

Course Name	: Business Finance
Course Code	: APBSS 401
Course level	: Level 4
Credit Unit	: 4 CU
Contact Hours	: 60 Hrs

Course Description

The Course describes the meaning of Business Finance, main techniques of the financial industry, the desirability of budgeting, understanding credit policy, management of stock, analysis of financial economics, public finance, insurance, debt consolidation, wealth management, capital investment decisions, and financial markets.

Course Objectives

- To equip students with a better understanding of major and fundamental theories behind business finance.
- To enable students adopt investment analysis techniques and detect financial problems.
- To help students appreciate the importance of having/acquiring insurance and credit policies in business.

Course content

Introduction

- Definition of Finance
- General areas of finance i.e business finance, personal finance and public finance
- Main techniques and sectors of the financial industry
- The desirability of budgeting
- Capital Vs Cash budgets

Credit Policy

- Definition of a credit policy
- Advantages of a credit trade
- Disadvantages of a credit trade
- Forms of credit
- Factors which influence credit conditions
- Duties of the credit department

Stock

- Purpose of stock control
- Merits and demerits of stockpiling
- Rate of turnover
- Determining optimum stock levels

Financial Economics

- Definition of Financial economics
- Valuation-determination of the fair value of an asset
- Financial markets and instruments
- Financial mathematics

Public Finance

- Description of public finance
- Overview of public finance
- Public finance management
- Financing government expenditures
- Public finance in socialist economies

Insurance

- Insurance in law and economics
- Principles of insurance
- Risks involved in insurance
- Indemnification
- Insurers' business model
- Claims in insurance
- Types of insurance
- Global insurance industry
- Controversies in insurance

Debt consolidation

- Definition of debt consolidation
- Different alternatives for debt consolidation
- Legal significance

Pensions

- What are pensions
- Retirement plan
- Employment-based pensions (retirement plans)
- Funded Vs unfunded benefit plans
- Criticisms for benefit plans
- Defined contribution plans
- Contrasting types of retirements plans

Other related topics; Wealth management, capital investment decisions,, working capital management, financial risk management, economic functions of banks, Financial markets

Mode of delivery Face to face lectures

Assessment

Coursework 40%

Exams 60%

Total mark 100%

Introduction Business Finance

Finance is the study of how investors allocate their assets over time under conditions of certainty and uncertainty. A key point in finance, which affects decisions, is the time value of money, which states that a dollar today is worth more than a dollar tomorrow. Finance measures the risks vs. profits and gives an indication of whether the investment is good or not. Finance can be broken into three different sub categories: public finance, corporate finance and personal finance.

Areas of finance

Personal finance

Questions in personal finance revolve around

- How can people protect themselves against unforeseen personal events, as well as those in the external economy?
- How can family assets best be transferred across generations (bequests and inheritance)?
- How does tax policy (tax subsidies or penalties) affect personal financial decisions?
- How does credit affect an individual's financial standing?
- How can one plan for a secure financial future in an environment of economic instability?

Personal financial decisions may involve paying for education, financing durable goods such as real estate and cars, buying insurance, e.g. health and property insurance, investing and saving for retirement.

Personal financial decisions may also involve paying for a loan, or debt obligations. The six key areas of personal financial planning, as suggested by the Financial Planning Standards Board, are:^[1]

1. **Financial position:** is concerned with understanding the personal resources available by examining net worth and household cash flow. Net worth is a person's balance sheet, calculated by adding up all assets under that person's control, minus all liabilities of the household, at one point in time. Household cash flow totals up all the expected sources of income within a year, minus all expected expenses within the same year. From this analysis, the financial planner can determine to what degree and in what time the personal goals can be accomplished.
2. **Adequate protection:** the analysis of how to protect a household from unforeseen risks. These risks can be divided into liability, property, death, disability, health and long term care. Some of these risks may be self-insurable, while most will require the purchase of an insurance contract. Determining how much insurance to get, at the most cost effective terms requires knowledge of the market for personal insurance. Business owners, professionals, athletes and entertainers require specialized insurance professionals to adequately protect themselves. Since insurance also enjoys some tax benefits, utilizing insurance investment products may be a critical piece of the overall investment planning.

3. **Tax planning:** typically the income tax is the single largest expense in a household. Managing taxes is not a question of if you will pay taxes, but when and how much. Government gives many incentives in the form of tax deductions and credits, which can be used to reduce the lifetime tax burden. Most modern governments use a progressive tax. Typically, as one's income grows, a higher marginal rate of tax must be paid.^[citation needed] Understanding how to take advantage of the myriad tax breaks when planning one's personal finances can make a significant impact.
4. **Investment and accumulation goals:** planning how to accumulate enough money for large purchases, and life events is what most people consider to be financial planning. Major reasons to accumulate assets include, purchasing a house or car, starting a business, paying for education expenses, and saving for retirement.

Achieving these goals requires projecting what they will cost, and when you need to withdraw funds. A major risk to the household in achieving their accumulation goal is the rate of price increases over time, or inflation. Using net present value calculators, the financial planner will suggest a combination of asset earmarking and regular savings to be invested in a variety of investments. In order to overcome the rate of inflation, the investment portfolio has to get a higher rate of return, which typically will subject the portfolio to a number of risks. Managing these portfolio risks is most often accomplished using asset allocation, which seeks to diversify investment risk and opportunity. This asset allocation will prescribe a percentage allocation to be invested in stocks, bonds, cash and alternative investments. The allocation should also take into consideration the personal risk profile of every investor, since risk attitudes vary from person to person.

5. **Retirement planning** is the process of understanding how much it costs to live at retirement, and coming up with a plan to distribute assets to meet any income shortfall. Methods for retirement plan include taking advantage of government allowed structures to manage tax liability including: individual (IRA) structures, or employer sponsored retirement plans.
6. **Estate planning** involves planning for the disposition of one's assets after death. Typically, there is a tax due to the state or federal government at your death. Avoiding these taxes means that more of your assets will be distributed to your heirs. You can leave your assets to family, friends or charitable groups.

Corporate finance

Managerial or corporate finance is the task of providing the funds for a corporation's activities (for small business, this is referred to as SME finance). Corporate finance generally involves balancing risk and profitability, while attempting to maximize an entity's wealth and the value of its stock, and generically entails three interrelated decisions. In the first, "the investment decision", management must decide which "projects" (if any) to undertake. The discipline of capital budgeting is devoted to this question, and may employ standard business valuation techniques or even extend to real options valuation; see Financial modeling. The second, "the financing decision" relates to how these investments are to be funded: capital here is provided by shareholders, in the form of equity (privately or via an initial public offering), creditors, often in the form of bonds, and the firm's operations (cash flow). Short-term funding or working capital is mostly provided by banks extending a line of credit. The balance between these elements forms the company's capital structure. The third, "the dividend decision", requires management to determine whether any unappropriated profit is to be retained for future investment / operational requirements, or instead to be distributed to shareholders, and if so in what form. Short term financial management is often termed "working capital management", and relates to cash-, inventory- and debtors management. These areas often overlap with the firm's

accounting function, however, financial accounting is more concerned with the reporting of historical financial information, while these financial decisions are directed toward the future of the firm.

Another business decision concerning finance is investment, or fund management. An investment is an acquisition of an asset in the hope that it will maintain or increase its value. In investment management— in choosing a portfolio— one has to decide *what*, *how much* and *when* to invest. To do this, a company must:

- Identify relevant objectives and constraints: institution or individual goals, time horizon, risk aversion and tax considerations;
- Identify the appropriate strategy: active v. passive— hedging strategy
- Measure the portfolio performance

Financial management is duplicate with the financial function of the Accounting profession. However, financial accounting is more concerned with the reporting of historical financial information, while the financial decision is directed toward the future of the firm.

Financial risk management, an element of corporate finance, is the practice of creating and protecting economic value in a firm by using financial instruments to manage exposure to risk, particularly credit risk and market risk. (Other risk types include Foreign exchange, Shape, Volatility, Sector, Liquidity, Inflation risks, etc.) It focuses on when and how to hedge using financial instruments; in this sense it overlaps with financial engineering. Similar to general risk management, financial risk management requires identifying its sources, measuring it (see: Risk measure: Well known risk measures), and formulating plans to address these, and can be qualitative and quantitative. In the banking sector worldwide, the Basel Accords are generally adopted by internationally active banks for tracking, reporting and exposing operational, credit and market risks.

Financial services

An entity whose income exceeds its expenditure can lend or invest the excess income. On the other hand, an entity whose income is less than its expenditure can raise capital by borrowing or selling equity claims, decreasing its expenses, or increasing its income. The lender can find a borrower, a financial intermediary such as a bank, or buy notes or bonds in the bond market. The lender receives interest, the borrower pays a higher interest than the lender receives, and the financial intermediary earns the difference for arranging the loan.

A bank aggregates the activities of many borrowers and lenders. A bank accepts deposits from lenders, on which it pays interest. The bank then lends these deposits to borrowers. Banks allow borrowers and lenders, of different sizes, to coordinate their activity.

Finance is used by individuals (personal finance), by governments (public finance), by businesses (corporate finance) and by a wide variety of other organizations, including schools and non-profit organizations. In general, the goals of each of the above activities are achieved through the use of appropriate financial instruments and methodologies, with consideration to their institutional setting.

Finance is one of the most important aspects of business management and includes decisions related to the use and acquisition of funds for the enterprise.

In corporate finance, a company's capital structure is the total mix of financing methods it uses to raise funds. One method is *debt financing*, which includes bank loans and bond sales. Another method is

equity financing - the sale of stock by a company to investors, the original shareholders of a share. Ownership of a share gives the shareholder certain contractual rights and powers, which typically include the right to receive declared dividends and to vote the proxy on important matters (e.g., board elections). The owners of both bonds and stock, may be *institutional investors* - financial institutions such as investment banks and pension funds — or private individuals, called *private investors* or *retail investors*.

Public finance

Public finance describes finance as related to sovereign states and sub-national entities (states/provinces, counties, municipalities, etc.) and related public entities (e.g. school districts) or agencies. It is concerned with:

- Identification of required expenditure of a public sector entity
- Source(s) of that entity's revenue
- The budgeting process
- Debt issuance (municipal bonds) for public works projects

Central banks, such as the Federal Reserve System banks in the United States and Bank of England in the United Kingdom, are strong players in public finance, acting as lenders of last resort as well as strong influences on monetary and credit conditions in the economy.^[2]

Capital

Capital, in the financial sense, is the money that gives the business the power to buy goods to be used in the production of other goods or the offering of a service. (The capital has two types of resources Equity and Debt)

The deployment of capital is decided by the budget. This may include the objective of business, targets set, and results in financial terms, e.g., the target set for sale, resulting cost, growth, required investment to achieve the planned sales, and financing source for the investment.

