credit events specified by the contracting parties must at a minimum include:
  - failure to pay the amounts due according to reference asset specified in the contract;
  - a reduction in the rate or amount of interest payable or the amount of scheduled interest accruals;
  - a reduction in the amount of principal or premium payable at maturity or at scheduled redemption dates;
  - a change in the ranking in the priority of payment of any obligation, causing the subordination of such obligation.
2. Contracts allowing for cash settlement are recognized for capital purposes insofar as a robust valuation process is in place in order to estimate loss reliably. There must also be a clearly specified period for obtaining post-credit-event valuations of the reference asset, typically no more than 30 days.
3. The credit protection must be legally enforceable in all relevant jurisdictions;
4. Default events must be triggered by any material event, e.g. failure to make payment over a certain period or filing for bankruptcy or protection from creditors;
5. The grace period in the credit derivative contract must not be longer than the grace period agreed upon under the loan agreement;
6. The protection purchaser must have the right/ability to transfer the underlying exposure to protection provider, if required for settlement;
7. The identity of the parties responsible for determining whether a credit event has occurred must be clearly defined. This determination must not be the sole responsibility of the protection seller. The protection buyer must have the right/ability to inform the protection provider of the occurrence of a credit event;

Only credit default swaps and total return swaps that provide credit protection equivalent to guarantees will be eligible for recognition. The following exception applies.

Where a bank buying credit protection through a total return swap records the net payments received on the swap as net income, but does not record offsetting deterioration in the value of the asset that is protected (either through reductions in fair value or by an addition to reserves) the credit protection will not be recognized.

Other types of credit derivatives will not be eligible for this treatment at this time. Further work is expected in this area.

### Sovereign Guarantees

As described in previous lectures, a lower risk weight may be applied at national discretion to banks. Exposures to the sovereign (or central bank) of incorporation denominated in domestic currency and funded in that currency. National authorities may extend this treatment to portions of claims guaranteed

by the sovereign (or central bank), where the guarantee is denominated in domestic currency and the exposure is funded in that currency.

### **Maturity Mismatches**

A maturity mismatch occurs when the residual maturity of a hedge is less than that of the underlying exposure. There may be sound economic reasons for acquiring a hedge with a maturity mismatch.

For example, a bank may have only a short-term concern in respect of the credit quality of a particular counterparty. Therefore, it may seek to hedge only the front-end credit risk i.e. the counterparty risk in the first year or so of the exposure.

The Committee does not wish to discourage such partial hedging but seeks to adopt a prudent approach to the maturity risks arising.

### **Currency Mismatches**

Where the credit exposure is denominated in a currency that differs from that in which the underlying exposure is denominated, there is a currency mismatch. This currency mismatch is a contingent risk: for a bank to suffer loss, the borrower must fail to pay and the exchange rates must move adversely. This contingent risk should be distinguished from outright FX risk.

### **Collateral / On-Balance Sheet Netting**

A bank must disclose gross exposures, the amount of exposure secured by collateral and netted by on-balance sheet netting contracts, and risk-weighted assets excluding and including the effects of collateral/on-balance sheet netting. These aggregate values must be split into risk weight bucket/internal risk grade.

A bank must disclose the methodologies used (i.e. simple/comprehensive, standard supervisory/own estimate haircuts).

A bank must describe its overall strategy and process for managing collateral including, in particular, the monitoring of collateral value over time. Key internal policies for the recognition of collateral, including, for example, the ratio of underlying exposure to collateral (i.e. LTV ratio) and maturity mismatches, must also be broadly described.

A bank must disclose the amount of exposure covered by guarantees/credit derivatives and risk weighted assets excluding and including the effects of guarantees/credit derivatives. These values must be disclosed by risk weight bucket/internal risk grade and by type of guarantor/protection provider.

A bank must provide information on its strategy and process for monitoring the continuing credit worthiness of protection providers and administering the guarantees and credit derivatives along the lines required for collateralized transactions.

### **Credit Risk: The Internal Ratings-Based Approach**

Banks must apply the securitization framework for determining regulatory capital requirements on exposures arising from traditional and synthetic securitizations or similar structures that contain features common to both. Since securitizations may be structured in many different ways, the capital treatment of a securitization exposure must be determined on the basis of its economic substance rather than its legal form.

Similarly, supervisors will look to the economic substance of a transaction to determine whether it should be subject to the securitization framework for purposes of determining regulatory capital. Banks are encouraged to consult with their national supervisors when there is uncertainty about whether a given transaction should be considered a securitization. For example, transactions involving cash flows from real estate (e.g. rents) may be considered specialized lending exposures, if warranted.

A *traditional securitization* is a structure where the cash flow from an underlying pool of exposures is used to service at least two different stratified risk positions or tranches reflecting different degrees of credit risk. Payments to the investors depend upon the performance of the specified underlying exposures, as opposed to being derived from an obligation of the entity originating those exposures.

The stratified / tranching structures that characterize securitizations differ from ordinary senior/subordinated debt instruments in that junior securitization tranches can absorb losses without interrupting contractual payments to more senior tranches, whereas subordination in a senior/subordinated debt structure is a matter of priority of rights to the proceeds of liquidation.

A *synthetic securitization* is a structure with at least two different stratified risk positions or tranches that reflect different degrees of credit risk where credit risk of an underlying pool of exposures is transferred, in whole or in part, through the use of funded (e.g. credit-linked notes) or unfunded (e.g. credit default swaps) credit derivatives or guarantees that serve to hedge the credit risk of the portfolio. Accordingly, the investors' potential risk is dependent upon the performance of the underlying pool.

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## CREDIT RISK: THE INTERNAL RATINGS-BASED APPROACH

Banks' exposures to a securitization are hereafter referred to as "securitization exposures". Securitization exposures can include but are not restricted to the following: asset-backed securities, mortgage-backed securities, credit enhancements, liquidity facilities, interest rate or currency swaps, credit derivatives and tranches as described in Basel Accord. Reserve accounts, such as cash collateral accounts, recorded as an asset by the originating bank must also be treated as securitization exposures.

Underlying instruments in the pool being securitized may include but are not restricted to the following: loans, commitments, asset-backed and mortgage-backed securities, corporate bonds, equity securities, and private equity investments. The underlying pool may include one or more exposures.

### Definitions & General Terminology

#### ***Originating bank***

For risk-based capital purposes, a bank is considered to be an originator with regard to a certain securitization if it meets either of the following conditions:

1. The bank originates directly or indirectly underlying exposures included in the securitization; or
2. The bank serves as a sponsor of an asset-backed commercial paper (ABCP) conduit or similar program that acquires exposures from third-party entities. In the context of such programs, a bank would generally be considered a sponsor and, in turn, an originator if it, in fact or in substance, manages or advises the program, places securities into the market, or provides liquidity and/or credit enhancements.

#### **Asset-Backed Commercial Paper**

An asset-backed commercial paper (ABCP) program predominately issues commercial paper with an original maturity of one year or less that is backed by assets or other exposures held in a bankruptcy-remote, special purpose entity.

#### **Clean-up call**

A clean-up call is an option that permits the securitization exposures (e.g. asset backed securities) to be called before all of the underlying exposures or securitization exposures have been repaid. In the case of traditional securitizations, this is generally accomplished by repurchasing the remaining securitization exposures once the pool balance or outstanding securities have fallen below some specified level. In the case of a synthetic transaction, the clean-up call may take the form of a clause that extinguishes the credit protection.

#### **Credit Enhancement**

A credit enhancement is a contractual arrangement in which the bank retains or assumes a securitization exposure and, in substance, provides some degree of added protection to other parties to the transaction.

#### **Credit-enhancing interest-only strip**

A credit-enhancing interest-only strip (*I/O*) is an on-balance sheet asset that:

1. represents a valuation of cash flows related to future margin income, and
2. is subordinated.

#### **Early Amortization**

Early amortization provisions are mechanisms that, once triggered, allow investors to be paid out prior to the originally stated maturity of the securities issued. For risk-based capital purposes, an early amortization provision will be considered either controlled or non-controlled. A controlled early amortization provision must meet all of the following conditions.

1. The bank must have an appropriate capital/liquidity plan in place to ensure that it has sufficient capital and liquidity available in the event of an early amortization.

2. Throughout the duration of the transaction, including the amortization period, there is the same pro rata sharing of interest, principal, expenses, losses and recoveries based on the bank's and investors' relative shares of the receivables outstanding at the beginning of each month.
3. The bank must set a period for amortization that would be sufficient for at least 90% of the total debt outstanding at the beginning of the early amortization period to have been repaid or recognized as in default; and
4. The pace of repayment should not be any more rapid than would be allowed by straight-line amortization over the period set out in criterion (3).
5. An early amortization provision that does not satisfy the conditions for a controlled early amortization provision will be treated as a non-controlled early amortization provision.

### **Excess Spread**

Excess spread is generally defined as gross finance charge collections and other income received by the trust or special purpose entity (SPE, specified in Basel II) minus certificate interest, servicing fees, charge-offs, and other senior trust or SPE expenses.

### **Implicit Support**

Implicit support arises when a bank provides support to a securitization in excess of its predetermined contractual obligation.

### **Special purpose entity (SPE)**

An SPE is a corporation, trust, or other entity organized for a specific purpose, the activities of which are limited to those appropriate to accomplish the purpose of the SPE, and the structure of which is intended to isolate the SPE from the credit risk of an originator or seller of exposures.

SPEs are commonly used as financing vehicles in which exposures are sold to a trust or similar entity in exchange for cash or other assets funded by debt issued by the trust.

### ***Operational requirements for traditional securitizations***

An originating bank may exclude securitized exposures from the calculation of risk weighted assets only if all of the following conditions have been met. Banks meeting these conditions must still hold regulatory capital against any securitization exposures they retain.

- a) Significant credit risk associated with the securitized exposures has been transferred to third parties.
- b) The transferor does not maintain effective or indirect control over the transferred exposures. The assets are legally isolated from the transferor in such a way (e.g. through the sale of assets or through sub participation) that the exposures are put beyond the reach of the transferor and its creditors, even in bankruptcy or receivership. These conditions must be supported by an opinion provided by a qualified legal counsel. The transferor is deemed to have maintained effective control over the transferred credit risk exposures if it:
  - (i) is able to repurchase from the transferee the previously transferred exposures in order to realize their benefits; or
  - (ii) is obligated to retain the risk of the transferred exposures. The transferor's retention of servicing rights to the exposures will not necessarily constitute indirect control of the exposures.
- c) The securities issued are not obligations of the transferor. Thus, investors who purchase the securities only have claim to the underlying pool of exposures.
- d) The transferee is an SPE and the holders of the beneficial interests in that entity have the right to pledge or exchange them without restriction.
- e) Clean-up calls must satisfy the conditions.
- f) The securitization does not contain clauses that
  - (i) require the originating bank to alter systematically the underlying exposures such that the pool's weighted average credit quality is improved unless this is achieved by selling assets to independent and unaffiliated third parties at market prices;
  - (ii) allow for increases in a retained first loss position or credit enhancement provided by the originating bank after the transaction's inception; or

- (iii) increase the yield payable to parties other than the originating bank, such as investors and third-party providers of credit enhancements, in response to deterioration in the credit quality of the underlying pool.

***Operational requirements for synthetic securitizations***

For synthetic securitizations, the use of CRM techniques (i.e. collateral, guarantees and credit derivatives) for hedging the underlying exposure may be recognized for risk-based capital purposes only if the conditions outlined following are satisfied:

1. Credit risk mitigate must comply with the requirements as set out in Basel II Section II-D of this Framework.
2. Eligible collateral is limited to that specified in Basel II paragraphs 145 and 146. Eligible collateral pledged by SPEs may be recognized.
3. Eligible guarantors are defined in paragraph 195. Banks may not recognize SPEs as eligible guarantors in the securitization framework.
4. Banks must transfer significant credit risk associated with the underlying exposure to third parties.

The instruments used to transfer credit risk may not contain terms or conditions that limit the amount of credit risk transferred, such as those provided following:

1. Clauses that materially limit the credit protection or credit risk transference (e.g. significant materiality thresholds below which credit protection is deemed not to be triggered even if a credit event occurs or those that allow for the termination of the protection due to deterioration in the credit quality of the underlying exposures);
2. Clauses that require the originating bank to alter the underlying exposures to improve the pool's weighted average credit quality;
3. Clauses that increase the banks' cost of credit protection in response to deterioration in the pool's quality;
4. Clauses that increase the yield payable to parties other than the originating bank, such as investors and third-party providers of credit enhancements, in response to deterioration in the credit quality of the reference pool.

## OPERATIONAL REQUIREMENTS & TREATMENT OF CLEAN-UP CALLS

For securitization transactions that include a clean-up call, no capital will be required due to the presence of a clean-up call if the following conditions are met:

- (i) the exercise of the clean-up call must not be mandatory, in form or in substance, but rather must be at the discretion of the originating bank;
- (ii) the clean-up call must not be structured to avoid allocating losses to credit enhancements or positions held by investors or otherwise structured to provide credit enhancement; and
- (iii) the clean-up call must only be exercisable when 10% or less of the original underlying portfolio, or securities issued remains, or, for synthetic securitizations, when 10% or less of the original reference portfolio value remains.

If a clean-up call, when exercised, is found to serve as a credit enhancement, the exercise of the clean-up call must be considered a form of implicit support provided by the bank and must be treated in accordance with the supervisory guidance pertaining to securitization transactions.

### Treatment of Securitization Exposure

#### *Calculation of capital requirements*

Banks are required to hold regulatory capital against all of their securitization exposures, including those arising from the provision of credit risk mitigants to a securitization transaction, investments in asset-backed securities, retention of a subordinated tranche, and extension of a liquidity facility or credit enhancement, as set forth in the following sections. Repurchased securitization exposures must be treated as retained securitization exposures.

### Operational Requirements for use of External Credit Assessments

The following operational criteria concerning the use of external credit assessments apply in the standardized and IRB approaches of the securitization framework:

- a. To be eligible for risk-weighting purposes, the external credit assessment must take into account and reflect the entire amount of credit risk exposure the bank has with regard to all payments owed to it. For example, if a bank is owed both principal and interest, the assessment must fully take into account and reflect the credit risk associated with timely repayment of both principal and interest.
- b. The external credit assessments must be from an eligible ECAI as recognized by the bank's national supervisor in accordance with paragraphs BASEL II with the following exception.  
***“An eligible credit assessment must be publicly available. In other words, a rating must be published in an accessible form and included in the ECAI's transition matrix. Consequently, ratings that are made available only to the parties to a transaction do not satisfy this requirement.”***
- c. Eligible ECAIs must have a demonstrated expertise in assessing securitizations, which may be evidenced by strong market acceptance.

### BASEL II & Supervisory Review Process

This lecture discusses the key principles of supervisory review, risk management guidance and supervisory transparency and accountability produced by the Committee with respect to banking risks, including guidance relating to, among other things, the treatment of interest rate risk in the banking book, credit risk (stress testing, definition of default, residual risk, and credit concentration risk), operational risk, enhanced cross-border communication and cooperation, and securitization.

### Importance of Supervisory Review

The supervisory review process of the Framework is intended not only to ensure that banks have adequate capital to support all the risks in their business, but also to encourage banks to develop and use better risk management techniques in monitoring and managing their risks.

The supervisory review process recognizes the responsibility of bank management in developing an internal capital assessment process and setting capital targets that are commensurate with the bank's risk profile and control environment.

In the Framework, bank management continues to bear responsibility for ensuring that the bank has adequate capital to support its risks beyond the core minimum requirements.

Supervisors are expected to evaluate how well banks are assessing their capital needs relative to their risks and to intervene, where appropriate. This interaction is intended to foster an active dialogue between banks and supervisors such that when deficiencies are identified, prompt and decisive action can be taken to reduce risk or restore capital.

Accordingly, supervisors may wish to adopt an approach to focus more intensely on those banks with risk profiles or operational experience that warrants such attention.

The Committee recognizes the relationship that exists between the amount of capital held by the bank against its risks and the strength and effectiveness of the bank's risk management and internal control processes.

However, increased capital should not be viewed as the only option for addressing increased risks confronting the bank. Other means for addressing risk, such as strengthening risk management, applying internal limits, strengthening the level of provisions and reserves, and improving internal controls, must also be considered.

Furthermore, capital should not be regarded as a substitute for addressing fundamentally inadequate control or risk management processes.

### **Key Principles of Supervisory Review**

The Committee has identified four key principles of supervisory review, which complement those outlined in the extensive supervisory guidance that has been developed by the Committee, the keystone of which is the Core Principles for Effective Banking Supervision and the Core Principles Methodology. A list of the specific guidance relating to the management of banking risks is provided at the end of this Part of the Framework.

- **Principle 1:** Banks should have a process for assessing their overall capital adequacy in relation to their risk profile and a strategy for maintaining their capital levels. Banks must be able to demonstrate that chosen internal capital targets are well founded and that these targets are consistent with their overall risk profile and current operating environment. In assessing capital adequacy, bank management needs to be mindful of the particular stage of the business cycle in which the bank is operating. Rigorous, forward-looking stress testing that identifies possible events or changes in market conditions that could adversely impact the bank should be performed. Bank management clearly bears primary responsibility for ensuring that the bank has adequate capital to support its risks.

#### **The five main features of a rigorous process are as follows:**

- Board and senior management oversight
  - Sound capital assessment
  - Comprehensive assessment of risks
  - Monitoring and reporting
  - Internal control review
- **Principle 2:** Supervisors should review and evaluate banks' internal capital adequacy assessments and strategies, as well as their ability to monitor and ensure their compliance with regulatory capital ratios. Supervisors should take appropriate supervisory action if they are not satisfied with the result of this process. The supervisory authorities should regularly review the process by which a bank assesses its capital adequacy, risk position, resulting capital levels, and quality of capital held. Supervisors should also evaluate the degree to which a bank has in place a sound internal process to assess capital adequacy. The emphasis of the review should be on the quality of the bank's risk management and controls and should not result in supervisors functioning as bank management.

**The periodic review can involve some combination of:**

- On-site examinations or inspections;
  - Off-site review;
  - Discussions with bank management;
  - Review of work done by external auditors (provided it is adequately focused on the necessary capital issues);
  - Periodic reporting
- 
- **Principle 3:** Supervisors should expect banks to operate above the minimum regulatory capital ratios and should have the ability to require banks to hold capital in excess of the minimum.
  
  - **Principle 4:** Supervisors should seek to intervene at an early stage to prevent capital from falling below the minimum levels required to support the risk characteristics of a particular bank and should require rapid remedial action if capital is not maintained or restored.

## KEY PRINCIPLES OF SUPERVISORY REVIEW

Supervisors should consider a range of options if they become concerned that a bank is not meeting the requirements embodied in the supervisory principles explained in last lecture.

These actions may include intensifying the monitoring of the bank, restricting the payment of dividends, requiring the bank to prepare and implement a satisfactory capital adequacy restoration plan, and requiring the bank to raise additional capital immediately.

Supervisors should have the discretion to use the tools best suited to the circumstances of the bank and its operating environment.

### Specific issues to be addressed under the supervisory review process

The Committee has identified a number of important issues that banks and supervisors should particularly focus on when carrying out the supervisory review process.

These issues include some key risks which are not directly addressed under Pillar 1 and important assessments that supervisors should make to ensure the proper functioning of certain aspects of Pillar 1.

### Interest rate risk in the banking book

The Committee remains convinced that interest rate risk in the banking book is a potentially significant risk which merits support from capital. However, comments received from the industry and additional work conducted by the Committee have made it clear that there is considerable heterogeneity across internationally active banks in terms of the nature of the underlying risk and the processes for monitoring and managing it.

In light of this, the Committee has concluded that it is at this time most appropriate to treat interest rate risk in the banking book under Pillar 2 of the Framework. Nevertheless, supervisors who consider that there is sufficient homogeneity within their banking populations regarding the nature and methods for monitoring and measuring this risk could establish a mandatory minimum capital requirement.

The revised guidance on interest rate risk recognizes banks' internal systems as the principal tool for the measurement of interest rate risk in the banking book and the supervisory response. To facilitate supervisors' monitoring of interest rate risk exposures across institutions, banks would have to provide the results of their internal measurement systems, expressed in terms of economic value relative to capital, using a standardized interest rate shock.