A budget may be long term or short term. Long term budgets have a time horizon of 5–10 years giving a vision to the company; short term is an annual budget which is drawn to control and operate in that particular year.

Budgets will include proposed fixed asset requirements and how these expenditures will be financed. Capital budgets are often adjusted annually and should be part of a longer-term Capital Improvements Plan.

A cash budget is also required. The working capital requirements of a business are monitored at all times to ensure that there are sufficient funds available to meet short-term expenses.

The cash budget is basically a detailed plan that shows all expected sources and uses of cash. The cash budget has the following six main sections:

1. **Beginning Cash Balance** - contains the last period's closing cash balance.
2. **Cash collections** - includes all expected cash receipts (all sources of cash for the period considered, mainly sales)

3. **Cash disbursements** - lists all planned cash outflows for the period, excluding interest payments on short-term loans, which appear in the financing section. All expenses that do not affect cash flow are excluded from this list (e.g. depreciation, amortization, etc.)
4. **Cash excess or deficiency** - a function of the cash needs and cash available. Cash needs are determined by the total cash disbursements plus the minimum cash balance required by company policy. If total cash available is less than cash needs, a deficiency exists.
5. **Financing** - discloses the planned borrowings and repayments, including interest.
6. **Ending Cash balance** - simply reveals the planned ending cash balance.

Theories of Finance

Financial economics

Financial economics is the branch of economics studying the interrelation of financial variables, such as prices, interest rates and shares, as opposed to those concerning the real economy. Financial economics concentrates on influences of real economic variables on financial ones, in contrast to pure finance. It centres on decision making under uncertainty in the context of the financial markets, and the resultant economic and financial models. It essentially explores how rational investors would apply decision theory to the problem of investment. Here, the twin assumptions of rationality and market efficiency lead to modern portfolio theory (the CAPM), and to the Black Scholes theory for option valuation; it further studies phenomena and models where these assumptions do not hold, or are extended. "Financial economics", at least formally, also considers investment under "certainty" (Fisher separation theorem, "theory of investment value", Modigliani-Miller theorem) and hence also contributes to corporate finance theory. Financial Econometrics is the branch of Financial Economics that uses econometric techniques to parameterize the relationships suggested.

Although closely related, the disciplines of economics and finance are distinctive. The "economy" is a social institution that organizes a society's production, distribution, and consumption of goods and services," all of which must be financed.

Economists make a number of abstract assumptions for purposes of their analyses and predictions. They generally regard financial markets that function for the financial system as an efficient mechanism. Instead, financial markets are subject to human error and emotion.^[3] New research discloses the mischaracterization of investment safety and measures of financial products and markets so complex that their effects, especially under conditions of uncertainty, are impossible to predict. The study of finance is subsumed under economics as financial economics, but the scope, speed, power relations and practices of the financial system can uplift or cripple whole economies and the well-being of households, businesses and governing bodies within them—sometimes in a single day.

Financial mathematics

Financial mathematics is a field of applied mathematics, concerned with financial markets. The subject has a close relationship with the discipline of financial economics, which is concerned with much of the underlying theory. Generally, mathematical finance will derive, and extend, the mathematical or numerical models suggested by financial economics. In terms of practice, mathematical finance also overlaps heavily with the field of computational finance (also known as *financial engineering*). Arguably, these are largely synonymous, although the latter focuses on application, while the former focuses on modeling and derivation (*see: Quantitative analyst*). The field is largely focused on the modelling of derivatives, although other important subfields include insurance mathematics and

quantitative portfolio problems. See Outline of finance: Mathematical tools; Outline of finance: Derivatives pricing.

Experimental finance

Experimental finance aims to establish different market settings and environments to observe experimentally and provide a lens through which science can analyze agents' behavior and the resulting characteristics of trading flows, information diffusion and aggregation, price setting mechanisms, and returns processes. Researchers in experimental finance can study to what extent existing financial economics theory makes valid predictions, and attempt to discover new principles on which such theory can be extended. Research may proceed by conducting trading simulations or by establishing and studying the behaviour of people in artificial competitive market-like settings.

Behavioral finance

Behavioral Finance studies how the psychology of investors or managers affects financial decisions and markets. Behavioral finance has grown over the last few decades to become central to finance.

Behavioral finance includes such topics as:

1. Empirical studies that demonstrate significant deviations from classical theories.
2. Models of how psychology affects trading and prices
3. Forecasting based on these methods.
4. Studies of experimental asset markets and use of models to forecast experiments.

A strand of behavioral finance has been dubbed Quantitative Behavioral Finance, which uses mathematical and statistical methodology to understand behavioral biases in conjunction with valuation. Some of this endeavor has been led by Gunduz Caginalp (Professor of Mathematics and Editor of Journal of Behavioral Finance during 2001-2004) and collaborators including Vernon Smith (2002 Nobel Laureate in Economics), David Porter, Don Balenovich, Vladimira Ilieva, Ahmet Duran). Studies by Jeff Madura, Ray Sturm and others have demonstrated significant behavioral effects in stocks and exchange traded funds. Among other topics, quantitative behavioral finance studies behavioral effects together with the non-classical assumption of the finiteness of assets.

Intangible asset finance

Intangible asset finance is the area of finance that deals with intangible assets such as patents, trademarks, goodwill, reputation, etc.

Professional qualifications

There are several related professional qualifications, that can lead to the field:

- **Generalist Finance qualifications:**
 - Degrees: Masters degree in Finance (MSF), Master of Financial Economics, Master of Finance & Control (MFC), Master Financial Manager (MFM), Master of Financial Administration (MFA)
 - Certifications: Chartered Financial Analyst (CFA), Certified Treasury Professional (CTP), Certified Valuation Analyst (CVA), Certified International Investment Analyst (CIIA), Financial Risk Manager (FRM), Association of Corporate Treasurers (ACT),

Certified Market Analyst (CMA/FAD) Dual Designation, Corporate Finance Qualification (CF), Chartered Alternative Investment Analyst (CAIA)

- **Quantitative Finance qualifications:** Master of Financial Engineering (MSFE), Master of Quantitative Finance (MQF), Master of Computational Finance (MCF), Master of Financial Mathematics (MFM), Certificate in Quantitative Finance (CQF).
- **Accountancy qualifications:**
 - Qualified accountant: Chartered Accountant (ACA - UK certification / CA - certification in Commonwealth countries), Chartered Certified Accountant (ACCA, UK certification), Certified Public Accountant (CPA, US certification), ACMA/FCMA (Associate/Fellow Chartered Management Accountant) from Chartered Institute of Management Accountant(CIMA), UK.
 - Non-statutory qualifications: Chartered Cost Accountant CCA Designation from AAFM
- **Business qualifications:** Master of Business Administration (MBA), Master of Management (MM), Master of Commerce (M.Comm), Master of Science in Management (MSM), Doctor of Business Administration (DBA)

STOCK

The **capital stock** (or simply **stock**) of a business entity represents the original capital paid into or invested in the business by its founders. It serves as a security for the creditors of a business since it cannot be withdrawn to the detriment of the creditors. Stock is different from the property and the assets of a business which may fluctuate in quantity and value.^[1]

Shares

The stock of a business is divided into multiple shares, the total of which must be stated at the time of business formation. Given the total amount of money invested in the business, a share has a certain declared face value, commonly known as the par value of a share. The par value is the *de minimis* (minimum) amount of money that a business may issue and sell shares for in many jurisdictions and it is the value represented as capital in the accounting of the business. In other jurisdictions, however, shares may not have an associated par value at all. Such stock is often called non-par stock. Shares represent a fraction of ownership in a business. A business may declare different types (*classes*) of shares, each having distinctive ownership rules, privileges, or share values.

Ownership of shares is documented by issuance of a stock certificate. A stock certificate is a legal document that specifies the amount of shares owned by the shareholder, and other specifics of the shares, such as the par value, if any, or the class of the shares.

Types of stock

Stock typically takes the form of shares of either common stock or preferred stock. As a unit of ownership, common stock typically carries voting rights that can be exercised in corporate decisions. Preferred stock differs from common stock in that it typically does not carry voting rights but is legally entitled to receive a certain level of dividend payments before any dividends can be issued to other shareholders.^{[4][5]} Convertible preferred stock is preferred stock that includes an option for the holder to convert the preferred shares into a fixed number of common shares, usually anytime after

a predetermined date. Shares of such stock are called "convertible preferred shares" (or "convertible preference shares" in the UK)

New equity issues may have specific legal clauses attached that differentiate them from previous issues of the issuer. Some shares of common stock may be issued without the typical voting rights, for instance, or some shares may have special rights unique to them and issued only to certain parties. Often, new issues that have not been registered with a securities governing body may be restricted from resale for certain periods of time.

Preferred stock may be hybrid by having the qualities of bonds of fixed returns and common stock voting rights. They also have preference in the payment of dividends over common stock and also have been given preference at the time of liquidation over common stock. They have other features of accumulation in dividend.

Stock derivatives

A stock derivative is any financial instrument which has a value that is dependent on the price of the underlying stock. Futures and options are the main types of derivatives on stocks. The underlying security may be a stock index or an individual firm's stock, e.g. single-stock futures.

Stock futures are contracts where the buyer is long, i.e., takes on the obligation to buy on the contract maturity date, and the seller is short, i.e., takes on the obligation to sell. Stock index futures are generally not delivered in the usual manner, but by cash settlement.

A stock option is a class of option. Specifically, a call option is the right (*not* obligation) to buy stock in the future at a fixed price and a put option is the right (*not* obligation) to sell stock in the future at a fixed price. Thus, the value of a stock option changes in reaction to the underlying stock of which it is a derivative. The most popular method of valuing stock options is the Black Scholes model.^[6] Apart from call options granted to employees, most stock options are transferable.

Means of financing

Financing a company through the sale of stock in a company is known as equity financing. Alternatively, debt financing (for example issuing bonds) can be done to avoid giving up shares of ownership of the company. Unofficial financing known as trade financing usually provides the major part of a company's working capital (day-to-day operational needs).

Trading

In general, the shares of a company may be transferred from shareholders to other parties by sale or other mechanisms, unless prohibited. Most jurisdictions have established laws and regulations governing such transfers, particularly if the issuer is a publicly-traded entity.

The desire of stockholders to trade their shares has led to the establishment of stock exchanges, organizations which provide marketplaces for trading shares and other derivatives and financial products. Today, stock traders are usually represented by a stock broker who buys and sells shares of a wide range of companies on such exchanges. A company may list its shares on an exchange by meeting and maintaining the listing requirements of a particular stock exchange. In the United States,

through the intermarket trading system, stocks listed on one exchange can often also be traded on other participating exchanges, including electronic communication networks (ECNs), such as Archipelago or Instinet.^[16]

Many large non-U.S. companies choose to list on a U.S. exchange as well as an exchange in their home country in order to broaden their investor base. These companies must maintain a block of shares at a bank in the US, typically a certain percentage of their capital. On this basis, the holding bank establishes American depositary shares and issues an American depositary receipt (ADR) for each share a trader acquires. Likewise, many large U.S. companies list their shares at foreign exchanges to raise capital abroad.

Small companies that do not qualify and cannot meet the listing requirements of the major exchanges may be traded over-the-counter (OTC) by an off-exchange mechanism in which trading occurs directly between parties. The major OTC markets in the United States are the electronic quotation systems OTC Bulletin Board (OTCBB) and OTC Markets Group where individual retail investors are also represented by a brokerage firm and the quotation service's requirements for a company to be listed are minimal. Shares of companies in bankruptcy proceeding are usually listed by these quotation services after the stock is delisted from an exchange.

Buying

There are various methods of buying and financing stocks, the most common being through a stock broker. Whether they are a full service or discount broker, they arrange the transfer of stock from a seller to a buyer. Most trades are actually done through brokers listed with a stock exchange.

There are many different stock brokers from which to choose, such as full service brokers or discount brokers. The full service brokers usually charge more per trade, but give investment advice or more personal service; the discount brokers offer little or no investment advice but charge less for trades. Another type of broker would be a bank or credit union that may have a deal set up with either a full service or discount broker.

There are other ways of buying stock besides through a broker. One way is directly from the company itself. If at least one share is owned, most companies will allow the purchase of shares directly from the company through their investor relations departments. However, the initial share of stock in the company will have to be obtained through a regular stock broker. Another way to buy stock in companies is through Direct Public Offerings which are usually sold by the company itself. A direct public offering is an initial public offering in which the stock is purchased directly from the company, usually without the aid of brokers.

When it comes to financing a purchase of stocks there are two ways: purchasing stock with money that is currently in the buyer's ownership, or by buying stock on margin. Buying stock on margin means buying stock with money borrowed against the value of stocks in the same account. These stocks, or collateral, guarantee that the buyer can repay the loan; otherwise, the stockbroker has the right to sell the stock (collateral) to repay the borrowed money. He can sell if the share price drops below the margin requirement, at least 50% of the value of the stocks in the account. Buying on margin works the same way as borrowing money to buy a car or a house, using a car or house as collateral. Moreover, borrowing is not free; the broker usually charges 8–10% interest.

Selling

Selling stock is procedurally similar to buying stock. Generally, the investor wants to buy low and sell high, if not in that order (short selling); although a number of reasons may induce an investor to sell at a loss, e.g., to avoid further loss.

As with buying a stock, there is a transaction fee for the broker's efforts in arranging the transfer of stock from a seller to a buyer. This fee can be high or low depending on which type of brokerage, full service or discount, handles the transaction.

After the transaction has been made, the seller is then entitled to all of the money. An important part of selling is keeping track of the earnings. Importantly, on selling the stock, in jurisdictions that have them, capital gains taxes will have to be paid on the additional proceeds, if any, that are in excess of the cost basis.

Stock price fluctuations

The price of a stock fluctuates fundamentally due to the theory of supply and demand. Like all commodities in the market, the price of a stock is sensitive to demand. However, there are many factors that influence the demand for a particular stock. The fields of fundamental analysis and technical analysis attempt to understand market conditions that lead to price changes, or even predict future price levels. A recent study shows that customer satisfaction, as measured by the American Customer Satisfaction Index (ACSI), is significantly correlated to the market value of a stock.^[17] Stock price may be influenced by analyst's business forecast for the company and outlooks for the company's general market segment. Stocks can also fluctuate greatly due to pump and dump scams.

Share price determination

At any given moment, an equity's price is strictly a result of supply and demand. The supply, commonly referred to as the *float*, is the number of shares offered for sale at any one moment. The demand is the number of shares investors wish to buy at exactly that same time. The price of the stock moves in order to achieve and maintain equilibrium. The product of this instantaneous price and the float at any one time is the market capitalization of the entity offering the equity at that point in time.

When prospective buyers outnumber sellers, the price rises. Eventually, sellers attracted to the high selling price enter the market and/or buyers leave, achieving equilibrium between buyers and sellers. When sellers outnumber buyers, the price falls. Eventually buyers enter and/or sellers leave, again achieving equilibrium.

Thus, the value of a share of a company at any given moment is determined by all investors voting with their money. If more investors want a stock and are willing to pay more, the price will go up. If more investors are selling a stock and there aren't enough buyers, the price will go down.

- Note: "For Nasdaq-listed stocks, the price quote includes information on the bid and ask prices for the stock."^[18]

Of course, that does not explain how people decide the maximum price at which they are willing to buy or the minimum at which they are willing to sell. In professional investment circles the efficient market hypothesis (EMH) continues to be popular, although this theory is widely discredited in academic and professional circles. Briefly, EMH says that investing is overall (weighted by the standard deviation) rational; that the price of a stock at any given moment represents a rational evaluation of the known information that might bear on the future value of the company; and that

share prices of equities are priced *efficiently*, which is to say that they represent accurately the expected value of the stock, as best it can be known at a given moment. In other words, prices are the result of discounting expected future cash flows.

The EMH model, if true, has at least two interesting consequences. First, because financial risk is presumed to require at least a small premium on expected value, the return on equity can be expected to be slightly greater than that available from non-equity investments: if not, the same rational calculations would lead equity investors to shift to these safer non-equity investments that could be expected to give the same or better return at lower risk. Second, because the price of a share at every given moment is an "efficient" reflection of expected value, then—relative to the curve of expected return—prices will tend to follow a random walk, determined by the emergence of information (randomly) over time. Professional equity investors therefore immerse themselves in the flow of fundamental information, seeking to gain an advantage over their competitors (mainly other professional investors) by more intelligently interpreting the emerging flow of information (news).

The EMH model does not seem to give a complete description of the process of equity price determination. For example, stock markets are more volatile than EMH would imply. In recent years it has come to be accepted that the share markets are not perfectly efficient, perhaps especially in emerging markets or other markets that are not dominated by well-informed professional investors.

Another theory of share price determination comes from the field of Behavioral Finance. According to Behavioral Finance, humans often make irrational decisions—particularly, related to the buying and selling of securities—based upon fears and misperceptions of outcomes. The irrational trading of securities can often create securities prices which vary from rational, fundamental price valuations. For instance, during the technology bubble of the late 1990s (which was followed by the dot-com bust of 2000–2002), technology companies were often bid beyond any rational fundamental value because of what is commonly known as the "greater fool theory". The "greater fool theory" holds that, because the predominant method of realizing returns in equity is from the sale to another investor, one should select securities that they believe that someone else will value at a higher level at some point in the future, without regard to the basis for that other party's willingness to pay a higher price. Thus, even a rational investor may bank on others' irrationality.

Arbitrage trading

When companies raise capital by offering stock on more than one exchange, the potential exists for discrepancies in the valuation of shares on different exchanges. A keen investor with access to information about such discrepancies may invest in expectation of their eventual convergence, known as arbitrage trading. Electronic trading has resulted in extensive price transparency (efficient-market hypothesis) and these discrepancies, if they exist, are short-lived and quickly equilibrated.

Financial economics

Financial economics is the branch of economics concerned with "the allocation and deployment of economic resources, both spatially and across time, in an uncertain environment".^[1] It is additionally characterised by its "concentration on monetary activities", in which "money of one type or another is likely to appear on *both sides* of a trade".^[2] The questions within financial economics are typically framed in terms of "time, uncertainty, options, and information".^[2]

- Time: money now is traded for money in the future.

- Uncertainty (or risk): The amount of money to be transferred in the future is uncertain.
- Options: one party to the transaction can make a decision at a later time that will affect subsequent transfers of money.
- Information: knowledge of the future can reduce, or possibly eliminate, the uncertainty associated with future monetary value (FMV).

Models in financial economics

Financial economics is primarily concerned with building models to derive testable or policy implications from acceptable assumptions. Some fundamental ideas in financial economics are portfolio theory, the Capital Asset Pricing Model. Portfolio theory studies how investors should balance risk and return when investing in many assets or securities. The Capital Asset Pricing Model describes how markets should set the prices of assets in relation to how risky they are. The Modigliani-Miller Theorem describes conditions under which corporate financing decisions are irrelevant for value, and acts as a benchmark for evaluating the effects of factors outside the model that do affect value.

A common assumption is that financial decision makers act rationally (see Homo economicus; efficient market hypothesis). However, recently, researchers in experimental economics and experimental finance have challenged this assumption empirically. They are also challenged, theoretically, by behavioral finance, a discipline primarily concerned with the limits to rationality of economic agents.

Other common assumptions include market prices following a random walk or asset returns being normally distributed. Empirical evidence suggests that these assumptions may not hold and that in practice, traders, analysts and particularly risk managers frequently modify the "standard models".

PUBLIC FINANCE

Public finance is the study of the role of the government in the economy.

The purview of public finance is considered to be threefold: governmental effects on (1) efficient allocation of resources, (2) distribution of income, and (3) macroeconomic stabilization.

Overview

The proper role of government provides a starting point for the analysis of public finance. In theory, under certain circumstances, private markets will allocate goods and services among individuals efficiently (in the sense that no waste occurs and that individual tastes are matching with the economy's productive abilities). If private markets were able to provide efficient outcomes and if the distribution of income were socially acceptable, then there would be little or no scope for government. In many cases, however, conditions for private market efficiency are violated. For example, if many people can enjoy the same good at the same time (non-rival, non-excludable consumption), then private markets may supply too little of that good. National defense is one example of non-rival consumption, or of a public good.