If supervisors determine that banks are not holding capital commensurate with the level of interest rate risk, they must require the bank to reduce its risk, to hold a specific additional amount of capital or some combination of the two.

Supervisors should be particularly attentive to the sufficiency of capital of 'outlier banks' where economic value declines by more than 20% of the sum of Tier 1 and Tier 2 capital as a result of a standardized interest rate shock (200 basis points) or its equivalent, as described in the supporting document *Principles for the Management and Supervision of Interest Rate Risk*.

### Credit concentration risk

A risk concentration is any single exposure or group of exposures with the potential to produce losses large enough (relative to a bank's capital, total assets, or overall risk level) to threaten a bank's health or ability to maintain its core operations. Risk concentrations are arguably the single most important cause of major problems in banks.

Risk concentrations can arise in a bank's assets, liabilities, or off-balance sheet items, through the execution or processing of transactions (either product or service), or through a combination of exposures across these broad categories.

Because lending is the primary activity of most banks, credit risk concentrations are often the most material risk concentrations within a bank.

Credit risk concentrations, by their nature, are based on common or correlated risk factors, which, in times of stress, have an adverse effect on the creditworthiness of each of the individual counterparties making up the concentration.

Concentration risk arises in both direct exposures to obligors and may also occur through exposures to protection providers. Such concentrations are not addressed in the Pillar 1 capital charge for credit risk.

Banks should have in place effective internal policies, systems and controls to identify, measure, monitor, and control their credit risk concentrations. Banks should explicitly consider the extent of their credit risk concentrations in their assessment of capital adequacy under Pillar 2. These policies should cover the different forms of credit risk concentrations to which a bank may be exposed.

**Such concentrations include:**

1. Significant exposures to an individual counterparty or group of related counterparties. In many jurisdictions, supervisors define a limit for exposures of this nature, commonly referred to as a large exposure limit. Banks might also establish an aggregate limit for the management and control of all of its large exposures as a group;
2. Credit exposures to counterparties in the same economic sector or geographic region;
3. Credit exposures to counterparties whose financial performance is dependent on the same activity or commodity; and
4. Indirect credit exposures arising from a bank's Credit Risk Mitigation activities (e.g. exposure to a single collateral type or to credit protection provided by a single counterparty).

A bank's framework for managing credit risk concentrations should be clearly documented and should include a definition of the credit risk concentrations relevant to the bank and how these concentrations and their corresponding limits are calculated. Limits should be defined in relation to a bank's capital, total assets or, where adequate measures exist, its overall risk level.

A bank's management should conduct periodic stress tests of its major credit risk concentrations and review the results of those tests to identify and respond to potential changes in market conditions that could adversely impact the bank's performance.

***Counterparty credit risk***

As counterparty credit risk (CCR) represents a form of credit risk, this would include meeting this Framework's standards regarding their approaches to stress testing, "**residual risks**" associated with credit risk mitigation techniques, and credit concentrations.

The bank must have counterparty credit risk management policies, processes and systems that are conceptually sound and implemented with integrity relative to the sophistication and complexity of a firm's holdings of exposures that give rise to CCR. A sound counterparty credit risk management framework shall include the identification, measurement, management, approval and internal reporting of CCR.

The bank's risk management policies must take account of the market, liquidity, legal and operational risks that can be associated with CCR and, to the extent practicable, interrelationships among those risks.

The bank must not undertake business with a counterparty without assessing its creditworthiness and must take due account of both settlement and pre-settlement credit risk. These risks must be managed as comprehensively as practicable at the counterparty level (aggregating counterparty exposures with other credit exposures) and at the firm-wide level. The board of directors and senior management must be actively involved in the CCR control process and must regard this as an essential aspect of the business to which significant resources need to be devoted. Where the bank is using an internal model for CCR, senior management must be aware of the limitations and assumptions of the model used and the impact these can have on the reliability of the output. They should also consider the uncertainties of the market environment (e.g. timing of realization of collateral) and operational issues (e.g. pricing feed irregularities) and be aware of how these are reflected in the model. In this regard, the daily reports prepared on a firm's exposures to CCR must be reviewed by a level of management with sufficient seniority and authority to enforce both reductions of positions taken by individual credit managers or traders and reductions in the firm's overall CCR exposure. The bank's CCR management system must be used in conjunction with internal credit and trading limits. In this regard, credit and trading limits must be related to the firm's risk measurement model in a manner that is consistent over time and that is well understood by credit managers, traders and senior management. The measurement of CCR must include monitoring daily and intra-day usage of credit lines. The bank must measure current exposure gross and net of collateral held where such measures are appropriate and meaningful (e.g. OTC

derivatives, margin lending, etc.). Measuring and monitoring peak exposure or potential future exposure (PFE) at a confidence level chosen by the bank at both the portfolio and counterparty levels is one element of a robust limit monitoring system. Banks must take account of large or concentrated positions, including concentrations by groups of related counterparties, by industry, by market, customer investment strategies, etc.

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## SUPERVISORY TRANSPARENCY & ACCOUNTABILITY

The supervision of banks is not an exact science, and therefore, discretionary elements within the supervisory review process are inevitable.

Supervisors must take care to carry out their obligations in a transparent and accountable manner. Supervisors should make publicly available the criteria to be used in the review of banks' internal capital assessments.

If a supervisor chooses to set target or trigger ratios or to set categories of capital in excess of the regulatory minimum, factors that may be considered in doing so should be publicly available.

Where the capital requirements are set above the minimum for an individual bank, the supervisor should explain to the bank the risk characteristics specific to the bank which resulted in the requirement and any remedial action necessary.

### Enhanced cross-border communication & cooperation

Effective supervision of large banking organizations necessarily entails a close and continuous dialogue between industry participants and supervisors.

In addition, the Framework will require enhanced cooperation between supervisors, on a practical basis, especially for the cross-border supervision of complex international banking groups.

The Framework will not change the legal responsibilities of national supervisors for the regulation of their domestic institutions or the arrangements for consolidated supervision as set out in the existing Basel Committee standards.

The home country supervisor is responsible for the oversight of the implementation of the Framework for a banking group on a consolidated basis; host country supervisors are responsible for supervision of those entities operating in their countries.

In order to reduce the compliance burden and avoid regulatory arbitrage, the methods and approval processes used by a bank at the group level may be accepted by the host country supervisor at the local level, provided that they adequately meet the local supervisor's requirements.

Wherever possible, supervisors should avoid performing redundant and uncoordinated approval and validation work in order to reduce the implementation burden on banks, and conserve supervisory resources.

In implementing the Framework, supervisors should communicate the respective roles of home country and host country supervisors as clearly as possible to banking groups with significant cross-border operations in multiple jurisdictions.

The home country supervisor would lead this coordination effort in cooperation with the host country supervisors. In communicating the respective supervisory roles, supervisors will take care to clarify that existing supervisory legal responsibilities remain unchanged.

The Committee supports a pragmatic approach of mutual recognition for internationally active banks as a key basis for international supervisory co-operation.

This approach implies recognizing common capital adequacy approaches when considering the entities of internationally active banks in host jurisdictions, as well as the desirability of minimizing differences in the national capital adequacy regulations between home and host jurisdictions so that subsidiary banks are not subjected to excessive burden.

### Supervisory review process for securitization

Further to the Pillar 1 principle that banks should take account of the economic substance of transactions in their determination of capital adequacy, supervisory authorities will monitor, as appropriate, whether banks have done so adequately.

As a result, regulatory capital treatments for specific securitization exposures might differ from those specified in Pillar 1 of the Framework, particularly in instances where the general capital requirement would not adequately and sufficiently reflect the risks to which an individual banking organization is exposed.

**Significance of risk transfer**

Securitization transactions may be carried out for purposes other than credit risk transfer (e.g. funding). Where this is the case, there might still be a limited transfer of credit risk.

However, for an originating bank to achieve reductions in capital requirements, the risk transfer arising from a securitization has to be deemed significant by the national supervisory authority.

If the risk transfer is considered to be insufficient or non-existent, the supervisory authority can require the application of a higher capital requirement than prescribed under Pillar 1 or, alternatively, may deny a bank from obtaining any capital relief from the securitizations.

Therefore, the capital relief that can be achieved will correspond to the amount of credit risk that is effectively transferred. The following includes a set of examples where supervisors may have concerns about the degree of risk transfer, such as retaining or repurchasing significant amounts of risk or “cherry picking” the exposures to be transferred via a securitization.

Retaining or repurchasing significant securitization exposures, depending on the proportion of risk held by the originator, might undermine the intent of a securitization to transfer credit risk.

Specifically, supervisory authorities might expect that a significant portion of the credit risk and of the nominal value of the pool be transferred to at least one independent third party at inception and on an ongoing basis.

Where banks repurchase risk for market making purposes, supervisors could find it appropriate for an originator to buy part of a transaction but not, for example, to repurchase a whole tranche.

Supervisors would expect that where positions have been bought for market making purposes, these positions should be resold within an appropriate period, thereby remaining true to the initial intention to transfer risk.

Another implication of realizing only a non-significant risk transfer, especially if related to good quality unrated exposures, is that both the poorer quality unrated assets and most of the credit risk embedded in the exposures underlying the securitized transaction are likely to remain with the originator.

Accordingly, and depending on the outcome of the supervisory review process, the supervisory authority may increase the capital requirement for particular exposures or even increase the overall level of capital the bank is required to hold.

**Market innovations**

As the minimum capital requirements for securitization may not be able to address all potential issues, supervisory authorities are expected to consider new features of securitization transactions as they arise. Such assessments would include reviewing the impact new features may have on credit risk transfer and, where appropriate, supervisors will be expected to take appropriate action under Pillar 2. A Pillar 1 response may be formulated to take account of market innovations.

Such a response may take the form of a set of operational requirements and/or a specific capital treatment.

**Residual risks**

As with credit risk mitigation techniques more generally, supervisors will review the appropriateness of banks' approaches to the recognition of credit protection. In particular, with regard to securitizations, supervisors will review the appropriateness of protection recognized against first loss credit enhancements.

On these positions, expected loss is less likely to be a significant element of the risk and is likely to be retained by the protection buyer through the pricing. Therefore, supervisors will expect banks' policies to take account of this in determining their economic capital.

Where supervisors do not consider the approach to protection recognized is adequate, they will take appropriate action. Such action may include increasing the capital requirement against a particular transaction or class of transactions.

**Call provisions**

Supervisors expect a bank not to make use of clauses that entitles it to call the securitization transaction or the coverage of credit protection prematurely if this would increase the bank's exposure to losses or deterioration in the credit quality of the underlying exposures.

Besides the general principle stated above, supervisors expect banks to only execute clean-up calls for economic business purposes, such as when the cost of servicing the outstanding credit exposures exceeds the benefits of servicing the underlying credit exposures.

Subject to national discretion, supervisory authorities may require a review prior to the bank exercising a call which can be expected to include consideration of:

1. The rationale for the bank's decision to exercise the call; and
2. The impact of the exercise of the call on the bank's regulatory capital ratio.

The supervisory authority may also require the bank to enter into a follow-up transaction, if necessary, depending on the bank's overall risk profile, and existing market conditions.

Date related calls should be set at a date no earlier than the duration or the weighted average life of the underlying securitization exposures.

Accordingly, supervisory authorities may require a minimum period to elapse before the first possible call date can be set, given, for instance, the existence of up-front sunk costs of a capital market securitization transaction.

Most early amortization triggers are tied to excess spread levels, the factors affecting these levels should be well understood, monitored, and managed, to the extent possible by the originating bank.

For example, the following factors affecting excess spread should generally be considered:

1. Interest payments made by borrowers on the underlying receivable balances;
2. Other fees and charges to be paid by the underlying obligors (e.g. late-payment fees, cash advance fees, over-limit fees);
3. Gross charge-offs;
4. Principal payments;
5. Recoveries on charged-off loans;
6. Interchange income;
7. Interest paid on investors' certificates;
8. Macroeconomic factors such as bankruptcy rates, interest rate movements, unemployment rates; etc.

Banks should consider the effects that changes in portfolio management or business strategies may have on the levels of excess spread and on the likelihood of an early amortization event.

For example, marketing strategies or underwriting changes that result in lower finance charges or higher charge-offs, might also lower excess spread levels and increase the likelihood of an early amortization event.

## THE ROLE OF FINANCIAL ADVISER & CREDIT RISK

Choosing financial advisers is an important first step towards successful investment planning. Having access to sound, objective financial advice will be key to your long term financial success. With that in mind, you should take the time to choose your financial advisers just as carefully as you would a family doctor or a lawyer.

In most countries, securities laws require anyone trading securities or in the business of advising clients on securities to be registered with (licensed by) the provincial or territorial securities regulator, unless a registration exemption applies.

Both the company employing the trader and the individual representative trading or advising in securities must be registered in the province/territory where the investor resides.

This regulatory system ensures that all registered dealers and advisers meet certain minimum standards. However, it does not mean that they are all equally skilled, that they provide the same services, or that they charge the same fees.

### What types of financial advisers are there?

**Dealers** are firms that are registered with securities regulators to buy or sell securities on behalf of clients. This registration also allows them to provide advice to clients about the purchase or sale of securities. There are many different types of dealers offering different products and services and specializing in different areas:

Some are large national firms, while others are very small and operate in only one province or territory, or one city.

Some dealers are full service stock brokerage firms, registered to buy or sell a full range of securities, while others are restricted to certain types of products such as mutual funds, scholarship plans, real estate securities or exchange contracts.

All dealers are subject to regulation by provincial or territorial securities regulators. Some are also members of self-regulatory organizations.

Some dealers offer clients a full range of trading, research and advisory services, while others specialize in providing low cost trading services for investors who are able to make their own investment decisions.

### Financial Advisors

Advisers are firms that specialize in providing advice to clients about investing in securities, but do not offer the trading services that are provided by dealers. You would look to a registered adviser purely for investment advice or if you wanted someone to manage your investment portfolio on your behalf.

Advice can come in different formats: face to face, written (newsletters and advertisements), e-mail, audio and Internet.

Some advisers, called portfolio managers, are authorized to make discretionary trades on behalf of their clients (you give them authority to make investment decisions and to trade on your behalf without consulting you on each trade).

Advisers must be registered with the regulator in your jurisdiction and, like dealers, may offer different services depending on their category of registration.

### What about financial planners?

Financial Planners determine how individuals can meet their life goals through proper management of their financial resources and offer financial services such as personal budgeting, cash and debt management, retirement and tax planning.

Financial planners are not currently subject to provincial registration or regulation, although a number of jurisdictions are considering the issue. If, however, a financial planner wants to trade in securities, he or she must become registered under the securities legislation. Without that registration, financial planners cannot trade securities for their clients or recommend the sale or purchase of specific securities.

In Most countries many financial planners have become registered to trade in mutual funds and segregated funds (a similar insurance product), allowing them to trade and advise clients only with respect to mutual funds or insurance products.

Investing your life savings involves a great deal of trust – trust in the management of companies you invest in, and trust in the people who advise you and handle your investment funds.

However, trust should never take the place of careful research and healthy skepticism. Don't make your choice of financial advisers lightly.

When you start your search for a dealer or adviser, remember that you want to have confidence in and be comfortable with both the firm and the individual representative who will service your account. Find out if the firm focuses on certain sectors of the market or on certain types of securities. Make sure the firm's style and the individual representative's style match your own.

Decide what kind of investment services you need.

*“Are you a knowledgeable investor who plans to do your own investment research and make your own investment decisions?”*

If so, you may want to find a dealer who will simply execute trades for you quickly and at the lowest cost. A discount brokerage firm might be right for you.

*“Are you looking for someone who can provide investment advice, make recommendations on specific securities and also execute the trades for you?”*

If so, you may want to look for a suitable full service dealer or you may want to find an independent investment adviser to provide the advice you need and a discount broker to execute the trades on your instructions.

*“Do you have a substantial investment portfolio and are you looking for someone to take control of the portfolio and manage it on your behalf?”*  
*If so, a portfolio manager may be able to provide the services you need.*  
*Are you interested only in mutual funds?*

If so, you will have a choice of many mutual fund dealers as well as the full service dealers in your area. Word of mouth can always be helpful in identifying capable financial professionals. Ask for recommendations from your accountant, your lawyer, your family, or friends whose judgment you trust. Your local agencies can provide you with the names of many or all of the dealers and advisers in your area under headings such as

'bonds – investment', 'brokers – stocks and bonds', 'financial planning', 'investment advisory services', 'investment dealers', 'investment management' and 'stocks and bonds'.

You may also want to contact the one of the stock exchanges to obtain a list of the member firms that are registered in your area.

In some jurisdictions, you may also be able to contact your provincial or territorial securities regulator to obtain a list of all of the registered dealers and advisers in your area.

Many firms have written materials about themselves and their services that will answer many of the questions. If you are like most clients, you will find that you deal with, and rely heavily on, a single individual with the firm.

For that reason, it is very important that you know as much as you can about the person's skills, knowledge and expertise, their approach to investing and their ability to provide the personal service you expect.

You want to find someone who deserves your confidence and your trust. Ensure you arrange to meet with the person and ask about their educational qualifications, their experience, their investment philosophy, and their specialties.

You may also want to ask for references, the size of their client list and the amount of an average client portfolio, and about their disciplinary history.

If the person never has time to meet with you, is unwilling to discuss their qualifications or history, or is not keenly interested in your financial goals and objectives, you should probably look elsewhere.

**What are my responsibilities as a client?**

No matter how well intentioned the dealer or adviser, no one will ever care as much about your financial health as you do.

**As an investor, you must be prepared:**

1. to research and monitor your investments, ask questions of your financial advisers, and educate yourself about investing.
2. to communicate clearly and honestly with dealers and advisers so they understand your financial circumstances, investment objectives and experience.
3. to be realistic in your expectations of profit.
4. to appreciate that investing can involve risk.
5. to read any offering documents those are provided to you in connection with an investment (such as a prospectus or offering memorandum).
6. to read and retain your confirmation slips and statements of account, as well as notes of conversations between you and your dealer or adviser. This will enable you to alert your dealer or adviser immediately if there are errors in or problems with your account.
7. to ask questions about investment matters that you do not understand.

**What should I expect from my dealer or adviser?**

1. to be competent and ethical, and to act in your best interests at all times.
2. to deal with you fairly, honestly, and in good faith.
3. to find out your general investment needs and objectives.
4. to make recommendations that are consistent with those investment needs and objectives.
5. to disclose the risks associated with their recommendations.
6. to disclose any conflicts of interest that they may have concerning their recommendations to you.
7. to provide prompt written confirmation of trades made on your behalf, with details of the value of the transaction as well as the commissions or fees charged.
8. to provide regular statements of accounts detailing the transactions in your accounts, the fees charged and the securities held on your behalf.
9. to obtain your express authorization in advance of every trade made on your behalf (unless you have provided proper written trading authority or power of attorney to someone else).

**You should not expect your dealer or adviser:**

1. to be successful in every investment recommendation they make. No one can predict future market performance with certainty.
2. to know what investment opportunities might be suitable for you unless you discuss your financial position, your objectives and your risk tolerance with them in detail.
3. to be aware of changes in your financial situation or investment objectives unless you tell them
4. To act on vague or general instructions to buy or sell securities 'when the time is right'. Unless you have vested proper written trading authority in someone else, registrants can only act on specific instructions from you.
5. To charge all clients the same commissions. Commissions are negotiable and larger clients may be able to negotiate lower commission rates.