"Market failure" occurs when private markets do not allocate goods or services efficiently. The existence of market failure provides an efficiency-based rationale for collective or governmental provision of goods and services. Externalities, public goods, informational advantages, strong economies of scale, and network effects can cause market failures. Public provision via a government or a voluntary association, however, is subject to other inefficiencies, termed "government failure."

Under broad assumptions, government decisions about the efficient scope and level of activities can be efficiently separated from decisions about the design of taxation systems (Diamond-Mirrlees separation). In this view, public sector programs should be designed to maximize social benefits minus costs (cost-benefit analysis), and then revenues needed to pay for those expenditures should be raised through a taxation system that creates the fewest efficiency losses caused by distortion of economic activity as possible. In practice, government budgeting or public budgeting is substantially more complicated and often results in inefficient practices.

Government can pay for spending by borrowing (for example, with government bonds), although borrowing is a method of distributing tax burdens through time rather than a replacement for taxes. A deficit is the difference between government spending and revenues. The accumulation of deficits over time is the total public debt. Deficit finance allows governments to smooth tax burdens over time, and gives governments an important fiscal policy tool. Deficits can also narrow the options of successor governments.

Public finance is closely connected to issues of income distribution and social equity. Governments can reallocate income through transfer payments or by designing tax systems that treat high-income and low-income households differently.

The Public Choice approach to public finance seeks to explain how self-interested voters, politicians, and bureaucrats actually operate, rather than how they should operate.

Public finance management

Collection of sufficient resources from the economy in an appropriate manner along with allocating and use of these resources efficiently and effectively constitute good financial management. Resource generation, resource allocation and expenditure management (resource utilization) are the essential components of a **public financial management** system.

Public Finance Management (PFM) basically deals with all aspects of resource mobilization and expenditure management in government. Just as managing finances is a critical function of management in any organization, similarly public finance management is an essential part of the governance process. Public finance management includes resource mobilization, prioritization of programmes, the budgetary process, efficient management of resources and exercising controls. Rising aspirations of people are placing more demands on financial resources. At the same time, the emphasis of the citizenry is on value for money, thus making public finance management increasingly vital.

Government expenditures

Economists classify government expenditures into three main types. Government purchases of goods and services for current use are classed as government consumption. Government purchases of goods and services intended to create future benefits--- such as infrastructure investment or research spending--- are classed as government investment. Government expenditures that are not purchases of

goods and services, and instead just represent transfers of money--- such as social security payments--- are called transfer payments.^[2]

Government operations

Government operations are those activities involved in the running of a state or a functional equivalent of a state (for example, tribes, secessionist movements or revolutionary movements) for the purpose of producing value for the citizens. Government operations have the power to make, and the authority to enforce rules and laws within a civil, corporate, religious, academic, or other organization or group.^[3] In its broadest sense, "to govern" means to rule over or supervise, whether over a state, a set group of people, or a collection of people.^[4]

Income distribution

- Income distribution - Some forms of government expenditure are specifically intended to transfer income from some groups to others. For example, governments sometimes transfer income to people that have suffered a loss due to natural disaster. Likewise, public pension programs transfer wealth from the young to the old. Other forms of government expenditure which represent purchases of goods and services also have the effect of changing the income distribution. For example, engaging in a war may transfer wealth to certain sectors of society. Public education transfers wealth to families with children in these schools. Public road construction transfers wealth from people that do not use the roads to those people that do (and to those that build the roads).
- Income Security
- Employment insurance
- Health Care
- Public financing of campaigns

Government expenditures are financed in three ways:

- Government revenue
 - Taxes
 - Non-tax revenue (revenue from government-owned corporations, sovereign wealth funds, sales of assets, or Seigniorage)
- Government borrowing
- Printing of Money or Inflation
- Privatization

How a government chooses to finance its activities can have important effects on the distribution of income and wealth (income redistribution) and on the efficiency of markets (effect of taxes on market prices and efficiency). The issue of how taxes affect income distribution is closely related to tax incidence, which examines the distribution of tax burdens after market adjustments are taken into account. Public finance research also analyzes effects of the various types of taxes and types of borrowing as well as administrative concerns, such as tax enforcement.

Taxes

Taxation is the central part of modern public finance. Its significance arises not only from the fact that it is by far the most important of all revenues but also because of the gravity of the problems created by the present day heavy tax burden. The main objective of taxation is raising revenue. A high level of

taxation is necessary in a welfare State to fulfill its obligations. Taxation is used as an instrument of attaining certain social objectives i.e. as a means of redistribution of wealth and thereby reducing inequalities. Taxation in a modern Government is thus needed not merely to raise the revenue required to meet its ever-growing expenditure on administration and social services but also to reduce the inequalities of income and wealth. Taxation is also needed to draw away money that would otherwise go into consumption and cause inflation to rise.^[5]

A tax is a financial charge or other levy imposed on an individual or a legal entity by a state or a functional equivalent of a state (for example, tribes, secessionist movements or revolutionary movements). Taxes could also be imposed by a subnational entity. Taxes consist of direct tax or indirect tax, and may be paid in money or as *corvée* labor. A tax may be defined as a "pecuniary burden laid upon individuals or property to support the government [...] a payment exacted by legislative authority."^[6] A tax "is not a voluntary payment or donation, but an enforced contribution, exacted pursuant to legislative authority" and is "any contribution imposed by government [...] whether under the name of toll, tribute, tallage, gabel, impost, duty, custom, excise, subsidy, aid, supply, or other name."^[7]

- There are various types of taxes, broadly divided into two heads - direct (which is proportional) and indirect tax (which is differential in nature):
- Stamp duty, levied on documents
- Excise tax (tax levied on production for sale, or sale, of a certain good)
- Sales tax (tax on business transactions, especially the sale of goods and services)
 - Value added tax (VAT) is a type of sales tax
 - Services taxes on specific services
- Road tax; Vehicle excise duty (UK), Registration Fee (USA), Regco (Australia), Vehicle Licensing Fee (Brazil) etc.
- Gift tax
- Duties (taxes on importation, levied at customs)
- Corporate income tax on corporations (incorporated entities)
- Wealth tax
- Personal income tax (may be levied on individuals, families such as the Hindu joint family in India, unincorporated associations, etc.)

Debt

Foreign currency reserves and gold minus external debt based on 2010 data from CIA Factbook.

Governments, like any other legal entity, can take out loans, issue bonds and make financial investments. Government debt (also known as public debt or national debt) is money (or credit) owed by any level of government; either central or federal government, municipal government or local government. Some local governments issue bonds based on their taxing authority, such as tax increment bonds or revenue bonds.

As the government represents the people, government debt can be seen as an indirect debt of the taxpayers. Government debt can be categorized as internal debt, owed to lenders within the country, and external debt, owed to foreign lenders. Governments usually borrow by issuing securities such as government bonds and bills. Less creditworthy countries sometimes borrow directly from commercial banks or international institutions such as the International Monetary Fund or the World Bank.

Most government budgets are calculated on a cash basis, meaning that revenues are recognized when collected and outlays are recognized when paid. Some consider all government liabilities, including

future pension payments and payments for goods and services the government has contracted for but not yet paid, as government debt. This approach is called accrual accounting, meaning that obligations are recognized when they are acquired, or accrued, rather than when they are paid.

Seigniorage

Seigniorage is the net revenue derived from the issuing of currency. It arises from the difference between the face value of a coin or bank note and the cost of producing, distributing and eventually retiring it from circulation. Seigniorage is an important source of revenue for some national banks, although it provides a very small proportion of revenue for advanced industrial countries.

Public finance through state enterprise

Public finance in centrally planned economies has differed in fundamental ways from that in market economies. Some state-owned enterprises generated profits that helped finance government activities. The government entities that operate for profit are usually manufacturing and financial institutions, services such as nationalized healthcare do not operate for a profit to keep costs low for consumers. The Soviet Union relied heavily on turnover taxes on retail sales. Sales of natural resources, and especially petroleum products, were an important source of revenue for the Soviet Union.

In market-oriented economies with substantial state enterprise, such as in Venezuela, the state-run oil company PSDVA provides revenue for the government to fund its operations and programs that would otherwise be profit for private owners. In various mixed economies, the revenue generated by state-run or state-owned enterprises are used for various state endeavors; typically the revenue generated by state and government agencies goes into a sovereign wealth fund. An example of this is the Alaska Permanent Fund and Singapore's Temasek Holdings.

Various market socialist systems or proposals utilize revenue generated by state-run enterprises to fund social dividends, eliminating the need for taxation altogether.

Government Finance Statistics and Methodology

Macroeconomic data to support public finance economics are generally referred to as fiscal or government finance statistics (GFS). *The Government Finance Statistics Manual 2001 (GFSM 2001)* is the internationally accepted methodology for compiling fiscal data. It is consistent with regionally accepted methodologies such as the *European System of Accounts 1995* and consistent with the methodology of the *System of National Accounts (SNA1993)* and broadly in line with its most recent update, the *SNA2008*.

Measuring the public sector

The size of governments, their institutional composition and complexity, their ability to carry out large and sophisticated operations, and their impact on the other sectors of the economy warrant a well-articulated system to measure government economic operations.

The *GFSM 2001* addresses the institutional complexity of government by defining various levels of government. The main focus of the *GFSM 2001* is the general government sector defined as the group of entities capable of implementing public policy through the provision of primarily nonmarket goods and services and the redistribution of income and wealth, with both activities supported mainly by compulsory levies on other sectors. The *GFSM 2001* disaggregates the general government into

subsectors: central government, state government, and local government (See Figure 1). The concept of general government does not include public corporations. The general government plus the public corporations comprise the public sector (See Figure 2).