## RISK IN OUR SOCIETY

### Meaning of Risk

- **Risk:** Uncertainty concerning the occurrence of a loss
- Objective Risk vs. Subjective Risk
  - **Objective risk** is defined as the relative variation of actual loss from expected loss
    - It can be statistically calculated using a measure of dispersion, such as the standard deviation
  - **Subjective risk** is defined as uncertainty based on a person's mental condition or state of mind
    - Two persons in the same situation may have different perceptions of risk
    - High subjective risk often results in conservative behavior
- **Chance of loss:** The probability that an event will occur
- Objective Probability vs. Subjective Probability
  - **Objective probability** refers to the long-run relative frequency of an event assuming an infinite number of observations and no change in the underlying conditions
    - It can be determined by deductive or inductive reasoning
  - **Subjective probability** is the individual's personal estimate of the chance of loss
    - A person's perception of the chance of loss may differ from the objective probability

### Peril and Hazard

- A **peril** is defined as the cause of the loss
  - In an auto accident, the collision is the peril
- A **hazard** is a condition that increases the chance of loss
  - **Physical hazards** are physical conditions that increase the chance of loss (icy roads, defective wiring)
  - **Moral hazard** is dishonesty or character defects in an individual, that increase the chance of loss (faking accidents, inflating claim amounts)
  - **Morale Hazard** is carelessness or indifference to a loss because of the existence of insurance (leaving keys in an unlocked car)
  - **Legal Hazard** refers to characteristics of the legal system or regulatory environment that increase the chance of loss (large damage awards in liability lawsuits)

### Basic Categories of Risk

- **Pure and Speculative Risk**
  - A **pure risk** is one in which there are only the possibilities of loss or no loss (earthquake)
  - A **speculative risk** is one in which both profit or loss are possible (gambling)
- **Fundamental and Particular Risk**
  - A **fundamental risk** affects the entire economy or large numbers of persons or groups (hurricane)
  - A **particular risk** affects only the individual (car theft)
- **Enterprise Risk**
  - **Enterprise risk** encompasses all major risks faced by a business firm, which include: pure risk, speculative risk, strategic risk, operational risk, and financial risk

### Types of Pure Risks

- **Personal risks** involve the possibility of a loss or reduction in income, extra expenses or depletion of financial assets:
  - Premature death of family head

- Insufficient income during retirement
  - Most workers are not saving enough for a comfortable retirement
- Poor health (catastrophic medical bills and loss of earned income)
- Involuntary unemployment
- **Property risks** involve the possibility of losses associated with the destruction or theft of property:
  - Physical damage to home and personal property from fire, tornado, vandalism, or other causes
- **Direct loss vs. indirect loss**
  - A direct loss is a financial loss that results from the physical damage, destruction, or theft of the property, such as fire damage to a restaurant
  - An indirect loss results indirectly from the occurrence of a direct physical damage or theft loss, such as lost profits due to inability to operate after a fire
- **Liability risks** involve the possibility of being held liable for bodily injury or property damage to someone else
  - There is no maximum upper limit with respect to the amount of the loss
  - A lien can be placed on your income and financial assets
  - Defense costs can be enormous

### Burden of Risk on Society

- The presence of risk results in three major burdens on society:
  - In the absence of insurance, individuals would have to maintain large emergency funds
  - The risk of a liability lawsuit may discourage innovation, depriving society of certain goods and services
  - Risk causes worry and fear

### Methods of Handling Risk

- Avoidance
- Loss control
  - **Loss prevention** refers to activities to reduce the frequency of losses
  - **Loss reduction** refers to activities to reduce the severity of losses
- Retention
  - An individual or firm retains all or part of a loss
  - Loss retention may be active or passive
- Non-insurance transfers
  - A risk may be transferred to another party through contracts, hedging, or incorporation
- Insurance

### Definition of Insurance

- Insurance is the pooling of fortuitous losses by transfer of such risks to insurers, who agree to indemnify insured for such losses, to provide other pecuniary benefits on their occurrence, or to render services connected with the risk

### Basic Characteristics of Insurance

- Pooling of losses
  - Spreading losses incurred by the few over the entire group
  - Risk reduction based on the Law of Large Numbers
- Payment of fortuitous losses
  - Insurance pays for losses that are unforeseen, unexpected, and occur as a result of chance
- Risk transfer
  - A pure risk is transferred from the insured to the insurer, who typically is in a stronger financial position

- Indemnification
  - The insured is restored to his or her approximate financial position prior to the occurrence of the loss

### Requirements of an Insurable Risk

- Large number of exposure units
  - to predict average loss
- Accidental and unintentional loss
  - to control moral hazard
  - to assure randomness
- Determinable and measurable loss
  - to facilitate loss adjustment
    - insurer must be able to determine if the loss is covered and if so, how much should be paid.
- No catastrophic loss
  - to allow the pooling technique to work
  - exposures to catastrophic loss can be managed by:
    - dispersing coverage over a large geographic area
    - using reinsurance
    - catastrophe bonds
- Calculable chance of loss
  - to establish an adequate premium
- Economically feasible premium
  - so people can afford to buy
  - Premium must be substantially less than the face value of the policy
- Based on these requirements:
  - Most personal, property and liability risks can be insured
  - Market risks, financial risks, production risks and political risks are difficult to insure

### Adverse Selection and Insurance

- **Adverse selection** is the tendency of persons with a higher-than-average chance of loss to seek insurance at standard rates
- If not controlled, adverse selection result in higher-than-expected loss levels
- Adverse selection can be controlled by:
  - careful **underwriting** (selection and classification of applicants for insurance)
  - policy provisions (e.g., suicide clause in life insurance)

### Insurance vs. Gambling

#### Insurance

- Insurance is a technique for handing an already existing pure risk
- Insurance is socially productive:
  - both parties have a common interest in the prevention of a loss

#### Gambling

- Gambling creates a new speculative risk
- Gambling is not socially productive
  - The winner's gain comes at the expense of the loser

## Insurance vs. Hedging

### Insurance

- Risk is transferred by a contract
- Insurance involves the transfer of insurable risks
- Insurance can reduce the objective risk of an insurer through the Law of Large Numbers

### Hedging

- Risk is transferred by a contract
- Hedging involves risks that are typically uninsurable
- Hedging does not result in reduced risk

## Types of Insurance

- Private Insurance
  - Life and Health
  - Property and Liability
- Government Insurance
  - Social Insurance
  - Other Government Insurance

## Private Insurance

- Life and Health
  - Life insurance pays death benefits to beneficiaries when the insured dies
  - Health insurance covers medical expenses because of sickness or injury
  - Disability plans pay income benefits
- Property and Liability
  - Property insurance indemnifies property owners against the loss or damage of real or personal property
  - Liability insurance covers the insured's legal liability arising out of property damage or bodily injury to others
  - Casualty insurance refers to insurance that covers whatever is not covered by fire, marine, and life insurance
- Private insurance coverages can be grouped into two major categories
  - Personal lines
    - coverages that insure the real estate and personal property of individuals and families or provide protection against legal liability
  - Commercial lines
    - coverages for business firms, nonprofit organizations, and government agencies

## Property and Casualty Insurance Coverages

### 1. Personal lines

- Private passenger auto insurance
- Homeowners insurance
- Personal umbrella liability insurance
- Boatowners insurance

## 2. Commercial lines

- Fire and allied lines insurance
- Commercial multiple-peril insurance
- General liability insurance
- Workers compensation insurance
- Commercial auto insurance
- Accident and health insurance

### Government Insurance

- Social Insurance Programs
  - Financed entirely or in large part by contributions from employers and/or employees
  - Benefits are heavily weighted in favor of low-income groups
  - Eligibility and benefits are prescribed by statute
  - Examples:
    - Social Security, Unemployment, Workers Comp
- Other Government Insurance Programs
  - Found at both the federal and state level
  - Examples:
    - Federal flood insurance, state health insurance pools

### Social Benefits of Insurance

- Indemnification for Loss
  - Contributes to family and business stability
- Reduction of Worry and Fear
  - Insureds are less worried about losses
- Source of Investment Funds
  - Premiums may be invested, promoting economic growth
- Loss Prevention
  - Insurers support loss-prevention activities that reduce direct and indirect losses
- Enhancement of Credit
  - Insured individuals are better credit risks than individuals without insurance

### Social Costs of Insurance

- Cost of Doing Business
  - Insurers consume resources in providing insurance to society
  - An expense loading is the amount needed to pay all expenses, including commissions, general administrative expenses, state premium taxes, acquisition expenses, and an allowance for contingencies and profit
- Fraudulent and Inflated Claims
  - Payment of fraudulent or inflated claims results in higher premiums to all insureds, thus reducing disposable income and consumption of other goods and services

## RISK MANAGEMENT

- Risk Management is a process that identifies loss exposures faced by an organization and selects the most appropriate techniques for treating such exposures
- A loss exposure is any situation or circumstance in which a loss is possible, regardless of whether a loss occurs
  - E.g., a plant that may be damaged by an earthquake, or an automobile that may be damaged in a collision
- New forms of risk management consider both pure and speculative loss exposures

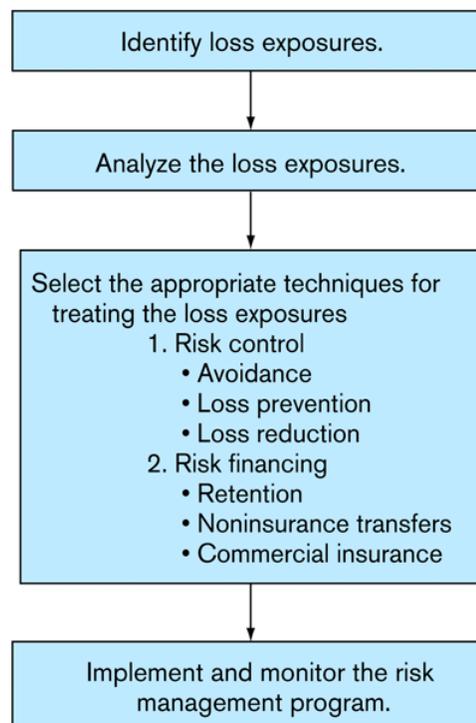
### Objectives of Risk Management

- Risk management has objectives before and after a loss occurs
- Pre-loss objectives:
  - Prepare for potential losses in the most economical way
  - Reduce anxiety
  - Meet any legal obligations
- Post-loss objectives:
  - Ensure survival of the firm
  - Continue operations
  - Stabilize earnings
  - Maintain growth
  - Minimize the effects that a loss will have on other persons and on society

### Risk Management Process

- Identify potential losses
- Evaluate potential losses
- Select the appropriate risk management technique
- Implement and monitor the risk management program

### Steps in the Risk Management Process



**Identifying Loss Exposures**

- Property loss exposures
- Liability loss exposures
- Business income loss exposures
- Human resources loss exposures
- Crime loss exposures
- Employee benefit loss exposures
- Foreign loss exposures
- Market reputation and public image of company
- Failure to comply with government rules and regulations

**Risk Managers have several sources of information to identify loss exposures:**

- Questionnaires
- Physical inspection
- Flowcharts
- Financial statements
- Historical loss data
- Industry trends and market changes can create new loss exposures.
- e.g., exposure to acts of terrorism

**Analyzing Loss Exposures**

- Estimate the frequency and severity of loss for each type of loss exposure
  - Loss frequency refers to the probable number of losses that may occur during some given time period
  - Loss severity refers to the probable size of the losses that may occur
- Once loss exposures are analyzed, they can be ranked according to their relative importance
- Loss severity is more important than loss frequency:
  - The maximum possible loss is the worst loss that could happen to the firm during its lifetime
  - The maximum probable loss is the worst loss that is *likely* to happen

**Select the Appropriate Risk Management Technique**

- Risk control refers to techniques that reduce the frequency and severity of losses
- Methods of risk control include:
  - Avoidance
  - Loss prevention
  - Loss reduction

**Risk Control Methods**

- Avoidance means a certain loss exposure is never acquired, or an existing loss exposure is abandoned
  - The chance of loss is reduced to zero
  - It is not always possible, or practical, to avoid all losses
- Loss prevention refers to measures that reduce the frequency of a particular loss
  - e.g., installing safety features on hazardous products
- Loss reduction refers to measures that reduce the severity of a loss after it occurs
  - e.g., installing an automatic sprinkler system

### Select the Appropriate Risk Management Technique

- Risk financing refers to techniques that provide for the funding of losses
- Methods of risk financing include:
  - Retention
  - Non-insurance Transfers
  - Commercial Insurance

### Risk Financing Methods: Retention

- Retention means that the firm retains part or all of the losses that can result from a given loss
  - Retention is effectively used when:
    - No other method of treatment is available
    - The worst possible loss is not serious
    - Losses are highly predictable
  - The retention level is the dollar amount of losses that the firm will retain
    - A financially strong firm can have a higher retention level than a financially weak firm
    - The maximum retention may be calculated as a percentage of the firm's net working capital
  - A risk manager has several methods for paying retained losses:
    - Current net income: losses are treated as current expenses
    - Unfunded reserve: losses are deducted from a bookkeeping account
    - Funded reserve: losses are deducted from a liquid fund
    - Credit line: funds are borrowed to pay losses as they occur
- A captive insurer is an insurer owned by a parent firm for the purpose of insuring the parent firm's loss exposures
  - A single-parent captive is owned by only one parent
  - An association or group captive is an insurer owned by several parents
  - Many captives are located in the Caribbean because the regulatory environment is favorable
  - Captives are formed for several reasons, including:
    - The parent firm may have difficulty obtaining insurance
    - Costs may be lower than purchasing commercial insurance
    - A captive insurer has easier access to a reinsurer
    - A captive insurer can become a source of profit
  - Premiums paid to a captive may be tax-deductible under certain conditions
- Self-insurance is a special form of planned retention
  - Part or all of a given loss exposure is retained by the firm
  - A more accurate term would be self-funding
  - Widely used for workers compensation and group health benefits
- A risk retention group is a group captive that can write any type of liability coverage except employer liability, workers compensation, and personal lines
  - Federal regulation allows employers, trade groups, governmental units, and other parties to form risk retention groups
  - They are exempt from many state insurance laws

### Advantages

- Save money
- Lower expenses
- Encourage loss prevention
- Increase cash flow

**Disadvantages**

- Possible higher losses
- Possible higher expenses
- Possible higher taxes

**Risk Financing Methods: Non-insurance Transfers**

- A non-insurance transfer is a method other than insurance by which a pure risk and its potential financial consequences are transferred to another party
  - Examples include:
    - Contracts, leases, hold-harmless agreements

**Risk Financing Methods: Non-insurance Transfers****Advantages**

- Can transfer some losses that are not insurable
- Save money
- Can transfer loss to someone who is in a better position to control losses

**Disadvantages**

- Contract language may be ambiguous, so transfer may fail
- If the other party fails to pay, firm is still responsible for the loss
- Insurers may not give credit for transfers

**Risk Financing Methods: Insurance**

- Insurance is appropriate for loss exposures that have a low probability of loss but for which the severity of loss is high
  - The risk manager selects the coverages needed, and policy provisions:
    - A deductible is a provision by which a specified amount is subtracted from the loss payment otherwise payable to the insured
    - An excess insurance policy is one in which the insurer does not participate in the loss until the actual loss exceeds the amount a firm has decided to retain
  - The risk manager selects the insurer, or insurers, to provide the coverages
  - The risk manager negotiates the terms of the insurance contract
    - A manuscript policy is a policy specially tailored for the firm
      - Language in the policy must be clear to both parties
    - The parties must agree on the contract provisions, endorsements, forms, and premiums
  - The risk manager must periodically review the insurance program

**Advantages**

- Firm is indemnified for losses
- Uncertainty is reduced
- Insurers may provide other risk management services
- Premiums are tax-deductible

**Disadvantages**

- Premiums may be costly
  - Opportunity cost should be considered
- Negotiation of contracts takes time and effort
- The risk manager may become lax in exercising loss control

**Implement and Monitor the Risk Management Program**

- Implementation of a risk management program begins with a risk management policy statement that:
  - Outlines the firm’s risk management objectives
  - Outlines the firm’s policy on loss control
  - Educates top-level executives in regard to the risk management process
  - Gives the risk manager greater authority
  - Provides standards for judging the risk manager’s performance
- A risk management manual may be used to:
  - Describe the risk management program
  - Train new employees
- A successful risk management program requires active cooperation from other departments in the firm
- The risk management program should be periodically reviewed and evaluated to determine whether the objectives are being attained
  - The risk manager should compare the costs and benefits of all risk management activities

**Benefits of Risk Management**

- Pre-loss and post-loss objectives are attainable
- A risk management program can reduce a firm’s cost of risk
  - The cost of risk includes premiums paid, retained losses, outside risk management services, financial guarantees, internal administrative costs, taxes, fees, and other expenses
- Reduction in pure loss exposures allows a firm to enact an enterprise risk management program to treat both pure and speculative loss exposures
- Society benefits because both direct and indirect losses are reduced

**Personal Risk Management**

- Personal risk management refers to the identification of pure risks faced by an individual or family, and to the selection of the most appropriate technique for treating such risks
- The same principles applied to corporate risk management apply to personal risk management

## ADVANCED TOPICS IN RISK MANAGEMENT

### The Changing Scope of Risk Management

- Today, the risk manager's job:
  - Involves more than simply purchasing insurance
  - Is not limited in scope to pure risks
- The risk manager may be using:
  - Financial risk management
  - Enterprise risk management

Financial Risk Management refers to the identification, analysis, and treatment of speculative financial risks:

Commodity price risk is the risk of losing money if the price of a commodity changes

Interest rate risk is the risk of loss caused by adverse interest rate movements

Currency exchange rate risk is the risk of loss of value caused by changes in the rate at which one nation's currency may be converted to another nation's currency

Financial risks can be managed with capital market instruments

An integrated risk management program is a risk treatment technique that combines coverage for pure and speculative risks in the same contract

A double-trigger option is a provision that provides for payment only if two specified losses occur

Some organizations have created a Chief Risk Officer (CRO) position

The chief risk officer is responsible for the treatment of pure and speculative risks faced by the organization.

Enterprise Risk Management (ERM) is a comprehensive risk management program that addresses the organization's pure, speculative, strategic, and operational risks

As long as risks are not positively correlated, the combination of these risks in a single program reduces overall risk

Nearly half of all US firms have adopted some type of ERM program

Barriers to the implementation of ERM include organizational, culture and turf battles

### Insurance Market Dynamics

- Decisions about whether to retain or transfer risks are influenced by conditions in the insurance marketplace
- The Underwriting Cycle refers to the cyclical pattern of underwriting stringency, premium levels, and profitability
  - **“Hard” market**: tight standards, high premiums, unfavorable insurance terms, more retention
  - **“Soft” market**: loose standards, low premiums, favorable insurance terms, less retention
  - One indicator of the status of the cycle is the combined ratio:
- Many factors affect property and liability insurance pricing and underwriting decisions:
  - Insurance industry capacity refers to the relative level of surplus
    - Surplus is the difference between an insurer's assets and its liabilities
    - Capacity can be affected by a clash loss, which occurs when several lines of insurance simultaneously experience large losses
  - Investment returns may be used to offset underwriting losses, allowing insurers to set lower premium rates
- The trend toward consolidation in the financial services industry is continuing
  - Consolidation refers to the combining of businesses through acquisitions or mergers
    - Due to mergers, the market is populated by fewer, but larger independent insurance organizations
    - There are also fewer large national insurance brokerages

- An insurance broker is an intermediary who represents insurance purchasers
  - Cross-Industry Consolidation: the boundaries between insurance companies and other financial institutions have been struck down
    - Some financial services companies are diversifying their operations by expanding into new sectors
- Insurers are making increasing use of securitization of risk
  - **Securitization of risk** means that insurable risk is transferred to the capital markets through creation of a financial instrument:
    - A **catastrophe bond** permits the issue to skip or defer scheduled payments if a catastrophic loss occurs
    - A **weather option** provides a payment if a specified weather contingency (e.g., high temperature) occurs
  - The impact of risk securitization is an increase in capacity for insurers and re-insurers
    - It provides access to the capital of many investors

### Loss Forecasting

- The risk manager can predict losses using several different techniques:
  - Probability analysis
  - Regression analysis
  - Forecasting based on loss distribution
- Of course, there is no guarantee that losses will follow past loss trends
- Probability analysis: the risk manager can assign probabilities to individual and joint events
  - The probability of an event is equal to the number of events likely to occur (X) divided by the number of exposure units (N)
    - May be calculated with past loss data
  - Two events are considered independent events if the occurrence of one event does not affect the occurrence of the other event
  - Two events are considered dependent events if the occurrence of one event affects the occurrence of the other
  - Events are mutually exclusive if the occurrence of one event precludes the occurrence of the second event
- Regression analysis characterizes the relationship between two or more variables and then uses this characterization to predict values of a variable
  - For example, the number of physical damage claims for a fleet of vehicles is a function of the size of the fleet and the number of miles driven each year
- A loss distribution is a probability distribution of losses that could occur
  - Useful for forecasting if the history of losses tends to follow a specified distribution, and the sample size is large
  - The risk manager needs to know the parameters of the loss distribution, such as the mean and standard deviation
  - The normal distribution is widely used for loss forecasting