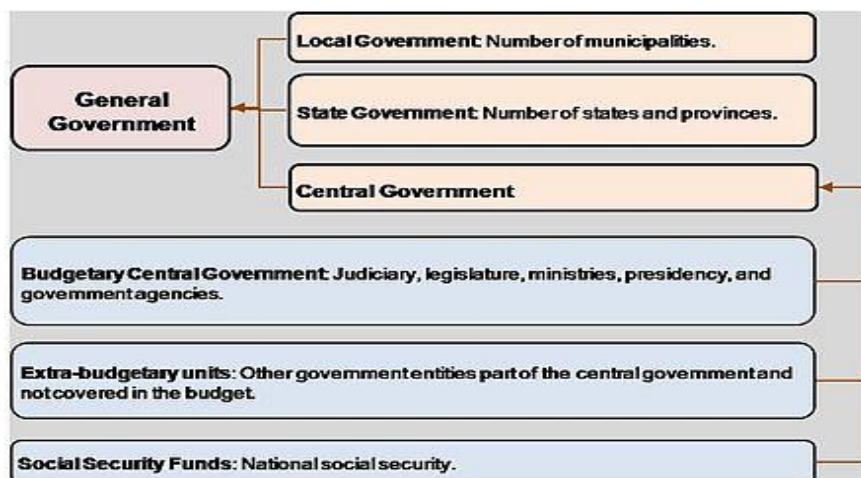


Figure 1: General Government (IMF *Government Finance Statistics Manual 2001*(Washington, 2001) pp.13

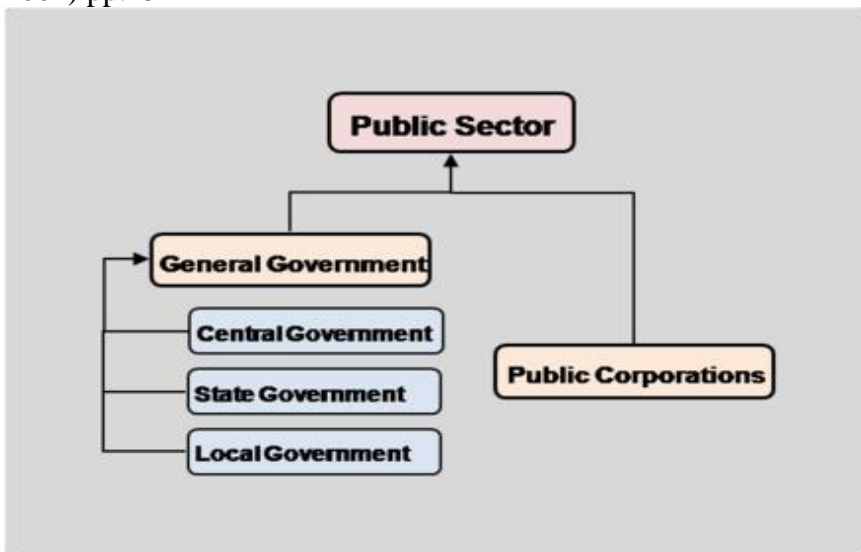


Figure 2: Public Sector(IMF *Government Finance Statistics Manual 2001*(Washington, 2001) pp.15

The general government sector of a nation includes all non-private sector institutions, organisations and activities. The general government sector, by convention, includes all the public corporations that are not able to cover at least 50 % of their costs by sales, and, therefore, are considered non-market producers.^[8]

In the European System of Accounts^[9], the sector “general government” has been defined as containing:

- “All institutional units which are other non-market producers whose output is intended for individual and collective consumption, and mainly financed by compulsory payments made by units belonging to other sectors, and/or all institutional units principally engaged in the redistribution of national income and wealth”^[8]

Therefore, the main functions of general government units are :

- to organise or redirect the flows of money, goods and services or other assets among corporations, among households, and between corporations and households; in the purpose of social justice, increased efficiency or other aims legitimised by the citizens; examples are the redistribution of national income and wealth, the corporate income tax paid by companies to finance unemployment benefits, the social contributions paid by employees to finance the pension systems;
- to produce goods and services to satisfy households' needs (e.g. state health care) or to collectively meet the needs of the whole community (e.g. defence, public order and safety).^[8]

The general government sector, in the European System of Accounts, has four sub-sectors:

1. central government
2. state government
3. local government
4. social security funds

"Central government"^[10] consists of all administrative departments of the state and other central agencies whose responsibilities cover the whole economic territory of a country, except for the administration of social security funds.

"State government"^[11] is defined as the separate institutional units that exercise some government functions below those units at central government level and above those units at local government level, excluding the administration of social security funds.

"Local government"^[12] consists of all types of public administration whose responsibility covers only a local part of the economic territory, apart from local agencies of social security funds.

"Social security fund"^[13] is a central, state or local institutional unit whose main activity is to provide social benefits. It fulfils the two following criteria:

- by law or regulation (except those about government employees), certain population groups must take part in the scheme and have to pay contributions;
- general government is responsible for the management of the institutional unit, for the payment or approval of the level of the contributions and of the benefits, independent of its role as a supervisory body or employer.

The *GFSM 2001* framework is similar to the financial accounting of businesses. For example, it recommends that governments produce a full set of financial statements including the statement of government operations (akin to the income statement), the balance sheet, and a cash flow statement. Two other similarities between the *GFSM 2001* and business financial accounting are the recommended use of accrual accounting as the basis of recording and the presentations of stocks of assets and liabilities at market value. It is an improvement on the prior methodology - *Government Finance Statistics Manual 1986* – based on cash flows and without a balance sheet statement.

Users of GFS

The *GFSM 2001* recommends standard tables including standard fiscal indicators that meet a broad group of users including policy makers, researchers, and investors in sovereign debt. Government finance statistics should offer data for topics such as the fiscal architecture, the measurement of the efficiency and effectiveness of government expenditures, the economics of taxation, and the structure of public financing. The *GFSM 2001* provides a blueprint for the compilation, recording, and presentation of revenues, expenditures, stocks of assets, and stocks of liabilities. The *GFSM 2001* also defines some indicators of effectiveness in government's expenditures, for example the compensation of employees as a percentage of expense. The *GFSM 2001* includes a functional classification of expense as defined by the Classification of Functions of Government (COFOG).

This functional classification allows policy makers to analyze expenditures on categories such as health, education, social protection, and environmental protection. The financial statements can provide investors with the necessary information to assess the capacity of a government to service and repay its debt, a key element determining sovereign risk, and risk premia. Like the risk of default of a private corporation, sovereign risk is a function of the level of debt, its ratio to liquid assets, revenues and expenditures, the expected growth and volatility of these revenues and expenditures, and the cost of servicing the debt. The government's financial statements contain the relevant information for this analysis.

The government's balance sheet presents the level of the debt; that is the government's liabilities. The memorandum items of the balance sheet provide additional information on the debt including its maturity and whether it is owed to domestic or external residents. The balance sheet also presents a disaggregated classification of financial and non-financial assets.

These data help estimate the resources a government can potentially access to repay its debt. The statement of operations ("income statement") contains the revenue and expense accounts of the government. The revenue accounts are divided into subaccounts, including the different types of taxes, social contributions, dividends from the public sector, and royalties from natural resources. Finally, the interest expense account is one of the necessary inputs to estimate the cost of servicing the debt.

Fiscal Data Using the *GFSM 2001* Methodology

GFS can be accessible through several sources. The International Monetary Fund publishes GFS in two publications: *International Financial Statistics* and the *Government Finance Statistics Yearbook*. The World Bank gathers information on external debt. On a regional level, the Organization for Economic Co-operation and Development (OECD) compiles general government account data for its members, and Eurostat, following a methodology compatible with the *GFSM 2001*, compiles GFS for the members of the European Union.

INSURANCE

Insurance is a form of risk management primarily used to hedge against the risk of a contingent, uncertain loss. Insurance is defined as the equitable transfer of the risk of a loss, from one entity to another, in exchange for payment. An insurer is a company selling the insurance; the insured, or policyholder, is the person or entity buying the insurance policy. The amount to be charged for a certain amount of insurance coverage is called the premium. Risk management, the practice of appraising and controlling risk, has evolved as a discrete field of study and practice.

The transaction involves the insured assuming a guaranteed and known relatively small loss in the form of payment to the insurer in exchange for the insurer's promise to compensate (indemnify) the insured in the case of a financial (personal) loss. The insured receives a contract, called the insurance policy, which details the conditions and circumstances under which the insured will be financially compensated.

Principles

Insurance involves pooling funds from *many* insured entities (known as exposures) to pay for the losses that some may incur. The insured entities are therefore protected from risk for a fee, with the fee being dependent upon the frequency and severity of the event occurring. In order to be insurable, the risk insured against must meet certain characteristics in order to be an insurable risk. Insurance is a commercial enterprise and a major part of the financial services industry, but individual entities can also self-insure through saving money for possible future losses.^[1]

Insurability

Main article: Insurability

Risk which can be insured by private companies typically share seven common characteristics:^[2]

1. **Large number of similar exposure units:** Since insurance operates through pooling resources, the majority of insurance policies are provided for individual members of large classes, allowing insurers to benefit from the law of large numbers in which predicted losses are similar to the actual losses. Exceptions include Lloyd's of London, which is famous for insuring the life or health of actors, sports figures and other famous individuals. However, all exposures will have particular differences, which may lead to different premium rates.
2. **Definite loss:** The loss takes place at a known time, in a known place, and from a known cause. The classic example is death of an insured person on a life insurance policy. Fire, automobile accidents, and worker injuries may all easily meet this criterion. Other types of losses may only be definite in theory. Occupational disease, for instance, may involve prolonged exposure to injurious conditions where no specific time, place or cause is identifiable. Ideally, the time, place and cause of a loss should be clear enough that a reasonable person, with sufficient information, could objectively verify all three elements.
3. **Accidental loss:** The event that constitutes the trigger of a claim should be fortuitous, or at least outside the control of the beneficiary of the insurance. The loss should be pure, in the sense that it results from an event for which there is only the opportunity for cost. Events that contain speculative elements, such as ordinary business risks or even purchasing a lottery ticket, are generally not considered insurable.
4. **Large loss:** The size of the loss must be meaningful from the perspective of the insured. Insurance premiums need to cover both the expected cost of losses, plus the cost of issuing and administering the policy, adjusting losses, and supplying the capital needed to reasonably assure that the insurer will be able to pay claims. For small losses these latter costs may be several times the size of the expected cost of losses. There is hardly any point in paying such costs unless the protection offered has real value to a buyer.
5. **Affordable premium:** If the likelihood of an insured event is so high, or the cost of the event so large, that the resulting premium is large relative to the amount of protection offered, it is not likely that the insurance will be purchased, even if on offer. Further, as the accounting profession formally recognizes in financial accounting standards, the premium cannot be so

large that there is not a reasonable chance of a significant loss to the insurer. If there is no such chance of loss, the transaction may have the form of insurance, but not the substance. (See the US Financial Accounting Standards Board standard number 113)

6. **Calculable loss:** There are two elements that must be at least estimable, if not formally calculable: the probability of loss, and the attendant cost. Probability of loss is generally an empirical exercise, while cost has more to do with the ability of a reasonable person in possession of a copy of the insurance policy and a proof of loss associated with a claim presented under that policy to make a reasonably definite and objective evaluation of the amount of the loss recoverable as a result of the claim.
7. **Limited risk of catastrophically large losses:** Insurable losses are ideally independent and non-catastrophic, meaning that the losses do not happen all at once and individual losses are not severe enough to bankrupt the insurer; insurers may prefer to limit their exposure to a loss from a single event to some small portion of their capital base. Capital constrains insurers' ability to sell earthquake insurance as well as wind insurance in hurricane zones. In the US, flood risk is insured by the federal government. In commercial fire insurance it is possible to find single properties whose total exposed value is well in excess of any individual insurer's capital constraint. Such properties are generally shared among several insurers, or are insured by a single insurer who syndicates the risk into the reinsurance market.