### Financial Analysis in Risk Management Decision Making

- The time value of money must be considered when decisions involve cash flows over time
  - Considers the interest-earning capacity of money
  - A present value is converted to a future value through compounding
  - A future value is converted to a present value through discounting
- Risk managers use the time value of money when:
  - Analyzing insurance bids
  - Making loss control investment decisions

- The **net present value** is the sum of the present values of the future cash flows minus the cost of the project
- The **internal rate of return** on a project is the average annual rate of return provided by investing in the project

### Other Risk Management Tools

- A **risk management information system** (RMIS) is a computerized database that permits the risk manager to store and analyze risk management data
  - The database may include listing of properties, insurance policies, loss records, and status of legal claims
  - Data can be used to predict and attempt to control future loss levels
- Risk Management Intranets and Web Sites
  - An **intranet** is a web site with search capabilities designed for a limited, internal audience
- A **risk map** is a grid detailing the potential frequency and severity of risks faced by the organization
  - Each risk must be analyzed before placing it on the map
- **Value at risk (VAR) analysis** involves calculating the worst probable loss likely to occur in a given time period under regular market conditions at some level of confidence
  - The VAR is determined using historical data or running a computer simulation
  - Often applied to a portfolio of assets
  - Can be used to evaluate the solvency of insurers
- **Catastrophe modeling** is a computer-assisted method of estimating losses that could occur as a result of a catastrophic event
  - Model inputs include seismic data, historical losses, and values exposed to losses (e.g., building characteristics)
  - Models are used by insurers, brokers, and large companies with exposure to catastrophic loss

### Overview of Private Insurance in the Financial Services Industry

- The financial services industry consists of:
  - Commercial banks
  - Savings and loan institutions
  - Credit unions
  - Life and health insurers
  - Property and casualty insurers
  - Mutual Funds
  - Securities brokers and dealers
  - Private and state pension funds
  - Government-related financial intuitions

### Overview of Private Insurance in the Financial Services Industry

- Changes in the financial services industry include:
  - **Consolidations**
    - The number of firms has declined due to mergers and acquisitions
  - **Convergence**
    - Existing financial institutions now sell a wide variety of financial products that earlier were outside their core business area

### Types of Private Insurers

- Life and health insurers:
  - These insurers sell life and health insurance products, annuities, mutual funds, pension plans, and related financial products

- Property and casualty insurers:
  - These insurers sell property and casualty insurance and related lines, including marine coverages and surety and fidelity bonds
- Insurers can be classified by their organizational form:
  - Stock insurers
  - Mutual insurers
  - Reciprocal exchanges
  - Lloyd's of London
  - Blue Cross and Blue Shield Plans
  - Health maintenance organizations (HMOs)
  - Other types of private insurers
- A **stock insurer** is a corporation owned by stockholders
  - Objective: earn profit for stockholders
    - Increase value of stock
    - Pay dividends
  - Stockholders elect board of directors
  - Stockholders bear all losses
  - Insurer cannot issue an assessable policy
- A **mutual insurer** is a corporation owned by the policy-owners
  - Policy-owners elect board of directors, who have effective management control
  - May pay dividends to policy-owners, or give a rate reduction in advance
  - **There are three main types of mutual insurers:**
    - An **advance premium mutual** is owned by the policy-owners; there are no stockholders, and the insurer does not issue assessable policies
    - An **assessment mutual** has the right to assess policy-owners an additional amount if the insurer's financial operations are unfavorable
    - A **fraternal insurer** is a mutual insurer that provides life and health insurance to members of a social or religious organization
- The corporate structure of mutual insurers is changing due to:
  - An increase in company mergers
  - **Demutualization**, in which a mutual company is converted into a stock insurer by:
    - Pure conversion
    - Merger
    - Bulk reinsurance
  - The creation of mutual holding companies
    - A **holding company** is a company that directly or indirectly controls an authorized insurer
  - A **captive insurer** is an insurer owned by a parent firm for the purposes of insuring the parent firm's loss exposures
  - **Savings Bank Life Insurance** refers to life insurance that is sold by mutual savings banks, over the phone or through Web sites

### Agents and Brokers

- An **agent** is someone who legally represents the principal and has the authority to act on the principal's behalf
- Authority may be:
  - Expressed
  - Implied
  - Apparent

- The principal is responsible for all acts of an agent when the agent is acting within the scope of authority
- A property and casualty agent has the power to bind the insurer
  - A binder provides temporary insurance until the policy is actually written
- A life insurance agent normally does not have the authority to bind the insurer
  - The applicant for life insurance must be approved by the insurer before the insurance becomes effective
- A broker is someone who legally represents the insured, and:
  - solicits applications and attempts to place coverage with an appropriate insurer
  - is paid a commission from the insurers where the business is placed
  - does not have the authority to bind the insurer
- A surplus lines broker is licensed to place business with a non-admitted insurer
  - Surplus lines refer to any type of insurance for which there is no available market within the state, and coverage must be placed with a non-admitted insurer

## MARKETING SYSTEMS IN LIFE INSURANCE

- An agency building system is a system by which an insurer builds its own agency force by recruiting, financing, training, and supervising new agents
- **General agency system**
  - The general agent is an independent contractor who represents only one insurer, and receives a commission based on the amount of business produced
  - Insurer provides some financial assistance, but the general agent is responsible for recruiting, training, and motivating new agents
  - Managerial system
    - Branch offices are established in various areas
    - The branch manager is responsible for hiring and training new agents, and receives a commission from the insurer
    - Insurer pays expenses of the branch office
  - Managerial system
    - Branch offices are established in various areas
    - The branch manager is responsible for hiring and training new agents, and receives a commission from the insurer
    - Insurer pays expenses of the branch office

### Marketing Systems in Life Insurance

- A **non-building agency system** is a marketing system by which an insurer sells its products through established agents
  - A **personal-producing general agent** is a successful agent who is hired primarily to sell insurance under a contract
- Under a **direct response system**, insurance is sold directly to customers without the services of an agent

### Marketing Systems in Property and Liability Insurance

- The independent agency is a business firm that usually represents several unrelated insurers
  - Agents are paid a commission based on the amount of business produced, which vary by the line of insurance
  - Agency owns the expirations or renewal rights to the business
- Under the exclusive agency system, the agent represents only one insurer or group of insurers under common ownership
  - Agents do not usually own the expirations or renewal rights to the policies
  - Agents are generally paid a lower commission rate on renewal business than on new business

### Marketing Systems in Property and Liability Insurance

- A direct writer is an insurer in which the salesperson is an employee of the insurer, not an independent contractor.
  - Employees are usually compensated on a “salary plus” arrangement
- A direct response insurer sells directly to the consumer by television or some other media
  - Used primarily to sell personal lines of insurance
- Many property and casualty insurers use multiple distribution systems

### Group Insurance Marketing

- Many insurers use group marketing methods to sell individual insurance policies to:

- Employer groups
- Labor unions
- Trade associations
- Some property and liability insurers use mass merchandising plans to market their insurance
- Employees pay for insurance by payroll deduction

### Insurance Company Operations

#### Rate making

- Rate making refers to the pricing of insurance
  - Total premiums charged must be adequate for paying all claims and expenses during the policy period
  - Rates and premiums are determined by an actuary, using the company's past loss experience and industry statistics

#### Underwriting

- Underwriting refers to the process of selecting, classifying, and pricing applicants for insurance
  - The objective is to produce a profitable book of business
- A statement of underwriting policy establishes policies that are consistent with the company's objectives, such as
  - Acceptable classes of business
  - Amounts of insurance that can be written
- A line underwriter makes daily decisions concerning the acceptance or rejection of business
- There are three important principles of underwriting:
  - The underwriter must select prospective insureds according to the company's underwriting standards
  - Underwriting should achieve a proper balance within each rate classification
    - In class underwriting, exposure units with similar loss-producing characteristics are grouped together and charged the same rate
  - Underwriting should maintain equity among the policyholders
- Underwriting starts with the agent in the field
- Information for underwriting comes from:
  - The application
  - The agent's report
  - An inspection report
  - Physical inspection
  - A physical examination and attending physician's report
  - MIB report
- After reviewing the information, the underwriter can:
  - Accept the application
  - Accept the application subject to restrictions or modifications
  - Reject the application
- Production refers to the sales and marketing activities of insurers
  - Agents are often referred to as producers
  - Life insurers have an agency or sales department
  - Property and liability insurers have marketing departments
- An agent should be a competent professional with a high degree of technical knowledge in a particular area of insurance and who also places the needs of his or her clients first

#### Claim Settlement

- The objectives of claims settlement include:
  - Verification of a covered loss
  - Fair and prompt payment of claims

- Personal assistance to the insured
- Some laws prohibit unfair claims practices, such as:
  - Refusing to pay claims without conducting a reasonable investigation
  - Not attempting to provide prompt, fair, and equitable settlements
  - Offering lower settlements to compel insureds to institute lawsuits to recover amounts due
- The claim process begins with a notice of loss
- Next, the claim is investigated
  - A claims adjustor determines if a covered loss has occurred and the amount of the loss
- The adjustor may require a proof of loss before the claim is paid
- The adjustor decides if the claim should be paid or denied
  - Policy provisions address how disputes may be resolved

### Reinsurance

- Reinsurance is an arrangement by which the primary insurer that initially writes the insurance transfers to another insurer part or all of the potential losses associated with such insurance
  - The primary insurer is the ceding company
  - The insurer that accepts the insurance from the ceding company is the re-insurer
  - The retention limit is the amount of insurance retained by the ceding company
  - The amount of insurance ceded to the re-insurer is known as a cession
- **Reinsurance is used to:**
  - Increase underwriting capacity
  - Stabilize profits
  - Reduce the unearned premium reserve
  - The unearned premium reserve represents the unearned portion of gross premiums on all outstanding policies at the time of valuation
  - Provide protection against a catastrophic loss
  - Retire from business or from a line of insurance or territory
  - Obtain underwriting advice on a line for which the insurer has little experience
- **There are two principal forms of reinsurance:**
  - Facultative reinsurance is an optional, case-by-case method that is used when the ceding company receives an application for insurance that exceeds its retention limit
  - Treaty reinsurance means the primary insurer has agreed to cede insurance to the reinsurer, and the reinsurer has agreed to accept the business
    - Under a quota-share treaty, the ceding insurer and the re-insurer agree to share premiums and losses based on some proportion
    - Under a surplus-share treaty, the re-insurer agrees to accept insurance in excess of the ceding insurer's retention limit, up to some maximum amount
    - An excess-of-loss treaty is designed for catastrophic protection
    - A reinsurance pool is an organization of insurers that underwrites insurance on a joint basis

### Reinsurance Alternatives

- Some insurers use the capital markets as an alternative to traditional reinsurance
- Securitization of risk means that an insurable risk is transferred to the capital markets through the creation of a financial instrument, such as a futures contract
- Catastrophe bonds are corporate bonds that permit the issuer of the bond to skip or reduce the interest payments if a catastrophic loss occurs

### Investments

1. Because premiums are paid in advance, they can be invested until needed to pay claims and expenses
2. Investment income is extremely important in reducing the cost of insurance to policy-owners and offsetting unfavorable underwriting experience

3. Life insurance contracts are long-term; thus, safety of principal is a primary consideration
4. In contrast to life insurance, property insurance contracts are short-term in nature, and claim payments can vary widely depending on catastrophic losses, inflation, medical costs, etc

**Other Insurance Company Functions**

1. The electronic data processing area maintains information on premiums, claims, loss ratios, investments, and underwriting results.
2. The accounting department prepares financial statements and develops budgets.
3. In the legal department, attorneys are used in advanced underwriting and estate planning.
4. Property and liability insurers provide numerous loss control services.

## INSURANCE AND RISK

Insurance is a system to protect persons against the risks of financial loss by transferring the risks to a large group who share the financial losses

Insurance is based on two principles: risk transference and the law of large numbers.

Risk transference, sometimes called ‘pooling’, involves the transfer of risk from the individual to a pool of the insurance company’s policyholders.

The insurance company charges a fee, the premium (or part thereof), for accepting the risk and ‘pools’ the premiums from a group of policyholders into a general fund to fund the death benefits under contract.

The law of large numbers basically relies on the principle that the larger the pool, the more predictable the amount of losses will be in a given period.

Since not all members of the pool are the same age or in the same health condition, we can assume not all of them will be making a claim at the same time.

In fact, by recording and studying the number of claims over a very large population, the number of 62 year old men, for example, who will die in a particular year can be fairly predicted.

This is not to say the year a particular person will die can be predicted. It only says that in a given year there is a high probability that X number of men who are 62 will die at that age.

All insurance is based on these two principles. A teenager commands a higher auto insurance rate because the statistical history has shown they have more accidents and the accidents are more serious than for a 40 year old driver.

Homeowners located on the eastern seaboard of Florida have a higher incidence of losses than a homeowner located in Idaho and, statistically, should pay a higher insurance premium.

It would not be fair to charge the Idaho homeowner additional fees to cover the costs of hurricanes in Florida, would it? A 40 year old man with two heart by-passes and who smokes statistically has less of a chance of living to age 70 than a 40 year old man who runs marathons.

Again, this is not to say there will not be instances of a 40 year old marathon runner dying from heart problems or other causes but, statistically, those incidences will be less for the marathon runner than for the heart patient who smokes. Should both 40 year old men pay the same premium for the same amount of insurance coverage?

The application submitted by an applicant is extremely important to the insurance company.

The application not only becomes essentially a legal document for purposes of recording what the insurance company knew about the applicant when the insurance company assumed the risk it is very important to the underwriter in rating the insurability of the applicant(s).

There are generally rules within the policy to address errors, omissions or falsehoods provided on the application.

### Insured Risk

**A risk that meets the following criteria:**

1. The insured loss must have a definite time and place;
2. The insured event must be accidental;
3. The insured must have an insurable interest in the subject of coverage;
4. The insured risks must belong to a sufficiently large group of homogeneous exposure units to make losses predictable;
5. The risk must not be subject to a catastrophic loss where a large number of exposure units can be damaged or destroyed in a single event;
6. The coverage must be provided at a reasonable cost;
7. The chance of loss must be calculable.

**Spread of risk**

A principle of insurance that insurers need to accept homogeneous exposure units spread over a wide geographic area, with the knowledge that only a given number of risks will result in claims or losses.

This dispersion of exposure units allows insurers to project expected losses from the entire body of insured, lessens the potential for catastrophic losses that could occur to exposure units close to each another, and allows for the development of rates.

**Reduction of risk**

A method of handling risk by the scope or volume of a firm's operations or through the purchase of insurance.

**Example:** A large outdoor advertising firm reduces its risk of lost revenue due to damaged billboards in a way that a small billboard company cannot because of its large number of dispersed exposure units. The scale of operations makes losses relatively predictable. Insurance reduces risk for the small company by combining a number of similar companies' risks into a more predictable group.

**What's the difference between an insurance score and a credit score?**

The use of credit information by insurance companies is not the same as by banks. It's easy to understand how credit applies to getting a bank loan, but insurers aren't as interested in credit-worthiness as in stability.

The logic is similar, because while it's not a loan, insurance is like a line of credit. Customers pay premiums so that, in the event of a loss, they will have money to repair or replace their homes, cars, etc.

**What is a Credit Score?**

In order to streamline the decision making process, the lending industry has developed a system which scores the borrower's credit history.

The score is seen as predictive of the borrower's ability and willingness to repay the loan. Such scoring gives the lender the ability to give the borrower a rapid credit decision by using automated underwriting software currently available.

**What does my credit score have to do with insurance?**

Most, if not all, insurance companies use credit scoring as a tool to qualify you for the best premiums possible. It is not a pure credit score, but barometer for estimating your potential for having a claim. Financial history does have an effect on your ability to properly maintain your property.

**What is an insurance-based credit score?**

Insurance-based credit score is a number or rating that is generated when information from a consumer's credit history is plugged into a highly specialized insurance formula or rating model.

The purpose for selecting and using a consumer's credit information in this manner is to predict the potential risk of loss that consumer poses to the insurance company.

**How can my credit insurance score benefit me?**

The way that you manage your credit is very important - it helps determine things like home mortgage interest rates and auto insurance rates.

A credit-based insurance score allows insurers to quote the fairest, most appropriate rate for every customer. Our experience shows that about half of our existing customers receive a rate decrease based on credit score.

**Why do Insurance Companies run a credit score?**

The use of credit history helps provide a consistent tool to look at every risk. It does not discriminate against any specific group of customers. The results usually help each customer pay his or her fair share of premium for insurance.

**Is an insurance credit score different from the credit score a bank or financial institution uses?**

Yes. An insurance credit score differs from the credit score used by banks and financial institutions. Though both scores rely on the same source of information, the scores and the models that generate the scores are designed to predict different outcomes.

A bank or financial institution will use credit information (including income) and your credit score to predict the amount of your loan, your ability to repay the loan and the risk that you may default on the loan.

### **Your Credit Score Can Affect Your Car Insurance Rates?**

You need to understand that your credit history can affect how much you pay for car insurance. Not only can it affect your rates, but it may even impact whether you can get insurance at all — or if insurance companies chooses to renew your policy.

### **If my bank says I have good credit, does that mean I have a good insurance score?**

Insurers do not look at credit the same way that a financial institution does. Insurers only consider items from your credit report that are relevant to loss potential. A financial institution uses credit to assess credit-worthiness.

### **Is the credit score used by auto insurance companies the same as that used by lenders?**

No. Lenders use your credit report to estimate your ability to repay a loan. Auto Insurance carriers use a different method to estimate the likelihood of your filing a claim. Some of the issues that may be considered to determine your auto insurance rate include:

## **Analysis of Insurance Contracts**

### **Basic Parts of an Insurance Contract**

- Declarations are statements that provide information about the particular property or activity to be insured
  - Usually the first page of the policy
  - In property insurance, it contains name of the insured, location of property, period of protection, amount of insurance, premium and deductible information
- Insurance contracts typically contain a page or section of definitions
  - For example, the insured is referred to as “you”
- The insuring agreement summarizes the major promises of the insurer
  - The two basic forms of an insuring agreement in property insurance are:
    - Named perils policy, where only those perils specifically named in the policy are covered
    - “All-risks” policy, where all losses are covered except those losses specifically excluded
      - May also be called an open-perils policy or special coverage policy
      - Insurers have generally deleted the word “all” from policies
    - “All-risks” coverage has fewer gaps, and the burden of proof is placed on the insurer to deny a claim
- Insurance contracts contain three major types of exclusions
  - Excluded perils, e.g., flood, intentional act
  - Excluded losses, e.g., a professional liability loss is excluded in the homeowners policy
  - Excluded property, e.g., pets are not covered as personal property in the homeowners policy
- Exclusions are necessary because:
  - Some perils are not commercially insurable
    - e.g., catastrophic losses due to war
  - Extraordinary hazards are present
    - e.g., using the automobile for a taxi
  - Coverage is provided by other contracts
    - e.g., use of auto excluded on homeowners policy
  - Moral hazard is present or it would be difficult to measure the amount of loss
    - e.g., coverage of money limited to \$200 in homeowners policy
  - Coverage not needed by typical insureds
    - e.g., homeowners policy does not cover aircraft

- Conditions are provisions in the policy that qualify or place limitations on the insurer's promise to perform
  - If policy conditions are not met, insurer can refuse to pay the claim
- Insurance policies contain a variety of miscellaneous provisions
  - e.g., cancellation, subrogation, grace period, misstatement of age

### DEFINITION OF THE “INSURED”

An insurance contract must indicate the persons or persons from whom the protection is provided

- Some policies insure only one person, e.g., most life insurance policies
- The named insured is the person or persons named in the declarations section of the policy
- A policy may cover other parties even though they are not specifically named
  - e.g., the homeowners policy covers resident relatives under age 24 who are full-time students away from home

### Endorsements and Riders

- In property and liability insurance, an endorsement is a written provision that adds to, deletes from, or modifies the provisions in the original contract
  - e.g., an earthquake endorsement to a homeowners policy
- In life and health insurance, a rider is a provision that amends or changes the original policy
  - e.g., a waiver-of-premium rider on a life insurance policy

### Deductibles

- A deductible is a provision by which a specified amount is subtracted from the total loss payment that otherwise would be payable
- The purpose of a deductible is to:
  - Eliminate small claims that are expensive to handle and process
  - Reduce premiums paid by the insured
    - Under the large loss principle, insurance should pay for high severity losses; small losses can be budgeted out of the person’s income
  - Reduce moral and morale hazard
- With a straight deductible, the insured must pay a certain amount before the insurer makes a loss payment
  - e.g., an auto insurance deductible
- An aggregate deductible means that all losses that occur during a specified time period are accumulated to satisfy the deductible amount

### Deductibles in Health Insurance

- A calendar-year deductible is a type of aggregate deductible that is found in basic medical expense and major medical insurance contracts
- A corridor deductible is a deductible that can be used to integrate a basic medical expense plan with a supplemental major medical expense plan
- An elimination (waiting) period is a stated period of time at the beginning of a loss during which no insurance benefits are paid

### Coinsurance

- A coinsurance clause in a property insurance contract encourages the insured to insure the property to a stated percentage of its insurable value
  - If the coinsurance requirement is not met at the time of the loss, the insured must share in the loss as a coinsurer

$$\frac{\text{Amount of insurance carried}}{\text{Amount of insurance required}} \times \text{Loss} = \text{Amount of recovery}$$

- **The purpose of coinsurance is to achieve equity in rating**
  - A property owner wishing to insure for a total loss would pay an inequitable premium if other property owners only insure for partial losses

- If the coinsurance requirement is met, the insured receives a rate discount, and the policy-owner who is underinsured is penalized through application of the coinsurance formula

### Coinsurance in Health Insurance

- Health insurance policies frequently contain a percentage participation clause
  - The clause requires the insured to pay a certain percentage of covered medical expenses in excess of the deductible
  - The purpose is to reduce premiums and prevent over-utilization of policy benefits

### Other-insurance Provisions

- The purpose of other-insurance provisions is to prevent profiting from insurance and violation of the principle of indemnity
  - Under a pro rata liability provision, each insurer's share of the loss is based on the proportion that its insurance bears to the total amount of insurance on the property
  - Under contribution by equal shares, each insurer shares equally in the loss until the share paid by each insurer equals the lowest limit of liability under any policy, or until the full amount of the loss is paid
  - Under a primary and excess insurance provision, the primary insurer pays first, and the excess insurer pays only after the policy limits under the primary policy are exhausted
  - The coordination of benefits provision in group health insurance is designed to prevent over-insurance and the duplication of benefits if one person is covered under more than one group health insurance plan
    - e.g., two employed spouses are insured as dependents under each other's group health insurance plan

### Social Insurance

- Social insurance programs are necessary for several reasons:
  - To help solve complex social problems
  - To provide coverage for perils that are difficult to insure privately
  - To provide a base of economic security to the population

### Basic Characteristics of Social Insurance

- Social insurance programs have certain characteristics that distinguish them from other government insurance programs:
  - Most programs are compulsory
    - This makes it easier to provide a floor of income to the population
    - It also reduces adverse selection
  - Programs are designed to provide a floor of income
  - Programs pay benefits based largely on social adequacy rather than individual equity
    - The benefits are heavily weighted in favor of certain groups, such as low-income persons, large families, and retirees
  - Benefits are loosely related to the workers' earnings
  - Programs, benefits, and benefit formulas are prescribed by law
  - A formal means test is not required
    - A means test involves disclosing income and assets
  - Full funding of benefits is unnecessary
    - For example, it is not necessary to fully fund Social Security because workers will always enter the program and support it
  - Programs are designed to be financially self-supporting
    - Programs should be almost completely financed from the earmarked contributions of covered employees

## The Liability Risk

### Basis of Legal Liability

- A legal wrong is a violation of a person's legal rights, or a failure to perform a legal duty owed to a certain person or to society as a whole
- Legal wrongs include:
  - Crime
  - Breach of contract
  - Tort
- A tort is a legal wrong for which the court allows a remedy in the form of money damages
- The person who is injured (plaintiff) by the action of another (tortfeasor) can sue for damages
- Torts fall into three categories:
  - Intentional, e.g., fraud, assault
  - Strict liability: liability is imposed regardless of negligence or fault
  - Negligence

### Law of Negligence

- Negligence is the failure to exercise the standard of care required by law to protect others from an unreasonable risk of harm
  - The standard of care is not the same for each wrongful act. It is based on the care required of a reasonably prudent person
- **Elements Negligence**
  - Existence of a legal duty to use reasonable care
  - Failure to perform that duty
  - Damage or injury to the claimant
  - Proximate cause relationship between the negligent act and the infliction of damages
    - A proximate cause relationship requires an unbroken chain of events
- **The law allows for the following types of damages:**
  - Compensatory damages compensate the victim for losses actually incurred. They include:
    - Special damages, e.g., medical expenses
    - General damages, e.g., pain and suffering
  - Punitive damages are designed to punish people and organizations so that others are deterred from committing the same wrongful act
- The ability to collect damages for negligence depends on state law
- Under a contributory negligence law, the injured person cannot collect damages if his or her care falls below the standard of care required for his or her protection
  - Under strict application of common law, the injured cannot collect damages if his or her conduct contributed in any way to the injury
- Under a comparative negligence law, the financial burden of the injury is shared by both parties according to their respective degrees of fault
  - Under the pure rule, you can collect damages even if you are negligent, but your reward is reduced in proportion to your fault
  - Under the 49 percent rule, you can collect damages only if your negligence is less than the negligence of the other party
  - Under the 50 percent rule, you can recover reduced damages only if your negligence is not greater than the negligence of the other party
- Some legal defenses can defeat a claim for damages:
  - The last clear chance rule states that a plaintiff who is endangered by his or her own negligence can still recover damages from the defendant if the defendant has a last clear chance to avoid the accident but fails to do so.
  - Under the assumption of risk doctrine, a person who understands and recognizes the danger inherent in a particular activity cannot recover damages in the event of an injury

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## LECTURE – 37

## PERSONAL AUTO POLICY BASICS

- The 2005 Personal Auto Policy (PAP) is widely used throughout the USA & European Countries
  - Drafted by the ISO, it replaces the 1998 form
- Eligible vehicles include:
  - A four-wheeled motor vehicle owned or leased by the insured for at least six consecutive months
  - A pick-up or van with a gross vehicle weight rating of 10,000 pounds or less
    - Cannot be used for deliveries, with some exceptions
- Autos covered by the policy include:
  - Any auto shown in the declarations
  - A newly acquired auto
    - Coverage depends on whether it is an additional vehicle or a replacement vehicle and whether the declarations indicates at least one auto for collision coverage
  - A trailer owned by the named insured
  - A temporary substitute vehicle, which is a non-owned auto or trailer used temporarily because of mechanical breakdown, repair, servicing, loss, or destruction of a covered vehicle

**Liability Coverage**

- Liability coverage is the most important part of the PAP
  - It protects a covered person against a suit or claim arising out of the ownership or operation of a covered vehicle
  - The coverage is usually written in split limits, where the amounts of insurance for bodily injury liability and property damage liability are stated separately
  - The insurer also agrees to provide defense and pay all legal defense costs for claims covered by the policy
    - Defense costs are covered in addition to the policy limits
- **Liability coverage applies to:**
  - The named insured and any resident family member
  - Any person using the named insured's covered auto
  - Any person or organization legally responsible for any insured's use of a covered auto on behalf of that person or organization
  - Any person or organization legally responsible for the named insured's or family members' use of any auto or trailer (other than a covered auto or one owned by the person or organization).
- **In addition to the policy limits and legal defense, certain supplementary payments can be paid, including:**
  - The cost of a bail bond
  - Premiums on appeals bonds
  - Interest accruing after a judgment
  - Loss of earnings
  - Other reasonable expenses
- **Exclusions to the coverage include:**
  - Intentional injury or damage
  - Property owned or transported
  - Property rented, used, or in the insured's care
  - Bodily injury to an employee
  - Use as a public livery or conveyance

- Vehicles used in the auto business
- Vehicles with fewer than four wheels
- Vehicle furnished for the insured's regular use
- If an accident occurs in another state, and the financial responsibility law in that state has higher liability limits than shown in the declarations, the PAP automatically provides the higher limits
- If more than one liability policy covers a loss:
  - The insurer pays its pro rata share of the loss for an owned vehicle
  - The insurance coverage is excess over any other insurance for a non-owned vehicle

### Medical Payments

- Medical payments coverage covers all reasonable medical and funeral expenses incurred by an insured in an accident
  - Two groups are eligible for coverage:
    - The named insured and family members are covered:
      - While occupying any motor vehicle, or
      - As pedestrians when struck by a motor vehicle
    - Other persons occupying a covered auto are covered
      - But not covered in a non-owned vehicle
  - Covers medical services rendered within three years from the date of the accident
  - Coverage is not based on fault
- **Exclusions to the coverage include injuries sustained:**
  - While occupying a vehicle with fewer than four wheels
  - While operating the vehicle as a public livery or conveyance
  - When the vehicle is used as a residence
  - When the vehicle is used without a reasonable belief of permission
  - When the vehicle is competing in a race
- If more than one auto policy covers a loss:
  - The insurer pays its pro rata share of the loss for an owned vehicle
  - The insurance coverage is excess over any other insurance for a non-owned vehicle

### Uninsured Motorists Coverage

- The uninsured motorists coverage pays for the bodily injury caused by an uninsured motorist, by a hit-and-run driver, or by a negligent driver whose insurance company is insolvent
  - In some states, property damage is also covered
  - The uninsured motorist must be legally liable
- The coverage applies to:
  - The named insured and family members
  - Any other person while occupying a covered auto
  - Any person legally entitled to recover damages (e.g., a surviving spouse)
- Coverage does not apply when:
  - An insured is injured in, or by, a vehicle owned by the named insured, but not insured under the policy
  - There is primary coverage under another policy
  - The vehicle is used as a public livery or conveyance
    - Does not apply to a carpool
  - When workers compensation benefits are applicable
- There are several limitations when more than one uninsured motorist coverage provision applies to a loss
  - For example, if an insurer provides coverage on a vehicle not owned by the named insured, the insurance provided is excess over any collectible insurance provided on a primary basis

- Underinsured motorists coverage can be added to the PAP to provide more complete protection
  - In general, the maximum amount paid is the underinsured motorist's coverage limit stated in the policy less the amount paid by the negligent driver's insurer
  - Coverage is typically added as an endorsement
    - Some states make it mandatory, while others make it optional

### Coverage for Damage to Your Auto

- Under the coverage for damage to your auto, the insurer agrees to pay for any direct and accidental loss to a covered auto or any non-owned auto
  - Two optional coverages are available:
    - Collision coverage: a collision is defined as the upset of your covered auto or non-owned auto or its impact with another vehicle or object
- **A non-owned auto is also covered under the coverages**
  - A non-owned auto is a private passenger auto, pickup, van, or trailer not owned by or furnished or made available for regular use of the named insured or family member, while it is in the custody of or being operated by the named insured or family member
  - The coverage also applies to a temporary substitute vehicle
    - The policy offers the broadest coverage applicable to any covered auto shown in the declarations
- A collision damage waiver (CDW) may be unnecessary on a rental car if you carry collision and comprehensive coverage on your own car
  - Most independent agents recommend purchase of the CDW
- This part also pays for temporary transportation expenses, e.g., for train, bus, taxi expenses
  - The expense must be the result of a covered loss
  - Coverage is subject to a daily and total limit
  - Includes charges from a rental car company for loss of daily rental
  - Coverage for towing and labor costs can be added by an endorsement
- Exclusions to the coverage include, for example:
  - Use as a public livery or conveyance
  - Damage from wear and tear, freezing, and mechanical or electrical breakdown
  - Radioactive contamination or war
  - Certain electronic equipment
    - Permanently installed equipment is covered
  - Tapes, records, and disks
  - Government destruction or confiscation
  - Trailer, camper body, or motor home
  - Racing vehicle
- For a total loss, the policy pays the actual cash value less the deductible
- For a partial loss, the policy pays only the amount necessary to repair or replace the damaged property of like kind and quality
  - The car can be repaired with original equipment manufacturer (OEM) or generic parts
- Insurers can add a clarifying endorsement to exclude coverage for diminution in value from a direct and accidental physical damage loss
  - The insured can purchase gap insurance to cover the difference between the amount an insurer pays for a totaled car and the amount owed on a lease or loan
- If more than one auto policy covers a physical damage loss:
  - The insurer pays its pro rata share of the loss for an owned vehicle
  - The insurance coverage is excess over any other insurance for a non-owned vehicle
- The policy includes an appraisal provision for handling disputes over the amount of physical damage loss
  - Either party can demand an appraisal of the loss

**Duties after an Accident or Loss**

- After an accident, the insured is required to perform certain duties, such as:
  - Promptly notify the insurance company or agent
  - Cooperate with the insurer in the investigation and settlement of a claim
  - Send the insurer copies of any legal notices received in connection with an accident
  - Take a physical exam, if required
- The police must be notified if a hit-and-run driver is involved
- The insurer must be allowed to inspect your vehicle if you are seeking coverage under next Part
- The insurer can deny coverage only if failure to comply is prejudicial to the insurer

**General Provisions**

- The PAP provides coverage in the US, US territories, Puerto Rico, and Canada
- All states restrict the insurer's right to cancel or non-renew coverage
- Termination provisions include:
  - Cancellation: The named insured can cancel at any time by returning the policy to the insurer or providing written notice. If a policy has been in force for more than 60 days, the insurer can cancel only if:
    - The premium has not been paid
    - The driver's license of any insured has been suspended, or
    - The policy was obtained through material misrepresentation
  - Non-renewal: if an insurer decides to discontinue coverage, the insured must be given notice at least 20 days before the end of the policy period
  - Automatic termination: a policy is automatically terminated if the insured declines the insurer's offer to renew

**Insuring Motorcycles and Other Vehicles**

- A miscellaneous-type vehicle endorsement can be added to the PAP to insure motorcycles, mopeds, motor-scooters, golf carts, motor homes, dune buggies, etc.
  - Does not cover snowmobiles
  - The liability coverage does not apply to a non-owned vehicle
  - A passenger hazard exclusion can be elected, which excludes liability for bodily injury to any passenger on a motorcycle

## AUTO INSURANCE AND SOCIETY

### Approaches for Compensating Auto Accident Victims

- Many accident victims are unable to recover damages
  - The negligent driver may be uninsured or underinsured
- States use a number of approaches to protect accident victims from irresponsible or reckless drivers
- A financial responsibility law requires motorists to furnish proof of financial responsibility up to certain minimum dollar limits
  - Proof is required:
    - After an accident involving bodily injury or property damage over a certain amount
    - Upon failure to pay a final judgment resulting from an auto accident
    - Following a conviction for certain offenses, such as DUI
- Evidence of financial responsibility can be provided in several ways:
  - Producing evidence of an auto liability insurance policy with at least certain minimum limits
  - Posting a bond
  - Depositing the amount required by law
  - Showing that the person is a qualified self-insurer
- Financial responsibility laws provide only limited protection against irresponsible motorists
  - There is no guarantee that all accident victim will be paid
    - The victim may not be paid if injured by an uninsured driver, hit-and-run driver, or driver of a stolen car
  - State laws require only minimum liability limits, which are relatively low
- A compulsory insurance law requires motorists to carry at least a minimum amount of liability insurance before the vehicle can be licensed or registered
  - Some argue that the law provides greater protection against uninsured drivers because motorists must provide evidence of financial responsibility before an accident occurs
  - Critics cite: mandatory insurance does not reduce the number of uninsured drivers
    - There is no correlation between compulsory insurance laws and the number of uninsured vehicles on the highway
  - Computer reporting systems to track uninsured motorists have not been effective
- For example Five states in USA have established unsatisfied judgment funds for compensating auto accident victims who have exhausted all other means of recovery
  - The accident must obtain a judgment against the negligent motorist and show that the judgment cannot be collected
  - The amount paid by the fund is limited by state law and may be reduced by collateral sources
  - The negligent driver must repay the fund
  - States use different methods for financing the benefits, e.g., through insurer assessments
- Many states require uninsured motorists coverage
  - The injured person's insurer agrees to compensate for bodily injury caused by an uninsured motorist, a hit-and-run driver, or a negligent driver whose insurer is insolvent
    - Some states include property damage losses
  - One advantage is that claim settlement is faster than a tort liability lawsuit
  - The injured person must establish that the uninsured motorist is legally liable for the accident
  - The minimum limits are low, so an accident victim may not be fully compensated

- Low-cost auto insurance provides minimum amounts of liability insurance at reduced rates to motorists who cannot afford regular insurance
  - Goal is to reduce the number of uninsured drivers
  - A pilot program in California does not appear to be effective
    - Many drivers still find auto insurance to be too expensive
- Several states have enacted “no pay, no play” laws which prohibit uninsured motorists from suing negligent drivers for non-economic damages

### No-fault Auto Insurance

- No-fault auto insurance is another method for compensating injured accident victims
- About half of the states have no-fault auto insurance laws in effect
  - After an auto accident involving bodily injury, each party collects from his or her own insurer regardless of fault
  - Enacted because of dissatisfaction and defects in the traditional tort liability system
- No-fault plans vary among the states:
  - Under a pure no-fault plan, accident victims cannot sue at all, regardless of the amount of the claim
    - No states have enacted a pure no-fault plan
  - Under a modified no-fault plan, victims have a limited right to sue:
    - In some states, an injured driver may sue if the bodily injury claim exceeds a certain monetary threshold
    - In some states, an injured driver may sue if the bodily injury claim exceeds a verbal threshold, e.g., if the injury involves death, dismemberment, disfigurement, or permanent loss of a bodily member or function
  - An add-on plan pays benefits to an accident victim without regard to fault, and the injured person has the right to sue the negligent driver who caused the accident
    - Not a true no-fault plan
  - Under a choice no-fault plan, motorists can elect to be covered under the state’s no-fault law and pay lower premiums
    - Or, they can retain the right to sue under the tort liability system and pay higher premiums
- No-fault benefits are provided by adding an endorsement to an auto insurance policy
  - Benefits are restricted to the injured person’s economic loss, which includes:
    - Medical expenses
    - Loss of earnings
    - Essential services expenses, e.g., housework
    - Funeral expenses
    - Survivors’ loss benefits, i.e., periodic payments to a surviving spouse and dependent children
  - In some states, insurers must also offer optional no-fault benefits above the prescribed minimums
- The right to sue varies across states with no-fault or add-on plans
  - All states permit a lawsuit in the event of a serious injury
- No-fault laws cover only bodily injury and not property damage
  - Except in Michigan
  - Motorists are allowed to sue the negligent driver for property damage
    - Cases are usually small and resolved quickly
- Arguments in support of no-fault laws include:
  - Difficulty in determining fault
  - Inequity in claim payments
    - Serious claims may be underpaid
  - High transactions costs and attorney fees

- Less than half of all tort dollars reach injured victims
- Fraudulent and inflated claims
  - When pain and suffering awards are based on a multiple of medical expenses and wage loss, claimants have a powerful incentive to inflate their claims
- Delay in payments
  - Many claims are not paid promptly because of the time consumed by investigation, negotiation, and waiting for a court date
- Arguments against no-fault laws include:
  - Defects of present system are exaggerated
  - Savings from no-fault are exaggerated
  - Court delays are confined to a few large cities
  - Safe drivers may be penalized by no-fault
    - The rating system may inequitably allocate accident costs to the drivers who are not at fault, thus raising their premiums
  - No-fault provides no payment for pain and suffering
  - The present tort liability system should be improved, not junked
- Some states have repealed their no-fault laws because relatively low monetary thresholds have increased the number of lawsuits
- A study by the Institute for Civil Justice found that no-fault plans:
  - reduce attorney fees and claim processing costs
  - match the compensation received for an injury more closely with the economic loss sustained
  - generally pay benefits more quickly
- The study concluded that savings from a no-fault plan depend on the provisions in the plan