Legal

When a company insures an individual entity, there are basic legal requirements. Several commonly cited legal principles of insurance include:^[3]

1. Indemnity – the insurance company indemnifies, or compensates, the insured in the case of certain losses only up to the insured's interest.
2. Insurable interest – the insured typically must directly suffer from the loss. Insurable interest must exist whether property insurance or insurance on a person is involved. The concept requires that the insured have a "stake" in the loss or damage to the life or property insured. What that "stake" is will be determined by the kind of insurance involved and the nature of the property ownership or relationship between the persons.
3. Utmost good faith – the insured and the insurer are bound by a good faith bond of honesty and fairness. Material facts must be disclosed.
4. Contribution – insurers which have similar obligations to the insured contribute in the indemnification, according to some method.
5. Subrogation – the insurance company acquires legal rights to pursue recoveries on behalf of the insured; for example, the insurer may sue those liable for insured's loss.
6. Causa proxima, or proximate cause – the cause of loss (the peril) must be covered under the insuring agreement of the policy, and the dominant cause must not be excluded
7. Mitigation - In case of any loss or casualty, the asset owner must attempt to keep the loss to a minimum, as if the asset was not insured.

Indemnification

Main article: Indemnity

To "indemnify" means to make whole again, or to be reinstated to the position that one was in, to the extent possible, prior to the happening of a specified event or peril. Accordingly, life insurance is generally not considered to be indemnity insurance, but rather "contingent" insurance (i.e., a claim

arises on the occurrence of a specified event). There are generally two types of insurance contracts that seek to indemnify an insured:

1. an "indemnity" policy, and
2. a "pay on behalf" or "on behalf of"^[4] policy.

The difference is significant on paper, but rarely material in practice.

An "indemnity" policy will never pay claims until the insured has paid out of pocket to some third party; for example, a visitor to your home slips on a floor that you left wet and sues you for \$10,000 and wins. Under an "indemnity" policy the homeowner would have to come up with the \$10,000 to pay for the visitor's fall and then would be "indemnified" by the insurance carrier for the out of pocket costs (the \$10,000).^{[4][5]}

Under the same situation, a "pay on behalf" policy, the insurance carrier would pay the claim and the insured (the homeowner in the above example) would not be out of pocket for anything. Most modern liability insurance is written on the basis of "pay on behalf" language.^[4]

An entity seeking to transfer risk (an individual, corporation, or association of any type, etc.) becomes the 'insured' party once risk is assumed by an 'insurer', the insuring party, by means of a contract, called an insurance policy. Generally, an insurance contract includes, at a minimum, the following elements: identification of participating parties (the insurer, the insured, the beneficiaries), the premium, the period of coverage, the particular loss event covered, the amount of coverage (i.e., the amount to be paid to the insured or beneficiary in the event of a loss), and exclusions (events not covered). An insured is thus said to be "indemnified" against the loss covered in the policy.

When insured parties experience a loss for a specified peril, the coverage entitles the policyholder to make a claim against the insurer for the covered amount of loss as specified by the policy. The fee paid by the insured to the insurer for assuming the risk is called the premium. Insurance premiums from many insureds are used to fund accounts reserved for later payment of claims — in theory for a relatively few claimants — and for overhead costs. So long as an insurer maintains adequate funds set aside for anticipated losses (called reserves), the remaining margin is an insurer's profit.

Auto insurance

Auto insurance protects the policyholder against financial loss in the event of an incident involving a vehicle they own, such as in a traffic collision.

Coverage typically includes:

1. Property coverage, for damage to or theft of the car;
2. Liability coverage, for the legal responsibility to others for bodily injury or property damage;
3. Medical coverage, for the cost of treating injuries, rehabilitation and sometimes lost wages and funeral expenses.

Most countries, such as the United Kingdom, require drivers to buy some, but not all, of these coverages. When a car is used as collateral for a loan the lender usually requires specific coverage.

Gap insurance

Gap insurance covers the excess amount on your auto loan in an instance where your insurance company does not cover the entire loan. Depending on the companies specific policies it might or might not cover the deductible as well. This coverage is marketed for those who put low down payments, have high interest rates on their loans, and those with 60 month or longer terms. Gap insurance is typically offered by your finance company when you first purchase your vehicle. Most auto insurance companies offer this coverage to consumers as well. If you are unsure if GAP coverage had been purchased, you should check your vehicle lease or purchase documentation.

Home insurance

Home insurance provides coverage for damage or destruction of the policyholder's home. In some geographical areas, the policy may exclude certain types of risks, such as flood or earthquake, that require additional coverage. Maintenance-related issues are typically the homeowner's responsibility. The policy may include inventory, or this can be bought as a separate policy, especially for people who rent housing. In some countries, insurers offer a package which may include liability and legal responsibility for injuries and property damage caused by members of the household, including pets.^[22]

Health insurance

Health insurance policies cover the cost of medical treatments. Dental insurance, like medical insurance protects policyholders for dental costs. In the US and Canada, dental insurance is often part of an employer's benefits package, along with health insurance.

Accident, sickness and unemployment insurance

Workers' compensation, or employers' liability insurance, is compulsory in some countries

- Disability insurance policies provide financial support in the event of the policyholder becoming unable to work because of disabling illness or injury. It provides monthly support to help pay such obligations as mortgage loans and credit cards. Short-term and long-term disability policies are available to individuals, but considering the expense, long-term policies are generally obtained only by those with at least six-figure incomes, such as doctors, lawyers, etc. Short-term disability insurance covers a person for a period typically up to six months, paying a stipend each month to cover medical bills and other necessities.
- Long-term disability insurance covers an individual's expenses for the long term, up until such time as they are considered permanently disabled and thereafter. Insurance companies will often try to encourage the person back into employment in preference to and before declaring them unable to work at all and therefore totally disabled.
- Disability overhead insurance allows business owners to cover the overhead expenses of their business while they are unable to work.
- Total permanent disability insurance provides benefits when a person is permanently disabled and can no longer work in their profession, often taken as an adjunct to life insurance.
- Workers' compensation insurance replaces all or part of a worker's wages lost and accompanying medical expenses incurred because of a job-related injury.

Casualty

Casualty insurance insures against accidents, not necessarily tied to any specific property. It is a broad spectrum of insurance that a number of other types of insurance could be classified, such as auto, workers compensation, and some liability insurances.

- Crime insurance is a form of casualty insurance that covers the policyholder against losses arising from the criminal acts of third parties. For example, a company can obtain crime insurance to cover losses arising from theft or embezzlement.
- Political risk insurance is a form of casualty insurance that can be taken out by businesses with operations in countries in which there is a risk that revolution or other political conditions could result in a loss.

Life

Life insurance provides a monetary benefit to a decedent's family or other designated beneficiary, and may specifically provide for income to an insured person's family, burial, funeral and other final expenses. Life insurance policies often allow the option of having the proceeds paid to the beneficiary either in a lump sum cash payment or an annuity.

Annuities provide a stream of payments and are generally classified as insurance because they are issued by insurance companies, are regulated as insurance, and require the same kinds of actuarial and investment management expertise that life insurance requires. Annuities and pensions that pay a benefit for life are sometimes regarded as insurance against the possibility that a retiree will outlive his or her financial resources. In that sense, they are the complement of life insurance and, from an underwriting perspective, are the mirror image of life insurance.

Certain life insurance contracts accumulate cash values, which may be taken by the insured if the policy is surrendered or which may be borrowed against. Some policies, such as annuities and endowment policies, are financial instruments to accumulate or liquidate wealth when it is needed.

In many countries, such as the US and the UK, the tax law provides that the interest on this cash value is not taxable under certain circumstances. This leads to widespread use of life insurance as a tax-efficient method of saving as well as protection in the event of early death.

In the US, the tax on interest income on life insurance policies and annuities is generally deferred. However, in some cases the benefit derived from tax deferral may be offset by a low return. This depends upon the insuring company, the type of policy and other variables (mortality, market return, etc.). Moreover, other income tax saving vehicles (e.g., IRAs, 401(k) plans, Roth IRAs) may be better alternatives for value accumulation.

Burial insurance

Burial insurance is a very old type of life insurance which is paid out upon death to cover final expenses, such as the cost of a funeral. The Greeks and Romans introduced burial insurance circa 600 AD when they organized guilds called "benevolent societies" which cared for the surviving families and paid funeral expenses of members upon death. Guilds in the Middle Ages served a similar purpose, as did friendly societies during Victorian times.