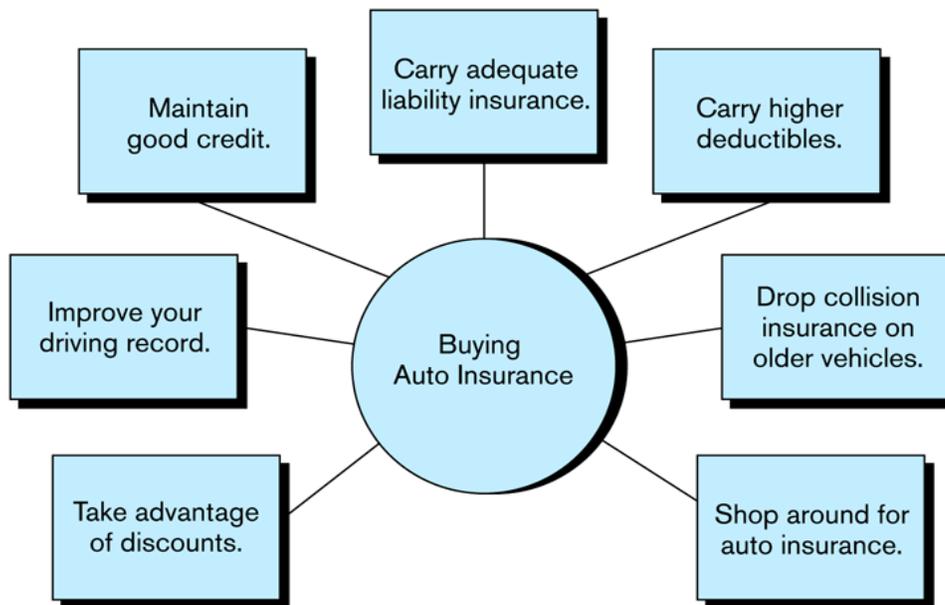
#### Auto Insurance for High Risk Drivers

- High risk drivers who have difficulty obtaining auto insurance in the voluntary market can obtain insurance in the shared (residual) market
  - These are typically younger drivers, drivers with poor driving records, and drivers with convictions for drunk driving
- Most states have an auto insurance plan (assigned risk plan) that makes auto insurance available to motorists who are unable to obtain insurance in the voluntary market
  - All auto insurers in the state are assigned a proportionate share of high-risk drivers, depending on their total volume of auto insurance premiums written in the state
  - Premiums charged are substantially higher than those charged in the voluntary markets
- A few states have established a joint underwriting association (JUA), in which auto insurers in the state participate in providing coverage to high-risk drivers through a common pool
  - Each insurer pays its pro rata share of pool losses and expenses
  - The JUA designs the policies and sets the rates
  - Underwriting losses are proportionately shared by the companies based on premiums written in the state
  - A limited number of insurers are designated as servicing insurers, but all insurers participate in the pool
- A few states have established a reinsurance facility (or pool) for placing high-risk drivers
  - Insurers must accept all applicants
    - If the applicant is considered a high-risk driver, the insurer has the option of placing the driver in the reinsurance pool
  - Underwriting losses are shared by all auto insurers in the state
- The Maryland Automobile Insurance Fund is a state fund that provides insurance to high-risk drivers who have been canceled or refused insurance by private insurers
- Specialty insurers are insurers that specialize in insuring motorists with poor driving records

### Cost of Auto Insurance

- Auto insurance rates have increased in recent years due to:
  - Rising medical and higher motor vehicle repair costs
  - Soaring jury awards in liability cases
  - Insurance fraud and abuse
- Insurers use a variety of factors to establish auto insurance premiums, including:
  - Territory
  - Age, gender, and marital status
  - Use of the auto
  - Driver education
  - Number and types of cars
    - A multicar discount is available if the insured owns two or more cars
  - Good student discount
  - Individual driving record
    - Many insurers offer a safe driver plan for drivers with clean records
  - An insurance score, based on an applicant's credit record

### Basics of Auto Insurance



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### ISO COMMERCIAL PROPERTY PROGRAM

- Business firms can purchase a commercial package policy (CPP)
  - The package policy is tailored to meet the specific needs of the business
  - The policy combines two or more coverages into a single policy
    - Advantages include: fewer gaps in coverage, lower premiums, and convenience
  - The policy contains:
    - Common policy declarations
    - Common policy conditions, e.g., cancellation terms
    - Coverage parts, e.g., commercial property, crime

#### Building and Personal Property Coverage Form

- The building and personal property coverage form is a commercial property coverage part that is widely used to cover a direct physical damage loss to commercial buildings and personal property
  - The form covers the buildings described in the declarations, including fixtures and permanently installed machinery and equipment
  - Business personal property, such as furniture and computers, is covered
    - Includes the insured's interest in improvements and betterments as a tenant
  - Personal property of others in the care, custody, or control of the named insured is also covered
  - Additional coverages include debris removal, the cost of preserving property, fire department charges, and the cost to replace data destroyed by a covered loss
  - Under certain conditions, the insurance can be extended to cover other property, such as the personal effects of employees, newly acquired property, and property off the premises
    - The declarations page must show a coinsurance requirement of 80% or greater or a value-reporting period symbol
  - If applicable, the coinsurance requirement must be met to avoid a penalty
  - The policy can be endorsed to cover losses on an agreed value or replacement cost basis, or to add an inflation guard

#### Causes-of-Loss Forms

- A causes-of-loss form must be added to the policy to have a complete contract
  - The form specifies the covered perils for the business and personal property coverage
  - The causes-of-loss basic form provides coverage for 11 basic causes of loss:

<ul style="list-style-type: none"> <li>• Fire</li> <li>• Lightning</li> <li>• Explosion</li> <li>• Windstorm or hail</li> <li>• Smoke</li> <li>• Aircraft or vehicles</li> </ul>	<ul style="list-style-type: none"> <li>• Riot or civil commotion</li> <li>• Vandalism</li> <li>• Sprinkler leakage</li> <li>• Sinkhole collapse</li> <li>• Volcanic action</li> </ul>
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- The causes-of-loss broad form includes all causes of loss covered by the basic form plus:
  - Falling objects
  - Weight of snow, ice, or sleet
  - Water damage

- Also, collapse is covered for certain causes, such as hidden decay
- The causes-of-loss special form insures against “risks of direct physical loss” unless specifically excluded
  - Also, personal property in transit is covered for certain causes of loss
  - Coverage also includes glass damage

### Reporting Forms

- The reporting form is used to insure fluctuations in business personal property
  - Premiums are based on the actual value of the covered property
  - The insured can report inventory on a daily, weekly, monthly, quarterly or annual basis
  - If the insured underreports the property values at a location, and a loss occurs at that location, recovery is limited to the proportion that the last value reported bears to the correct value that should have been reported

### Business Income Insurance

- Business income insurance is designed to cover the loss of business income, expenses that continue during the shutdown period, and extra expenses because of loss from a covered peril
  - One form is the business income (and extra expense) coverage form
    - This form covers the loss of business income due to suspension of operations during a period of restoration
      - Suspension must result from a covered direct physical loss
    - Extra expenses, such as relocation costs, are also covered
    - An extended business income provision covers the reduction in earnings for a limited period after the business reopens
    - Business income is defined as the net profit or loss before income taxes that would have been earned, and continuing normal operating expenses, including payroll

### Business Income Insurance

- The coinsurance percentage selected depends on the length of time it takes to complete repairs and resume operations
  - A higher percentage should be selected if the business expects to be shut down for a longer period of time
- Some optional coverages include:
  - A maximum period of indemnity of 120 days
    - Also eliminates the coinsurance requirement
  - A monthly limit of indemnity
    - Eliminates the coinsurance requirement and limits the maximum monthly amount that will be paid for each consecutive 30-day period
  - Business income agreed value
    - This option suspends the coinsurance clause and places no limit on the monthly amount paid, provided that the agreed amount of insurance is carried
- The extra expense coverage form is a separate form that can be used to cover the extra expenses incurred by the firm in continuing operations during a period of restoration
  - Can be used by firms that must continue to operate after a loss occurs, such as a newspaper
  - The form does not cover loss of business income
  - Expenses to continue operations are covered, subject to certain limits
- An endorsement can be added to a business income policy to cover the loss of business income from dependent properties
  - Used when a business depends on a single supplier for raw materials, or relies on a single customer to purchase its products

- The loss of income must result from direct damage to property of the dependent property
- Types of dependent properties include:
  - Contributing location
  - Recipient location
  - Manufacturing location
  - Leader location

### Other Commercial Property Coverages

- Some firms have certain needs that require more specialized property coverage
- A builders risk coverage form can be used to insure buildings under construction
  - Covers the insurable interest of a general contractor, subcontractor, or building owner
  - A builders risk reporting form can be attached as an endorsement
    - Requires the builder to report monthly on the value of the building under construction
    - As the building progresses, the amount of insurance on the building is increased, and premiums are adjusted based on the values reported by the builder
- A condominium association coverage form is used to cover a condominium building
  - Coverage includes the association’s personal property, such as exercise room equipment
  - Coverage also includes personal property in the association’s care, such as leased lawn mowers
- Businesses that own units in a condominium building can purchase a condominium commercial unit-owners coverage form
  - Not used for residential condominium units
  - The form covers the business property of the unit owner, such as furniture, fixtures and improvements, machinery and equipment
  - The form also covers the personal property of others in the care, custody, or control of the unit owner
- The equipment breakdown coverage form can be used to cover losses due to the accidental breakdown of covered equipment, such as steam boilers, refrigeration equipment, and computer equipment
  - These losses are not covered under the causes-of-loss forms
- Difference in Conditions (DIC) insurance is an “all-risks” policy that covers other perils not insured by basic property insurance contracts
  - The coverage fills gaps in commercial property coverage
  - The coverage can be used to insure unusual and catastrophic exposures that are not covered by the underlying contracts
  - A substantial deductible must be satisfied for losses not covered by the underlying contracts

### Transportation Insurance

- Ocean marine insurance provides protection for goods transported over water
  - It is one of the oldest forms of transportation insurance
- Ocean marine insurance comes in several different forms:
  - Hull insurance covers physical damage to the ship or vessel
    - A collision liability clause (running down clause) covers the owner’s legal liability if the ship collides with another vessel or damages its cargo
  - Cargo insurance covers the shipper of the goods if the goods are damaged or lost
    - Regular shipments can be covered with an open-cargo policy
      - This coverage requires the shipper to report periodically the shipments that are made

- Protection and indemnity (P&I) insurance is usually written as a separate contract that provides comprehensive liability insurance for property damage or bodily injury to third parties
  - Coverage includes liability for damages caused by the ship to piers and docks, and for illness or injury to passengers and crew
- Freight insurance indemnifies the ship owner for the loss of earnings if the goods are damaged or lost and are not delivered
- Ocean marine insurance is based on certain fundamental concepts, or implied warranties:
  - The owner implicitly warrants that the vessel is seaworthy
  - The ship cannot deviate from its original course
    - The ship can only deviate to avoid an accident, or to save the life of an individual on board, or rescue persons from another vessel
  - The purpose of the voyage is legal
- The ocean marine policy provides broad coverage for perils of the sea, such as bad weather, high waves, collision, sinking, and stranding
  - Includes losses from fire, pirates, and jettison (to save the ship)
  - The policy can be written on an “all-risks” basis
    - Common exclusions are losses due to delay and war
- A particular average is a loss that falls entirely on a particular interest
  - Under the free-of-particular average (FPA) clause, partial losses are not covered unless the loss is caused by certain perils, such as stranding or sinking
    - The insurer pays the full amount of a loss only if it exceeds a certain percentage specified in the FPA
- A general average is a loss that falls on all parties to the voyage, incurred for the common good
  - Each party must pay its share of the loss based on the proportion that its interest bears to the total value in the venture
  - Conditions for a general average loss include imminent peril, voluntary sacrifice, preservation of at least part of the value
    - All parties claiming contributions must be free of fault
- Inland marine insurance provides protection for goods shipped on land
  - The coverage grew out of ocean marine insurance
  - Conflicts between fire and marine insurers were resolved with a nationwide marine definition in 1933, to define the types of property that marine insurers could write
  - The current definition includes imports, exports, domestic shipments, means of transportation and communication, personal property floater risks, and commercial property floater risks
  - Some examples of property that can be insured include:
    - Losses to domestic goods in transit
    - Property held by a bailee, such as dry cleaner
    - Mobile equipments, such as a tractor
    - Property of certain dealers, such as jewelry and fine art
    - Means of transportation and communication, which is property at a fixed location that is used in transportation or communications, such as a bridge or television tower
- Inland marine contracts are classified as either filed or non-filed forms
  - Filed forms are filed with the state insurance department, and are typically used in situations where there are a large number of potential insureds
    - Forms under the ISO simplified commercial inland marine program include, for example:
      - Accounts receivable coverage
      - Camera and musical instrument dealers coverage
      - Film coverage form
      - Mail coverage form
      - Signs coverage form

- Theatrical property coverage form
- Non-filed inland marine forms are used to meet specialized needs
  - An annual transit policy can be used to cover the shipment of goods on public trucks, railroads, and coastal vessels
    - Both incoming and outgoing shipments can be insured on a named perils or “all-risks” basis
  - A trip transit policy is used by firms to cover a single shipment
  - A business floater covers property that frequently moves from one location to another, such as contractors equipment and garments in the process of manufacturing

### **Business-owners Policy**

- A business-owners policy (BOP) is a package policy specifically designed for small- to medium-sized retail stores, office buildings, apartment buildings, and similar firms
  - The ISO BOP provides both property and liability coverage in one policy
  - Businesses are ineligible if their loss exposures are outside those contemplated for the average small- to medium-sized firm
    - e.g., auto repair shops and bowling alleys
  - Property losses are covered on an “all-risks” basis
    - Coverage includes buildings described in the declarations, fixtures, permanently installed machinery and equipment
  - Business personal property, including property in the insured’s care, is also covered
    - A peak season provision provides for a temporary increase of 25% of the amount of insurance when inventory values are at their peak
  - Some addition coverages include debris removal, collapse, and interruption of computer operations
  - For an additional cost, business-owners can also cover:
    - Outdoor signs
    - Money and securities
    - Employee dishonesty
    - Mechanical breakdown
  - The BOP also includes business liability coverage similar to the commercial general liability policy (CGL)
    - The business-owner is insured for bodily injury and property damage liability, and advertising and personal injury liability
    - Medical expense insurance is also provided

## COMMERCIAL LIABILITY INSURANCE

### General Liability Loss Exposures

- General liability refers to legal liability arising out of business operations other than auto or aviation accidents and employee injuries
  - Some important exposures include:
    - Premises and operations liability, arising out of the ownership and maintenance of the premises where the firm does business
    - Products liability, arising out of the manufacturing and sale of products
    - Completed operations liability, arising out of faulty work performed away from the premises after the work or operation is completed
    - Contractual liability, arising out of the assumption of legal liability through a written or oral contract
    - Contingent liability, arising out of work done by independent contractors

### Commercial General Liability Policy

- The commercial general liability policy (CGL) is widely used by firms to cover their general liability loss exposures
  - The policy comes in two forms: an occurrence form and a claims-made form
    - An occurrence policy covers liability claims arising out of occurrences that take place during the policy period, regardless of when the claim is made
    - A claims-made policy covers only claims that are first reported during the policy period or extended reporting period, provided that the event occurred after the retroactive date, if any, stated in the policy
- CGL contains three major parts of coverage and supplementary payments
- Coverage A: Bodily Injury and Property Damage Liability
  - The insurer agrees to pay on behalf of the insured all sums up to the policy limits that the insured is legally obligated to pay because of bodily injury or property damage
    - The bodily injury or property damage must be caused by an occurrence, i.e., an accident, including continuous or repeated exposure to substantially the same general harmful conditions
    - Coverage does not apply when a loss is known or is apparent before the policy's inception date
    - Coverage includes defense costs, and the insurer has the right to investigate a claim or suit and settle it at its discretion
- **Coverage A: contains a lengthy list of exclusions, including:**
  - Expected or intended injuries or damages
  - Contractual liability, with some exceptions
  - Liquor liability
  - Workers compensation and employers liability
  - Pollution, with some exceptions
  - Aircraft, auto, and watercraft, with some exceptions
  - Mobile equipment
  - War
  - Damage to property owned, rented, or occupied by the insured
  - Property damage to the insured's product or work
  - Damage to impaired property that is not physically damaged
  - Recall of products
- Coverage A includes coverage for fire legal liability

- Covers fire damage to premises rented to the named insured or temporarily occupied by the named insured with the permission of the owner
- A separate limit of coverage applies
- Other damage to property rented by the insured is NOT covered

**Coverage B: Personal and Advertising Liability**

- The insurer agrees to pay those sums that the insured is legally liable to pay as damages because of personal and advertising injury
- The policy covers legal liability resulting from:
  - false arrest
  - malicious prosecution
  - wrongful eviction or entry
  - slander
  - violation of privacy
  - copyright infringement

**Coverage C: Medical Payments**

- The insurer will cover the medical expenses of persons who are injured in an accident on the premises or on ways next to the premises, or as a result of the insured's operations
  - Expenses must be incurred within one year of the accident
  - Payments are made without regard to legal liability
- Supplementary Payments: Coverages A and B
  - In addition to the policy limits, coverage includes:
    - All expenses incurred by the insurer
    - Actual loss of earnings by the insured
    - Prejudgment interest

**CGL indicates the individuals and organizations that are considered “insureds”**

- If designated in the declarations, insureds include:
  - Owner and spouse if a sole proprietorship
  - Partners, members, and their spouses if a partnership or joint venture
  - Members and managers if a limited liability company (LLC)
  - Officers, directors, and stockholders if a corporation
  - A trust and trustees, but only with respect to their duties as trustees

**Insureds also include persons not named in the policy:**

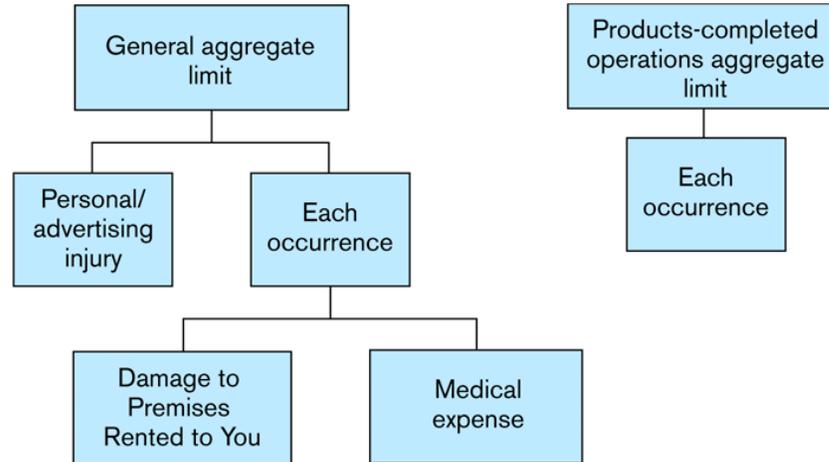
- Volunteer workers acting for the organization
- Employees acting within the scope of employment
- Any person or organization acting as a real estate manager
- A legal representative if the named insured should die
- Any newly acquired or formed organization, other than a partnership, joint venture or LLC

**CGL contains the coverage limits**

- The general aggregate limit is the maximum amount that the insurer will pay for the sum of the following:
  - Damages under Coverage A (except for amounts paid for products-completed operations hazard), damages under Coverage B, and medical payments under Coverage C
- The policy contains a separate products-completed operations hazard aggregate limit
- A personal and advertising injury limit is the maximum paid under Coverage B

- An each-occurrence limit is the maximum amount the insurer will pay for the sum of damages under Coverage A and medical expenses under Coverage C arising out of any one occurrence
- The damage to rented premises limit is the maximum amount paid for damages under Coverage A due to a single fire
- The medical expense limit is the maximum amount paid under Coverage C because of a bodily injury sustained by any one person

### Illustration of the CGL Limits of Insurance



SOURCE: Adapted with permission from International Risk Management Institute, Inc. *Commercial Liability Insurance*, vol. 1, p. IV.E 14. Copyright 1994.

- CGL states the various conditions that apply to the coverage form
  - For example, this section contains provisions for dealing with bankruptcy, and the duties in the event of an occurrence
- CGL contains the definitions of various terms used in the policy
  - Some terms defined in the policy include “advertisement”, “hostile fire”, and “volunteer worker”
- The ISO claims-made policy is similar to the occurrence policy with the major exceptions of:
  - Payment of claims is on a claims-made basis
    - The policy covers only those claims that are first reported during the policy period
      - The event must occur after any stated retroactive date
  - It contains an extended reporting period provision
    - The purpose is to provide coverage under an expired claims-made policy for claims first reported after the policy expires
    - The basic extended reporting period, with two separate reporting “tails” is automatically provided in certain circumstances (e.g., cancellation of coverage)
      - The first tail is a five-year period after the policy expires
        - Covers events that occur during the policy period, and are reported to the insurer, but a claim may not yet be made
      - The second tail is a 60-day period after the expiration date
        - Covers events that occur during the policy period that the insured may not be aware of

### Employment-related Practices Liability Insurance

- Under the ISO employment-related practices liability insurance coverage, the insurer agrees to pay damages resulting from an “injury” arising out of:

- Demotion or failure to promote
- Wrongful termination
- Negligent hiring or supervision
- Retaliatory action against employees
- Coercing an employee to commit an unlawful act
- Work related harassment
- Employment-related libel
- Other work-related verbal, physical, mental, or emotional abuse, such as gender discrimination
- The form includes a co-payment provision that requires the insured to pay part of the damages and legal defense costs up to some maximum limit
- The form provides for a legal defense
  - Included as *part of* the policy limit
  - A claim cannot be settled without the insured's consent
- Exclusions include criminal acts, contractual liability, workers compensation, and violation of laws applicable to employers, such as the Age Discrimination in Employment Act
- Interest in this coverage is increasing due to an increase in suits against employers for sexual harassment

### Workers Compensation Insurance

- Workers compensation insurance provides medical care, cash benefits, survivor benefits, and rehabilitation services to workers who are injured or die from job-related accidents or disease
  - Benefits are paid on the principle of liability without fault
  - The workers compensation and employment liability policy contains three parts:
    - Part One: Workers compensation insurance
    - Part Two: Employers liability insurance
    - Part Three: Other-states insurance
    -
- Under Part One, the insurer agrees to pay all workers compensation benefits and other benefits that the employer must legally provide to covered employees who have a job-related injury or an occupational disease
  - There are no policy limits. The insurer pays all benefits required by state law
  - The employer must reimburse the insurer for any payments that exceed regular benefits in certain cases, e.g., willful misconduct by the employer

### Commercial Umbrella Policy

- A commercial umbrella policy can protect a business against catastrophic liability judgments
- The ISO commercial umbrella policy pays the ultimate net loss in excess of the retained limit for bodily injury, property damage, and personal and advertising injury to which the insurance applies
  - The ultimate net loss is the total sum the insured is legally obligated to pay as damages
  - The retained limit refers to (1) the available limits of underlying insurance listed in the declarations, or (2) the self-insurance retention, whichever applies
    - If a loss is covered by an underlying insurance contract, the umbrella policy pays only after the underlying limits are exhausted
    - If the loss is not covered by any underlying coverage, the insured must satisfy a self-insured retention (SIR)
  - Insureds are required to carry certain minimum amounts of liability coverage before the umbrella insurer will pay any claims
  - The form contains a lengthy list of exclusions for bodily injury and property damage liability, including:
    - Expected or intentional injury
    - Liquor liability
    - Pollution

- Liability arising out of professional services
- The form also contains a list of exclusions for personal injury and advertising liability, including:
  - Criminal acts
  - Failure of the product to perform as advertised
  - Employment-related practices, such as harassment

### **Business-owners Policy**

- The ISO business-owners policy (BOP) includes liability coverage that is similar to the CGL form
  - The coverage includes:
    - Business liability
    - Medical expenses
    - Legal defense
  - Although the BOP excludes professional liability, some professional liability endorsements are available for:
    - retail drugstores
    - barbers and beauticians
    - funeral directors
    - optical and hearing aid establishments
    - printers
    - veterinarians

### **Professional Liability Insurance**

- Professional liability insurance is available for certain business professionals to provide protection against a lawsuit involving a substantial error or omission
- The physicians, surgeons, and dentists liability coverage form covers these professionals for acts of malpractice or omission resulting in harm or injury to patients
  - Liability is not restricted to accidental acts of the physician or surgeon. The policy also covers the physician for liability arising out of negligent acts of an employee
  - Current forms permit the insurer to settle a claim without the physician's or surgeon's consent
  - An extended reporting period endorsement can be added to cover future claims arising out of incidents that occurred during the policy period
- Errors and omissions insurance provides protection against loss incurred by a client because of negligent acts, errors, or omissions by the insured
  - This coverage is purchased by professionals who provide advice to clients, such as:
    - insurance agents and brokers
    - travel agents
    - real estate agents
    - stockbrokers
    - attorneys
    - consultants
    - engineers, and architects
  - The policies are generally issued on a claims-made basis, covering only claims made in the current policy period
  - Claims that result from dishonest, fraudulent, criminal or malicious acts by the insured are specifically excluded

### **Directors and Officers Insurance**

- A directors and officers (D&O) liability policy provides financial protection for the directors and officers and the corporation if the directors and officers are sued for mismanagement of the company's affairs

- Typically, the policy agrees to pay damages on behalf of directors, officers, and employees because of a wrongful act
- D&O policies are written on a claims-made basis
- Common exclusions include bodily injury and property damage, libel and slander, personal profit, deliberate dishonesty by the insured, and illegal discrimination

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## CRIME INSURANCE AND SURETY BONDS

### ISO Commercial Crime Insurance Program

- Crime insurance coverage can be added to a commercial package policy (CPP), or purchased separately
  - There are five basic crime coverage forms, and each can be written in one of two versions:
    - The discovery version covers a loss that is discovered during the policy period or within 60 days after the policy expires even though the loss may have occurred before the policy's inception date
    - The loss-sustained version covers a loss that occurs during the policy period, and the loss is discovered during the policy period or within one year after the policy expires

### ISO Commercial Crime Coverage Forms and Policies

- Commercial Crime Coverage Form (discovery version and loss-sustained version)
  - Commercial Crime Policy (discovery version and loss-sustained version)
  - Government Crime Coverage Form (discovery version and loss-sustained version)
  - Government Crime Policy (discovery version and loss-sustained version)
  - Employee Theft and Forgery Policy (discovery version and loss-sustained version)
- Most property crimes against businesses are due to:
    - Robbery: the unlawful taking of property from the care and custody of a person by someone who has caused or threatens to cause that person bodily harm, or has committed an obviously unlawful act witnessed by that person
    - Burglary: the unlawful taking of property from inside the premises by a person who unlawfully enters or leaves the premises, as evidenced by marks of forcible entry or exit
    - Safe burglary: the unlawful taking of property from within a locked safe or vault by someone who unlawfully enters the safe or vault as evidenced by marks of forcible entry upon the exterior
  - The commercial crime coverage form (loss sustained version) is used by private firms and nonprofit organizations
    - Firms can select from among eight insuring agreements
    - Employee theft coverage pays for the loss of money, securities, and other property that results directly from theft committed by an employee
      - Includes the theft of other property, besides money and securities, but not computer programs or data
    - Forgery or alteration coverage pays for a loss that results directly from forgery or from the alteration of checks drawn by the insured or the insured's agent
      - Also includes drafts, promissory notes, or similar instruments
      - The coverage does not apply to losses that result from the acceptance of forged documents

- Inside the premises - theft of money and securities pays for the loss of money and securities inside the premises that result directly from theft committed by a person present inside the premises, or for disappearance, or destruction
  - Coverage also applies to damage to the premises or a vault if related to the actual or attempted theft
- Inside the premises – robbery or safe burglary of other property pays for the loss or damage to other property inside the premises by the actual or attempted robbery of a custodian, or by safe burglary inside the premises
  - Burglary loss of other property that is not stored in a safe is not covered. These losses can be covered by an inside the premises – robbery or burglary of other property agreement
- The outside the premises agreement covers the theft, disappearance, or destruction of money and securities outside the premises while in the custody of a messenger or an armored-car company
  - The coverage also includes losses due to the actual or attempted robbery of other property outside the premises
- The computer fraud agreement covers the loss of money, securities, and other property if a computer is used to transfer property fraudulently from inside the premises to a person or place outside the premises
- The funds transfer fraud agreement covers the loss of funds that result directly from fraudulent instructions that direct a financial institution to transfer or pay funds from the insured's account
- The money orders and counterfeit paper currency coverage pays for losses resulting directly from the good-faith acceptance of counterfeit currency
  - Includes money orders that are not paid upon presentation
- Exclusions in the commercial crime coverage form include:
  - Dishonest acts or theft committed by the named insured, partners, or members
  - Knowledge of dishonest acts of employees prior to the policy period
  - Indirect loss
  - Inventory shortages (applies to employee theft only)
    - There is no coverage for any loss if proof of loss depends on an inventory computation or on a profit and loss computation
- The discovery version form is especially valuable for a business firm that has been in business for several years but is uninsured for employee theft losses
  - New coverage written on a discovery version would cover any losses that occurred years earlier but were only discovered during the current policy period
  - If the underwriter suspects that large undiscovered losses might exist prior to the policy's inception date, a retroactive date endorsement can be added to the policy
    - The endorsement limits coverage to only those losses that occur after the retroactive date and are discovered during the current policy period
- A provision for loss sustained during prior insurance covers a loss that occurred during the term of the prior policy but was discovered only after the discovery period under the prior policy had expired
  - This provision enables a business to change insurers without penalty
  - There must not be a break in coverage
- Coverage under the employee theft agreement terminates as to any employee once the insured has knowledge that the employee has committed a theft or dishonest act

### Financial Institution Bonds

- Financial institutions, such as commercial banks and credit unions, use some type of financial institution bond to deal with crime exposures
  - In this context, the word “bond” is synonymous with “insurance policy”

- Fidelity coverage covers losses that result directly from the dishonest or fraudulent acts of employees acting alone or in collusion with others, with the active and conscious purpose of causing the insured to sustain such loss
  - Excludes losses due to trading or loan transactions
- On premises coverage covers loss of property on the premises for a broad list of perils, including robbery, burglary, misplacement, mysterious unexplainable disappearance, and theft
- In-transit coverage covers losses to property in-transit for a broad list of perils
  - The property must be in the custody of a messenger or transportation company
- Forgery or alteration coverage covers loss from forgery or alteration of most negotiable instruments
- Securities coverage covers losses to the insured because securities accepted in good faith have been forged, altered, lost or stolen
- Counterfeit currency coverage covers loss to the insured from counterfeit money
- Fraudulent mortgages coverage covers loss that results directly from having accepted or acted upon any mortgage on real property that proves defective because of a fraudulent signature

### Surety Bonds

- A surety bond is a bond that usually provides monetary compensation if the bonded party fails to perform certain promised acts
- The parties to a surety bond include:
  - The principal is the party who agrees to perform certain acts or fulfill certain obligations
  - The obligee is the party who receives the proceeds of the bond if the principal fails to perform
  - The surety is the party who agrees to answer for the debt, default, or obligation of the principal
- Surety bonds are similar to insurance contracts in that both provide protection against specified losses

### Comparison of Insurance and Surety Bonds

<i>Insurance</i>
<ol style="list-style-type: none"> <li>1. There are two parties to an insurance contract.</li> <li>2. The insurer expects to pay losses. The premium reflects expected loss costs.</li> <li>3. The insurer normally does not have the right to recover a loss payment from the insured.</li> <li>4. Insurance is designed to cover unintentional losses that ideally are outside of the insured's control.</li> </ol>
<i>Surety Bonds</i>
<ol style="list-style-type: none"> <li>1. There are three parties to a surety bond.</li> <li>2. The surety theoretically expects no losses to occur. The premium is viewed as a service fee, by which the surety's credit is substituted for that of the principal.</li> <li>3. The surety has the legal right to recover a loss payment from the defaulting principal.</li> <li>4. The surety guarantees the principal's character, honesty, integrity, and ability to perform. These qualities are within the principal's control.</li> </ol>

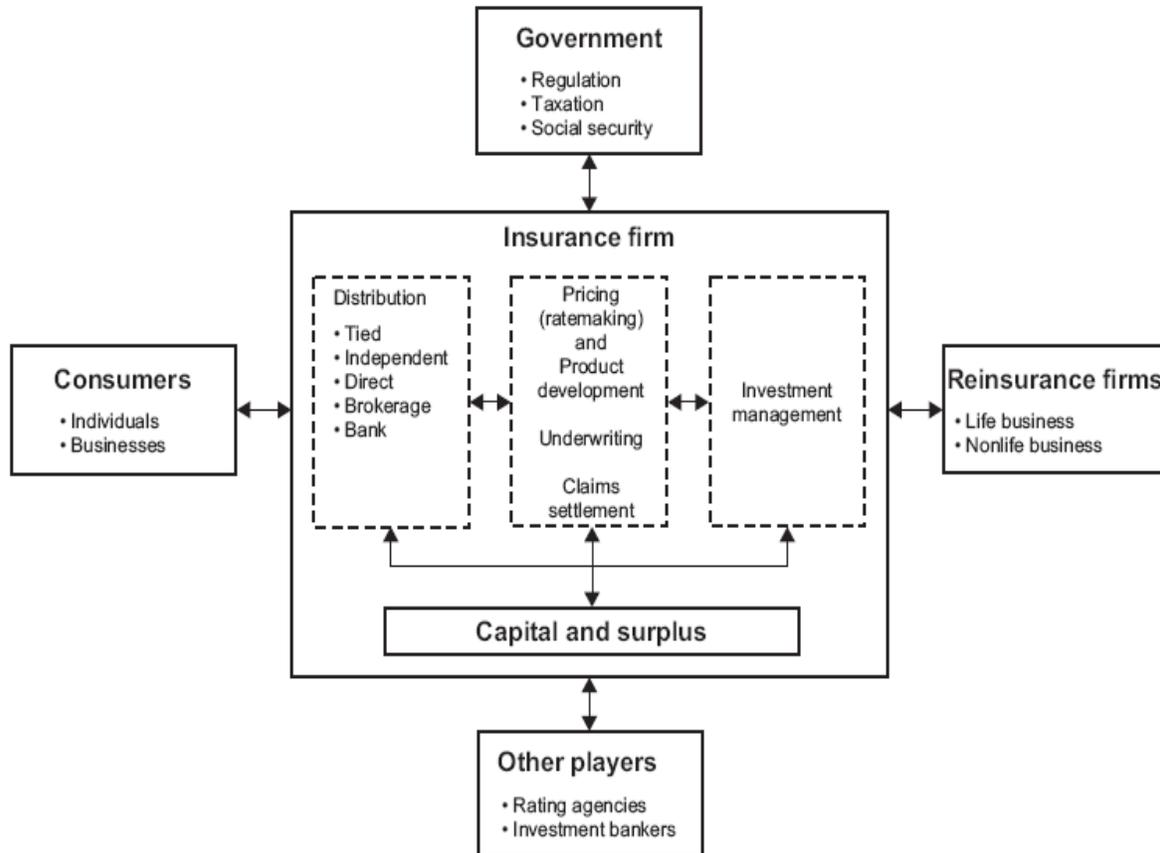
### Comparison of Five Contract Bonds

<i>Type of Bond</i>	<i>Obligee</i>	<i>Principal</i>	<i>Guarantee</i>
1. Bid Bond	Property owner or party requesting bids	Firm or party submitting the bid	Party whose bid is accepted will sign a contract and furnish a performance bond
2. Performance Bond	Property owner or party having work done	Contractor doing the work	Work will be completed according to contract specifications
3. Payment Bond	Property owner or party having work done	Contractor doing the work	Bills for labor and materials will be paid when due
4. Maintenance Bond	Party having work done	Contractor doing the work	Faulty work of principal will be corrected, or defective materials replaced
5. Completion Bond	Lending institution or lessor	Contractor doing the work	Guarantees completion of the building or improvement

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## THE NATURE AND IMPORTANCE OF CREDIT RISK & INSURANCE

### The Insurance Production Process



### The Role of Capital and Surplus

- Insurance policies are contingent claim contracts that rely on pricing inversion.
  - The product is priced before actual production costs are known.
  - Insurers must provide a margin for unfavorable pricing deviations.
- The greater an insurer's capital compared with its premium writings and liabilities – that is, the less its financial leverage – the greater the perceived security and the more favorable its reception among informed buyers.

### Pricing and Product Development

- Pricing (premium rates and reserves) using their best estimates as to future losses and expenses with an eye toward competitiveness.
  - The greater the average period between premium receipt and loss payout, the greater the influence of investment returns in setting premium rates. (life vs. non-life) (experience rating v. exposure rating & model)
- Product innovation and price competitiveness are often understandably crucial determinants of success, especially for new entrants.

### Distribution

- Direct response system
  - Companies distribute products without the use of intermediary.
- Distribution through agents (authority granted)

- Captive (exclusive, tied) agents
- Independent agents
- Distribution through brokers
  - A broker is a legal representative of an insurance purchaser, represents the interests of the insured.
- Distribution through other financial institutions  
e.g. bank, convenient store, post office

### Investment Management

- Insurers are key institutional investors in capital markets worldwide.
- Regulators and supervisors pay close attention to the composition and management of invested assets of insurance companies.
- Nothing inherent in the investment management function requires a local presence.
- Foreign investments can exacerbate the buyer's (and the regulator's) problem of information asymmetry.
  - National regulation typically places severe limits on foreign investments by domestic insurers.
- A related but different concern arises with cross-border insurance trade.
  - If a foreign insurer in cross-border business fails to meet its obligations, the host-country insureds could be at a legal, not to mention a practical, disadvantage.
  - The resolution of this issue is essential if cross-border insurance is to grow.
  - Asset management,

### Overview of Insurance Worldwide

<i>Life Insurance</i>	<i>Revenue (US\$ million)<sup>a</sup></i>	<i>Country</i>
1 ING Group	\$138,235	The Netherlands
2 AXA	129,839	France
3 Assicurazioni Generali	101,404	Italy
4 Aviva	92,579	U.K.
5 Prudential	74,745	U.K.
6 Nippon Life Insurance	61,158	Japan
7 Legal & General Group	56,385	U.K.
8 CNP Assurances	48,745	France
9 MetLife	46,983	USA
10 Dai-ichi Mutual Life Insurance	44,598	Japan

### World's Largest Non-life Insurers

<i>Nonlife Insurance</i>	<i>Revenue (US\$ million)<sup>a</sup></i>	<i>Country</i>
1 Allianz	\$121,406	Germany
2 American International Group	108,905	USA
3 Berkshire Hathaway	81,663	USA
4 Zurich Financial Services	67,186	Switzerland
5 Munich Reinsurance Group	60,256	Germany
6 State Farm Insurance Companies	59,224	USA
7 Allstate Insurance Companies	35,383	USA
8 Millea Holdings	30,030	Japan
9 Swiss Reinsurance	28,093	Switzerland
10 Hartford Financial Services	27,083	USA

**World's Largest Reinsurers**

	<i>Reinsurance</i>	<i>Net Premiums Written (US\$ million)</i>	<i>Country</i>
1	Munich Re	\$22,603	Germany
2	Swiss Re <sup>d</sup>	21,204	Switzerland
3	Berkshire Hathaway Re	10,041	USA
4	Hannover Re	6,697	Germany
5	GE Insurance Solutions <sup>d</sup>	6,557	USA
6	Lloyd's	7,653	U.K.
7	XL Re	5,013	Bermuda
8	Everest Re	3,972	Bermuda
9	Reinsurance Group of America	3,893	USA
10	Partner Re	3,616	Bermuda

<sup>a</sup> Revenues include premium and annuity income, investment income and capital gains or losses but excludes deposits; includes consolidated subsidiaries, excludes excise taxes.

<sup>b</sup> Lloyd's is a marketplace for a number of syndicates.

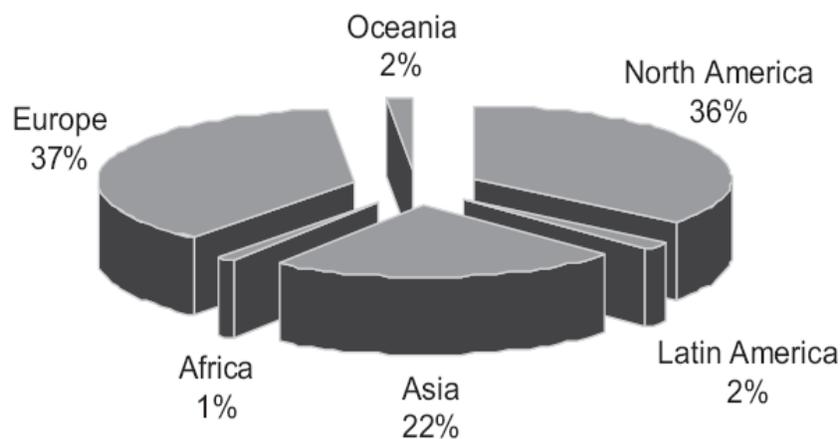
<sup>c</sup> See also Table 23.5.