Property

Property insurance provides protection against risks to property, such as fire, theft or weather damage. This may include specialized forms of insurance such as fire insurance, flood insurance, earthquake insurance, home insurance, inland marine insurance or boiler insurance. The term *property insurance* may, like casualty insurance, be used as a broad category of various subtypes of insurance, some of which are listed below:

- Aviation insurance protects aircraft hulls and spares, and associated liability risks, such as passenger and third-party liability. Airports may also appear under this subcategory, including air traffic control and refuelling operations for international airports through to smaller domestic exposures.
- Boiler insurance (also known as boiler and machinery insurance, or equipment breakdown insurance) insures against accidental physical damage to boilers, equipment or machinery.
- Builder's risk insurance insures against the risk of physical loss or damage to property during construction. Builder's risk insurance is typically written on an "all risk" basis covering damage arising from any cause (including the negligence of the insured) not otherwise expressly excluded. Builder's risk insurance is coverage that protects a person's or organization's insurable interest in materials, fixtures and/or equipment being used in the construction or renovation of a building or structure should those items sustain physical loss or damage from an insured peril.^[23]
- Crop insurance may be purchased by farmers to reduce or manage various risks associated with growing crops. Such risks include crop loss or damage caused by weather, hail, drought, frost damage, insects, or disease.^[24]
- Earthquake insurance is a form of property insurance that pays the policyholder in the event of an earthquake that causes damage to the property. Most ordinary home insurance policies do not cover earthquake damage. Earthquake insurance policies generally feature a high deductible. Rates depend on location and hence the likelihood of an earthquake, as well as the construction of the home.
- Fidelity bond is a form of casualty insurance that covers policyholders for losses incurred as a result of fraudulent acts by specified individuals. It usually insures a business for losses caused by the dishonest acts of its employees.
- Flood insurance protects against property loss due to flooding. Many insurers in the US do not provide flood insurance in some parts of the country. In response to this, the federal government created the National Flood Insurance Program which serves as the insurer of last resort.
- Home insurance, also commonly called hazard insurance, or homeowners insurance (often abbreviated in the real estate industry as HOI), is the type of property insurance that covers private homes, as outlined above.
- Landlord insurance covers residential and commercial properties which are rented to others. Most homeowners' insurance covers only owner-occupied homes.
- Marine insurance and marine cargo insurance cover the loss or damage of vessels at sea or on inland waterways, and of cargo in transit, regardless of the method of transit. When the owner

of the cargo and the carrier are separate corporations, marine cargo insurance typically compensates the owner of cargo for losses sustained from fire, shipwreck, etc., but excludes losses that can be recovered from the carrier or the carrier's insurance. Many marine insurance underwriters will include "time element" coverage in such policies, which extends the indemnity to cover loss of profit and other business expenses attributable to the delay caused by a covered loss.

- Supplemental natural disaster insurance covers specified expenses after a natural disaster renders the policyholder's home uninhabitable. Periodic payments are made directly to the insured until the home is rebuilt or a specified time period has elapsed.
- Surety bond insurance is a three-party insurance guaranteeing the performance of the principal.

Terrorism insurance provides protection against any loss or damage caused by terrorist activities. In the US in the wake of 9/11, the Terrorism Risk Insurance Act 2002 (TRIA) set up a federal Program providing a transparent system of shared public and private compensation for insured losses resulting from acts of terrorism. The program was extended until the end of 2014 by the Terrorism Risk Insurance Program Reauthorization Act 2007 (TRIPRA).

- Volcano insurance is a specialized insurance protecting against damage arising specifically from volcanic eruptions.
- Windstorm insurance is an insurance covering the damage that can be caused by wind events such as hurricanes.

Liability

Liability insurance is a very broad superset that covers legal claims against the insured. Many types of insurance include an aspect of liability coverage. For example, a homeowner's insurance policy will normally include liability coverage which protects the insured in the event of a claim brought by someone who slips and falls on the property; automobile insurance also includes an aspect of liability insurance that indemnifies against the harm that a crashing car can cause to others' lives, health, or property. The protection offered by a liability insurance policy is twofold: a legal defense in the event of a lawsuit commenced against the policyholder and indemnification (payment on behalf of the insured) with respect to a settlement or court verdict. Liability policies typically cover only the negligence of the insured, and will not apply to results of wilful or intentional acts by the insured.

Public liability insurance covers a business or organization against claims should its operations injure a member of the public or damage their property in some way.

- Directors and officers liability insurance (D&O) protects an organization (usually a corporation) from costs associated with litigation resulting from errors made by directors and officers for which they are liable.
- Environmental liability insurance protects the insured from bodily injury, property damage and cleanup costs as a result of the dispersal, release or escape of pollutants.
- Errors and omissions insurance is business liability insurance for professionals such as insurance agents, real estate agents and brokers, architects, third-party administrators (TPAs) and other business professionals.

- Prize indemnity insurance protects the insured from giving away a large prize at a specific event. Examples would include offering prizes to contestants who can make a half-court shot at a basketball game, or a hole-in-one at a golf tournament.
- Professional liability insurance, also called professional indemnity insurance (PI), protects insured professionals such as architectural corporations and medical practitioners against potential negligence claims made by their patients/clients. Professional liability insurance may take on different names depending on the profession. For example, professional liability insurance in reference to the medical profession may be called medical malpractice insurance.

Credit

Credit insurance repays some or all of a loan when certain circumstances arise to the borrower such as unemployment, disability, or death.

- Mortgage insurance insures the lender against default by the borrower. Mortgage insurance is a form of credit insurance, although the name "credit insurance" more often is used to refer to policies that cover other kinds of debt.
- Many credit cards offer payment protection plans which are a form of credit insurance.
- Trade credit insurance is business insurance over the accounts receivable of the insured. The policy pays the policy holder for covered accounts receivable if the debtor defaults on payment.

Other types

- All-risk insurance is an insurance that covers a wide-range of incidents and perils, except those noted in the policy. All-risk insurance is different from peril-specific insurance that cover losses from only those perils listed in the policy.^[25] In car insurance, all-risk policy includes also the damages caused by the own driver.

High-value horses may be insured under a bloodstock policy

- Bloodstock insurance covers individual horses or a number of horses under common ownership. Coverage is typically for mortality as a result of accident, illness or disease but may extend to include infertility, in-transit loss, veterinary fees, and prospective foal.
- Business interruption insurance covers the loss of income, and the expenses incurred, after a covered peril interrupts normal business operations.
- Collateral protection insurance (CPI) insures property (primarily vehicles) held as collateral for loans made by lending institutions.
- Defense Base Act (DBA) insurance provides coverage for civilian workers hired by the government to perform contracts outside the US and Canada. DBA is required for all US citizens, US residents, US Green Card holders, and all employees or subcontractors hired on overseas government contracts. Depending on the country, foreign nationals must also be covered under DBA. This coverage typically includes expenses related to medical treatment and loss of wages, as well as disability and death benefits.
- Expatriate insurance provides individuals and organizations operating outside of their home country with protection for automobiles, property, health, liability and business pursuits.
- Kidnap and ransom insurance is designed to protect individuals and corporations operating in high-risk areas around the world against the perils of kidnap, extortion, wrongful detention and hijacking.

- Legal expenses insurance covers policyholders for the potential costs of legal action against an institution or an individual. When something happens which triggers the need for legal action, it is known as "the event". There are two main types of legal expenses insurance: before the event insurance and after the event insurance.
- Locked funds insurance is a little-known hybrid insurance policy jointly issued by governments and banks. It is used to protect public funds from tamper by unauthorized parties. In special cases, a government may authorize its use in protecting semi-private funds which are liable to tamper. The terms of this type of insurance are usually very strict. Therefore it is used only in extreme cases where maximum security of funds is required.
- Livestock insurance is a specialist policy provided to, for example, commercial or hobby farms, aquariums, fish farms or any other animal holding. Cover is available for mortality or economic slaughter as a result of accident, illness or disease but can extend to include destruction by government order.
- Media liability insurance is designed to cover professionals that engage in film and television production and print, against risks such as defamation.
- Nuclear incident insurance covers damages resulting from an incident involving radioactive materials and is generally arranged at the national level. (See the nuclear exclusion clause and for the US the Price-Anderson Nuclear Industries Indemnity Act.)
- Pet insurance insures pets against accidents and illnesses; some companies cover routine/wellness care and burial, as well.
- Pollution insurance usually takes the form of first-party coverage for contamination of insured property either by external or on-site sources. Coverage is also afforded for liability to third parties arising from contamination of air, water, or land due to the sudden and accidental release of hazardous materials from the insured site. The policy usually covers the costs of cleanup and may include coverage for releases from underground storage tanks. Intentional acts are specifically excluded.
- Purchase insurance is aimed at providing protection on the products people purchase. Purchase insurance can cover individual purchase protection, warranties, guarantees, care plans and even mobile phone insurance. Such insurance is normally very limited in the scope of problems that are covered by the policy.
- Title insurance provides a guarantee that title to real property is vested in the purchaser and/or mortgagee, free and clear of liens or encumbrances. It is usually issued in conjunction with a search of the public records performed at the time of a real estate transaction.
- Travel insurance is an insurance cover taken by those who travel abroad, which covers certain losses such as medical expenses, loss of personal belongings, travel delay, and personal liabilities.
- Tuition insurance insures students against involuntary withdrawal from cost-intensive educational institutions
- Interest rate insurance protects the holder from adverse changes in interest rates, for instance for those with a variable rate loan or mortgage

Insurance financing vehicles

- Fraternal insurance is provided on a cooperative basis by fraternal benefit societies or other social organizations.^[26]
- No-fault insurance is a type of insurance policy (typically automobile insurance) where insureds are indemnified by their own insurer regardless of fault in the incident.
- Protected self-insurance is an alternative risk financing mechanism in which an organization retains the mathematically calculated cost of risk within the organization and transfers the catastrophic risk with specific and aggregate limits to an insurer so the maximum total cost of

the program is known. A properly designed and underwritten Protected Self-Insurance Program reduces and stabilizes the cost of insurance and provides valuable risk management information.

- Retrospectively rated insurance is a method of establishing a premium on large commercial accounts. The final premium is based on the insured's actual loss experience during the policy term, sometimes subject to a minimum and maximum premium, with the final premium determined by a formula. Under this plan, the current year's premium is based partially (or wholly) on the current year's losses, although the premium adjustments may take months or years beyond the current year's expiration date. The rating formula is guaranteed in the insurance contract. Formula: retrospective premium = converted loss + basic premium × tax multiplier. Numerous variations of this formula have been developed and are in use.
- Formal self insurance is the deliberate decision to pay for otherwise insurable losses out of one's own money. This can be done on a formal basis by establishing a separate fund into which funds are deposited on a periodic basis, or by simply forgoing the purchase of available insurance and paying out-of-pocket. Self insurance is usually used to pay for high-frequency, low-severity losses. Such losses, if covered by conventional insurance, mean having to pay a premium that includes loadings for the company's general expenses, cost of putting the policy on the books, acquisition expenses, premium taxes, and contingencies. While this is true for all insurance, for small, frequent losses the transaction costs may exceed the benefit of volatility reduction that insurance otherwise affords.
- Reinsurance is a type of insurance purchased by insurance companies or self-insured employers to protect against unexpected losses. Financial reinsurance is a form of reinsurance that is primarily used for capital management rather than to transfer insurance risk.
- Social insurance can be many things to many people in many countries. But a summary of its essence is that it is a collection of insurance coverages (including components of life insurance, disability income insurance, unemployment insurance, health insurance, and others), plus retirement savings, that requires participation by all citizens. By forcing everyone in society to be a policyholder and pay premiums, it ensures that everyone can become a claimant when or if he/she needs to. Along the way this inevitably becomes related to other concepts such as the justice system and the welfare state. This is a large, complicated topic that engenders tremendous debate, which can be further studied in the following articles (and others):
 - National Insurance
 - Social safety net
 - Social security
 - Social Security debate (United States)
 - Social Security (United States)
 - Social welfare provision
- Stop-loss insurance provides protection against catastrophic or unpredictable losses. It is purchased by organizations who do not want to assume 100% of the liability for losses arising from the plans. Under a stop-loss policy, the insurance company becomes liable for losses that exceed certain limits called deductibles.