<sup>d</sup> Swiss Re acquired GE Insurance Solutions in 2006.

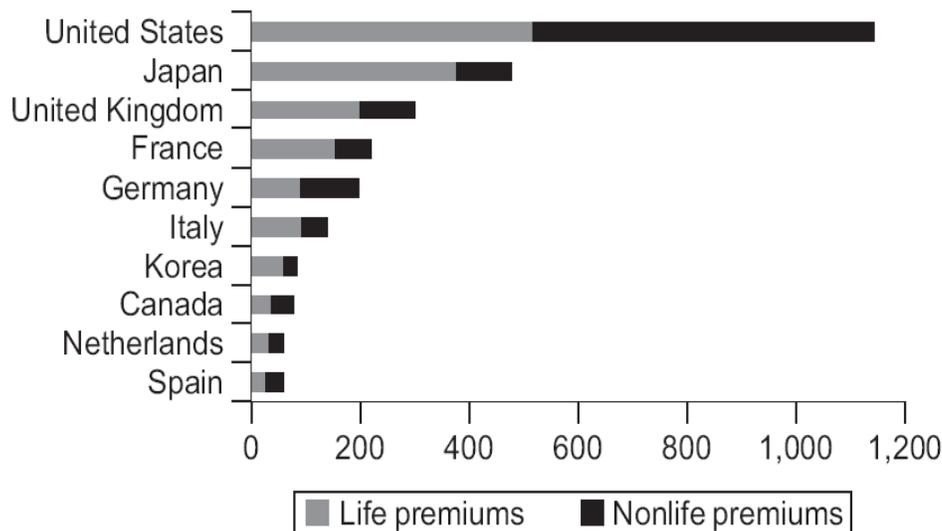
Source: Insurance Information Institute (III).

**Nature of Insurance Companies**

- Ownership structure
  - Stock insurers
  - Mutual insurers
    - Assessment mutuals (e.g., Protection and Indemnity clubs)
    - Non-assessment mutuals
- Licensing status
  - Admitted vs. non-admitted insurers
  - Composite insurers
- Place of domicile
  - Domestic vs. foreign insurer (alien insurer in the U.S.)
  - Home vs. host country

**Distribution of Insurance Premiums**

### World's 10 Largest Markets



### Insurance Density and Penetration

- Insurance density
  - The average annual per capita premium within a country.
  - Values are usually converted from national currency to US dollars – currency fluctuations affect comparisons.
- Insurance penetration
  - The ratio of yearly direct premiums written to GDP.
  - It shows roughly the relative importance of insurance within national economies – unaffected by currency fluctuations.

### Insurance Supply

#### Cross-border Insurance Trade

- Pure cross-border insurance trade
  - When the resultant insurance contract is entered into because of solicitations.
- Own-initiative cross-border insurance trade
  - Many corporations often seek insurance abroad trying to secure coverage either more favorable terms.
- Consumption-abroad cross-border insurance trade
  - Ex. Travelers may purchase a short-term automobile insurance for rental car.
- Difference-in-conditions (DIC) and difference-in-limits (DIL) insurance trade
  - A global firm purchases DIC or DIL coverage as part of its global management.
- Excess and surplus (E&S) insurance
  - An insurer places the risk with a non-admitted insurer.
  - E&S brokers – such trades are prohibit except through specialty domestic E&S brokers.

#### Establishment of Insurance Trade

- Agency
  - A domestic agent represents a foreign insurer for the purpose of making sales.
- Branch
  - Not Separate Corporation but a part of the home-country insurers.
- Subsidiary

- The local subsidiary of a foreign insurer is a domestic corporation.
- Representative office
  - market research, interest promotion
  - No risk bearing, no insurance selling

### **The Role of Insurance in Economic Growth**

#### **Property Rights and Economic Development**

- Property rights
  - The right to own and alienate real and personal property
  - The right to contract
  - The right to be compensated for damage resulting from the tortuous conduct of others
- Private financial services will not flourish unless individuals' ownership interests in property are well defined and protected. (legal environment and infrastructure) Ex. Shin Kong's joint venture in Beijing.

#### **Property Rights and Economic Development**

- Any action that diminishes the value of one's ownership interest in private property hinders private financial services development.
  - Failure to control inflation
  - Substantial trade restrictions
  - High income tax rate
- Private property rights, however, are restrictive by their nature.
  - Without some restraints, their complete exercise could actually interfere with the efficient functioning of markets.

**LECTURE – 43****FINANCIAL DEVELOPMENT AND ECONOMIC GROWTH**

- As financial intermediaries, insurance companies perform the same types of functions and provide similar generic benefits to a national economy as other financial intermediaries.
  - Financial services generally and insurance in particular are of primordial importance to economic development.
- Financial services offer the possibility of providing such externalities, thereby enhancing economic growth.
  - Non-life insurance, life insurance and banking are all shown to be important predictors of economic productivity.

Thus, the more developed and efficient a country's financial market, the greater will be its contribution to economic prosperity.

**Benefits of Insurance in Economic Growth**

- Promote financial stability
  - By indemnifying those who suffer or harm, insurance helps stabilize the financial situation of individuals, families and organizations.
  - It encourages individuals and firms to invest and create wealth.
  - Peace of mind and financial carelessness.
- Substitutes for and complements government security programs
  - Private insurance can relieve pressure on social insurance system, preserving government resources for essential social security.
  - Pension fund and life insurance
  - Natural disaster indemnity plan
- Facilitates trade and commerce
  - Many products and services are produced and sold only if adequate liability insurance is available to cover any claims for negligence.
  - Innovation
  - Credit enhancement
- Helps mobilize savings
  - Insurance and financial intermediation
  - Insurance enhance financial system efficiency in three ways
    - Reduce transaction costs associated with bringing together savers and borrowers
    - Create liquidity
    - Facilitate economies of scale in investment
  - Financial intermediaries vs. financial markets
    - The more developed a country's financial system, the greater the reliance on markets and the less the reliance on intermediaries.
  - Insurers vs. other financial intermediaries
    - Commercial banks – short-term deposits
    - Contractual saving institutions – long-term view
- Enables risk to be managed more efficiently
  - Risk pricing – greater the expected loss, higher the price (u/w and investment)
  - Risk transformation – risk exposures can be transferred to an insurer for a price
  - Risk pooling and reduction
    - (1) insurers make reasonably accurate estimates as to the pool's overall losses.
    - (2) insurers diversify their portfolios.

- Encourages loss mitigation
  - If pricing is tied to loss experience, insureds have economic incentives to control losses.
  - Ex. experience rating, no claim bonus
- Fosters a more efficient capital allocation
  - Insurers will monitor the companies to reduce risk-increasing behavior and act in the best interests of their various stakeholders.
  - A watch-dog role.

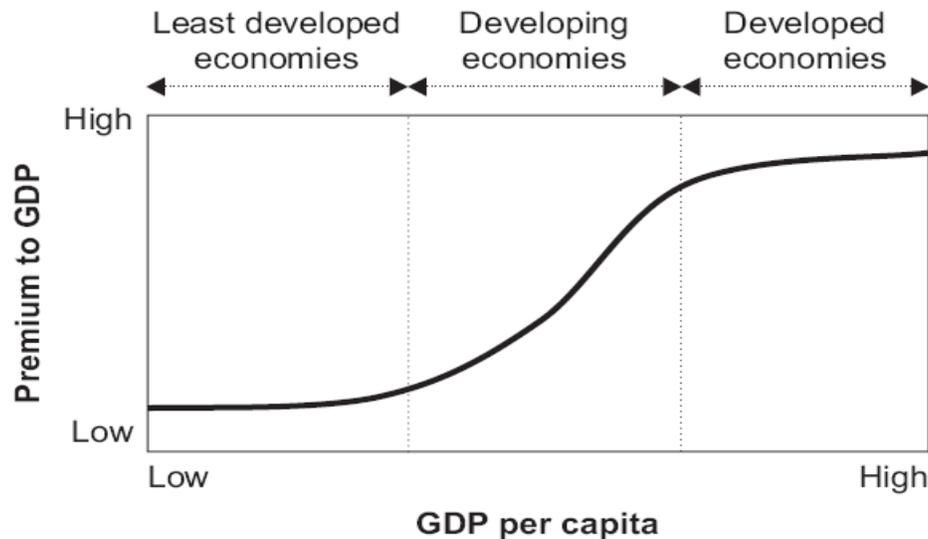
### The Costs of Insurance to Society

- Insurers incur sales, servicing, administration and investment management expenses.
  - The higher are such expenses, the less efficient are.
- The existence of insurance encourages moral hazard.
  - All such moral hazard caused behavior causes premiums to be higher than they would be otherwise, represents a deadweight loss to society, can lead to disruptions in otherwise well-functioning markets, and truly is a societal cost of insurance.

### Determinants of Insurance Market Structure

#### Economic Factors

- Income
  - The higher an economy's income, the more it spends on all types of insurance.
  - The income elasticity of insurance premium
    - The relative change in insurance premiums written for a given change in national income.
- Inflation
  - Considered as detrimental to life insurance supply and demand.



#### Demographic Factors

- Aging populations
  - A greater demand for savings-based life insurance products, long-term care insurance. e.g. longevity risk
- Education
  - The more educated population, the greater the likelihood of understanding the need for insurance.
- Household structure

- Life insurance demand increase as the number of young children in the house hold increases.
- Industrialization and urbanization
  - The positive between Industrialization and urbanization and insurance consumption. e.g. new urban risks

### Social Factors

- Cultural perceptions of the role of insurance products can vary substantially.
  - Asia – life insurance as a savings instrument
  - Muslim society -- insurance as inappropriate because of religious belief.
  - Non-Muslim society – impolite to say no in some circumstances.

### Political and Legal Factors

- Improvements in a country's political environment enhance insurance demand.
- Governments make decisions that directly affect insurance demand and supply.
  - Insurance product within the regulatory jurisdiction through a policy review and approval process.
  - Tax laws and the premium approval process greatly influence product design, availability and value.
  - An improvement in legal systems had a significant and positive affect on life insurance demand.

### Globalization

- The continuing globalization of financial services adds a new dimension to insurance consumption
  - Especially for markets that have been highly restrictive regarding new entrants
- With increasing internationalization can come increased capital from abroad, product and marketing innovations, and different ways of managing companies.
  - More competition
  - More consumption
  - Product and marketing innovation
  - New management style
  - Greater consumer choice and value
- Insurance provides monetary compensation against a predetermined risk. An insurance company offers such protection for a payment (or premium).
- It is also the amount the *insurance company* agrees to pay when an unfortunate event occurs. Insurance is a benefit to the society at large by allowing individuals to share the risks faced by many people. An insurance policy is a written agreement between an insurance company and an individual or organization that requires insurance.
- The *insurance policy* sets out the terms and conditions and specifies the risks that will be compensated for. Online insurance quote helps you to shop for insurance via the Internet. It offers a quick, safe and convenient method to shop for insurance from the comfort of your home.

### Business Insurance

- Buying a *business insurance*, that is, property and liability insurance for a business protects it against unforeseen disaster. A property and liability insurance together is available in a cheaper premium called a business owner policy (BOP) or comprehensive general liability (CGL).
- A basic property insurance would have a fire, theft and damage coverage for buildings, furniture, equipment, inventory, accounts receivable records, vehicles and also intangible assets like trademarks or goodwill.
- If the business is in an area prone to tornadoes, floods, or earthquakes, or there are potential safety risks, extra coverage may be needed on the business owner policy based on the nature of

the hazard. A basic business liability policy protects the business against losses by employees or machinery.

- The comprehensive general liability policy covers the premises, leasing troubles, contracts, products and operations, injury to customers, vehicle accidents, and professional malpractice. Another type of liability insurance is a "professional *liability insurance* " also called as " errors and omissions insurance ".
- This protects against professional misjudgments that cause damage to others. A typical example would be insurance to cover surgery where the doctor used the wrong procedure or otherwise made a mistake.

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## NON-LIFE INSURANCE

### Policies Sold by Non-life Insurance Companies

#### Classification of Non-life Insurance

- Based on purchaser
  - Personal lines
  - Commercial lines
- Based on the Object
  - Property
  - Liability
- OECD

#### Property Insurance Policies

- Nature and property
  - Real (immovable) vs. personal (movable) properties
  - Tangible vs. intangible properties
- Property losses
  - Direct loss
    - Reductions in property values caused by a loss event
  - Consequential (indirect) losses
    - Reductions in income or increases in expenses that result from direct losses
- Nature of covered perils
  - Named-peril policy
    - Indemnification to the insured only if the cause of loss is “named as covered”
  - All risks policy – by exclusion
    - Basic form
      - Named-peril coverage for damage
    - Broad form
      - Broader coverage than the basic form
    - Special form
      - All-risks coverage for damage (with exclusion)
- Nature of indemnification
  - Actual cash value (ACV)

Replacement cost less depreciation in value

- Replacement cost (reinstatement value)

At the time of loss to replace the property with the same kind of like-kind

- Economic (use value) of property

Lost of utility associated with damaged property

- Market value

#### Property Insurance Policies – Common Aspects

- Pricing
  - Characteristics of the covered property, such as construction, occupancy, protection, exposure and location (for Fire Insurance, Public Liability)
  - Scope of insurance requested
  - Limit of insurance along with
    - Deductible, coinsurance, and other optional coverages

#### Property Insurance Policies – Types

- Package policies / multi-line policies

- Cover both direct and indirect property exposures plus
- financial obligations and
- legal expenses arising from the insured's legal liability for injuries to others or damage to their property.
- e.g. Homeowner policy

### Property Insurance Policies – Types

- Fire insurance
  - Cover 2 perils: fire. Lighting
- Commercial property insurance
  - For large business, both movable and immovable business property
- Consequential loss insurance (business income insurance)
  - For specific indirect losses form an insured peril
- Industrial all-risk insurance (special risk insurance)
  - All-risk contracts of high-value movable and immovable properties
- Contractors' (builders) all-risk insurance (CAR)
  - For damage during the course of construction
- Boiler and machinery
  - For the direct physical losses from an explosion
- Fidelity/crime insurance – for employee dishonesty & Criminal acts
  - Fidelity bond/ insurance
  - Computer fraud insurance
  - Employee dishonesty
  - Extortion
  - Forgery or alteration
  - Theft and robbery
- Insurance for self-propelled property
  - Insurance for motor vehicles – covering the direct loss of or damage to their vessels
  - Insurance for ships – when the term “marine insurance” is used, the policy provides both hull insurance and insurance on the vessel's cargo.
  - Insurance for aircraft – for damage to the aircraft, its equipment, its cargo
- Insurance for property being transported
  - Cargo insurance – from the departure to the final destination (international trade, risk of cargo)
  - Insurance for transportable property – including items worn, carried from place to place, temporarily removed

### Liability Insurance Policies

- General (public) liability insurance
  - All-risks coverage for individuals and organizations for their tortuous actions
- Automobile (motor) liability insurance
  - Cover insureds' legal liability to third party
- Product liability insurance
  - Pay claims on behalf of the insured made by third party (desperately needed in China)

### Package Insurance Policies

- Workers' compensation insurance
  - Employer's liability insurance
  - Civil law, Labor law, others?
- Professional liability insurance
  - Errors and omissions insurance

- Doctor, Lawyers, Engineers
- Homeowner's (householder's) insurance
  - Commonly cover loss of or damage to the residence and its contents, consequential expenses while the property is being repaired
- Business owner's insurance
  - Commonly cover loss of or damage to the business premises and its contents, consequential expenses following a direct property loss
- Commercial multi-peril insurance
  - Covering both the property and general liability loss exposures of large business

### **Selected Non-life Insurance Markets Internationally**

#### **The Americas – the U.S**

- The importance of understanding the U.S. market
  - It has been the world's largest non-life market for decades.
  - It remains highly competitive
    - Encourages experimentation in product development, methods of distribution and general business practices
  - The size and complexity of many U.S. risks demand the capacity and expertise of the global insurance and reinsurance markets.
- Features
  - Ranks second in per capita expenditures and first on premiums as a percentage of GDP
    - The U.S. per capita spending for private health insurance the world's highest
    - U.S. businesses and families spend more on liability insurance than do the citizens of any other country
  - A fast growth in recent years, especially after September 2001
  - A market prone to natural catastrophic losses
  - More than 2,500 non-life insurance companies compete.
    - About 800 or so insurers are independent.
- Products and distributions
  - Virtually any type of non-life insurance is available.
  - Insurers use multiple distribution channels to reach their customers.
  - Brokers also figure prominently in the market.
- Issues
  - State regulation
    - Stated based, with differences in each of the regulatory jurisdictions.
    - The National Association of Insurance Commissioners (NAIC) strives toward uniformity in regulation.
    - Major issue – rate regulation
  - Market consolidation
    - A large number of relatively small insurers
  - Loss reserve adequacy
    - A lack of precision in their establishing loss reserves
  - Impact of catastrophes
    - Significantly affected by natural catastrophes

#### **The Americas – Canada**

- Features
  - Shares some similarities with the U.S. market
  - As noted earlier, Canada maintains a dual regulatory system.
    - Non-life insurance accounts for 36% of the Canadian insurance market.

- Products and distributions
  - The agency form of distribution dominates the Canadian non-life insurance market.
- Issues
  - The government continues to regulate rating of automobile insurance premiums.

### **The Americas – Latin America**

- Features
  - Two groups
    - The Caribbean (developed insurance markets)
    - Other countries (including Argentina, Brazil, Chile, Colombia, Mexico, and Venezuela)
  - A high growth potential
  - Many Latin American governments have privatized insurers and opened their markets to foreign interests.
- Products and distributions
  - Traditional intermediaries (brokers and agents) and employees of insurance companies dominate the markets
  - Bancassurance introduced in selected countries
- Issues
  - Economic crisis – led to the collapse of several non-life insurers
  - Many Latin American insurers have comparatively high expenses, making their products less attractive.
  - With increasing bilateral and multilateral trade agreements and more regional arrangements, future competition promises to be even more vigorous.

### **Europe**

- Features
  - Consists of big three markets – Germany, the U.K. and France
  - Rich history and tradition that are reflected in the markets
  - Gained more attention globally with the creation of a single E.U. market
  - Bancassurance primarily in life insurance

### **Europe – Germany**

- Products and distributions
  - Workers' compensation as part of the government's social insurance program
  - Distribution dominated by exclusive agents
  - Guaranteed renewal features common in many non-life insurance contracts

### **The London Market**

- An international insurance center
  - Specializes in large accounts and target risks such as MAT and hard-to-place business
  - Comprises insurance and reinsurance companies and Lloyd's syndicates
  - It is a subscription market in that the coverage needs are often satisfied by a group of insurers or reinsurers on a collective basis.
    - Insurance brokers play a crucial role.

### **Asia-Pacific**

- Features
  - Countries in various economic development stages
    - Middle East probably with least developed insurance markets
  - China and India continue to grow
  - The potential impact of WTO agreements in several countries

### **Asia-Pacific – Japan**

- Features

- The world's fourth largest non-life insurance market
- Non-life insurance density ranks 20th worldwide
- The local market is heavily skewed toward the life business

### **Non-life Insurance Issues**

- Liberalization and deregulation
  - Competition is increasing worldwide in both developing and developed markets
  - Increased competition enhances social welfare, and is best achieved by liberty, open, and appropriately supervised markets.
  - Many developing nations are encountering the challenge – from closed and strictly regulated markets to new market deregulation
- Coping with catastrophes
  - Developing countries – depending greatly on catastrophe reinsurance
  - Developed countries – the financial consequences of catastrophes
- Solvency
  - Some insurance lines are highly volatile and notoriously difficult to price
  - Insolvency becomes a more critical issue in open and competitive markets for regulators

**RECAP**

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- Course Objectives
- Learning Objectives
- Course Contents
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- Identity Score
- Credit Bureau or Credit Agency
- How credit rating is determined
- Understanding credit reports and scores
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- Principles for the Management of Credit Risk
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- Operating under a sound credit granting process
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- Establishing an Appropriate Credit Risk Environment
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