Closed community self-insurance

Some communities prefer to create virtual insurance amongst themselves by other means than contractual risk transfer, which assigns explicit numerical values to risk. A number of religious groups, including the Amish and some Muslim groups, depend on support provided by their communities when disasters strike. The risk presented by any given person is assumed collectively by the community who all bear the cost of rebuilding lost property and supporting people whose needs are suddenly greater after a loss of some kind. In supportive communities where others can be trusted to

follow community leaders, this tacit form of insurance can work. In this manner the community can even out the extreme differences in insurability that exist among its members. Some further justification is also provided by invoking the moral hazard of explicit insurance contracts.

In the United Kingdom, The Crown (which, for practical purposes, meant the civil service) did not insure property such as government buildings. If a government building was damaged, the cost of repair would be met from public funds because, in the long run, this was cheaper than paying insurance premiums. Since many UK government buildings have been sold to property companies, and rented back, this arrangement is now less common and may have disappeared altogether.

Insurance companies

Insurance companies may be classified into two groups:

- Life insurance companies, which sell life insurance, annuities and pensions products.
- Non-life, general, or property/casualty insurance companies, which sell other types of insurance.

General insurance companies can be further divided into these sub categories.

- Standard lines
- Excess lines

In most countries, life and non-life insurers are subject to different regulatory regimes and different tax and accounting rules. The main reason for the distinction between the two types of company is that life, annuity, and pension business is very long-term in nature — coverage for life assurance or a pension can cover risks over many decades. By contrast, non-life insurance cover usually covers a shorter period, such as one year.

In the United States, standard line insurance companies are insurers that have received a license or authorization from a state for the purpose of writing specific kinds of insurance in that state, such as automobile insurance or homeowners' insurance.^[27] They are typically referred to as "admitted" insurers. Generally, such an insurance company must submit its rates and policy forms to the state's insurance regulator to receive his or her prior approval, although whether an insurance company must receive prior approval depends upon the kind of insurance being written. Standard line insurance companies usually charge lower premiums than excess line insurers and may sell directly to individual insureds. They are regulated by state laws, which include restrictions on rates and forms, and which aim to protect consumers and the public from unfair or abusive practices.^[27] These insurers also are required to contribute to state guarantee funds, which are used to pay for losses if an insurer becomes insolvent.^[27]

Excess line insurance companies (also known as Excess and Surplus) typically insure risks not covered by the standard lines insurance market, due to a variety of reasons (e.g., new entity or an entity that does not have an adequate loss history, an entity with unique risk characteristics, or an entity that has a loss history that does not fit the underwriting requirements of the standard lines insurance market).^[27] They are typically referred to as non-admitted or unlicensed insurers.^[27] Non-admitted insurers are generally not licensed or authorized in the states in which they write business, although they must be licensed or authorized in the state in which they are domiciled.^[27] These companies have more flexibility and can react faster than standard line insurance companies because

they are not required to file rates and forms.^[27] However, they still have substantial regulatory requirements placed upon them.

Most states require that excess line insurers submit financial information, articles of incorporation, a list of officers, and other general information.^[27] They also may not write insurance that is typically available in the admitted market, do not participate in state guarantee funds (and therefore policyholders do not have any recourse through these funds if an insurer becomes insolvent and cannot pay claims), may pay higher taxes, only may write coverage for a risk if it has been rejected by three different admitted insurers, and only when the insurance producer placing the business has a surplus lines license.^[27] Generally, when an excess line insurer writes a policy, it must, pursuant to state laws, provide disclosure to the policyholder that the policyholder's policy is being written by an excess line insurer.^[27]

On July 21, 2010, President Barack Obama signed into law the Nonadmitted and Reinsurance Reform Act of 2010 ("NRRA"), which took effect on July 21, 2011 and was part of the Dodd-Frank Wall Street Reform and Consumer Protection Act. The NRRA changed the regulatory paradigm for excess line insurance. Generally, under the NRRA, only the insured's home state may regulate and tax the excess line transaction.^[28]

Insurance companies are generally classified as either mutual or stock companies. Mutual companies are owned by the policyholders, while stockholders (who may or may not own policies) own stock insurance companies.

Demutualization of mutual insurers to form stock companies, as well as the formation of a hybrid known as a mutual holding company, became common in some countries, such as the United States, in the late 20th century. However, not all states permit mutual holding companies.

Other possible forms for an insurance company include reciprocals, in which policyholders reciprocate in sharing risks, and Lloyd's organizations.

Insurance companies are rated by various agencies such as A. M. Best. The ratings include the company's financial strength, which measures its ability to pay claims. It also rates financial instruments issued by the insurance company, such as bonds, notes, and securitization products.

Reinsurance companies are insurance companies that sell policies to other insurance companies, allowing them to reduce their risks and protect themselves from very large losses. The reinsurance market is dominated by a few very large companies, with huge reserves. A reinsurer may also be a direct writer of insurance risks as well.

Captive insurance companies may be defined as limited-purpose insurance companies established with the specific objective of financing risks emanating from their parent group or groups. This definition can sometimes be extended to include some of the risks of the parent company's customers. In short, it is an in-house self-insurance vehicle. Captives may take the form of a "pure" entity (which is a 100% subsidiary of the self-insured parent company); of a "mutual" captive (which insures the collective risks of members of an industry); and of an "association" captive (which self-insures individual risks of the members of a professional, commercial or industrial association). Captives represent commercial, economic and tax advantages to their sponsors because of the reductions in costs they help create and for the ease of insurance risk management and the flexibility for cash flows they generate. Additionally, they may provide coverage of risks which is neither available nor offered in the traditional insurance market at reasonable prices.

The types of risk that a captive can underwrite for their parents include property damage, public and product liability, professional indemnity, employee benefits, employers' liability, motor and medical aid expenses. The captive's exposure to such risks may be limited by the use of reinsurance.

Captives are becoming an increasingly important component of the risk management and risk financing strategy of their parent. This can be understood against the following background:

- heavy and increasing premium costs in almost every line of coverage;
- difficulties in insuring certain types of fortuitous risk;
- differential coverage standards in various parts of the world;
- rating structures which reflect market trends rather than individual loss experience;
- insufficient credit for deductibles and/or loss control efforts.

There are also companies known as 'insurance consultants'. Like a mortgage broker, these companies are paid a fee by the customer to shop around for the best insurance policy amongst many companies. Similar to an insurance consultant, an 'insurance broker' also shops around for the best insurance policy amongst many companies. However, with insurance brokers, the fee is usually paid in the form of commission from the insurer that is selected rather than directly from the client.

Neither insurance consultants nor insurance brokers are insurance companies and no risks are transferred to them in insurance transactions. Third party administrators are companies that perform underwriting and sometimes claims handling services for insurance companies. These companies often have special expertise that the insurance companies do not have.

The financial stability and strength of an insurance company should be a major consideration when buying an insurance contract. An insurance premium paid currently provides coverage for losses that might arise many years in the future. For that reason, the viability of the insurance carrier is very important. In recent years, a number of insurance companies have become insolvent, leaving their policyholders with no coverage (or coverage only from a government-backed insurance pool or other arrangement with less attractive payouts for losses). A number of independent rating agencies provide information and rate the financial viability of insurance companies.

Global insurance premiums grew by 2.7% in inflation-adjusted terms in 2010 to \$4.3 trillion, climbing above pre-crisis levels. The return to growth and record premiums generated during the year followed two years of decline in real terms. Life insurance premiums increased by 3.2% in 2010 and non-life premiums by 2.1%. While industrialised countries saw an increase in premiums of around 1.4%, insurance markets in emerging economies saw rapid expansion with 11% growth in premium income. The global insurance industry was sufficiently capitalised to withstand the financial crisis of 2008 and 2009 and most insurance companies restored their capital to pre-crisis levels by the end of 2010. With the continuation of the gradual recovery of the global economy, it is likely the insurance industry will continue to see growth in premium income both in industrialised countries and emerging markets in 2011.

Advanced economies account for the bulk of global insurance. With premium income of \$1,620bn, Europe was the most important region in 2010, followed by North America \$1,409bn and Asia \$1,161bn. Europe has however seen a decline in premium income during the year in contrast to the growth seen in North America and Asia. The top four countries generated more than a half of premiums. The US and Japan alone accounted for 40% of world insurance, much higher than their 7% share of the global population. Emerging economies accounted for over 85% of the world's population but only around 15% of premiums. Their markets are however growing at a quicker pace.^[29]

Regulatory differences

In the United States, insurance is regulated by the states under the McCarran-Ferguson Act, with "periodic proposals for federal intervention", and a nonprofit coalition of state insurance agencies called the National Association of Insurance Commissioners works to harmonize the country's different laws and regulations.^[30] The National Conference of Insurance Legislators (NCOIL) also works to harmonize the different state laws.^[31]

In the European Union, the Third Non-Life Directive and the Third Life Directive, both passed in 1992 and effective 1994, created a single insurance market in Europe and allowed insurance companies to offer insurance anywhere in the EU (subject to permission from authority in the head office) and allowed insurance consumers to purchase insurance from any insurer in the EU.^[32]

The insurance industry in China was nationalized in 1949 and thereafter offered by only a single state-owned company, the People's Insurance Company of China, which was eventually suspended as demand declined in a communist environment. In 1978, market reforms led to an increase in the market and by 1995 a comprehensive Insurance Law of the People's Republic of China^[33] was passed, followed in 1998 by the formation of China Insurance Regulatory Commission (CIRC), which has broad regulatory authority over the insurance market of China.^[34]

In India, IRDA is insurance regulatory authority. As per the section 4 of IRDA Act' 1999, Insurance Regulatory and Development Authority (IRDA), which was constituted by an act of parliament. National Insurance Academy, Pune is apex insurance capacity builder institute promoted with support from Ministry of Finance and by LIC, Life & General Insurance compnies.

Controversies

Insurance insulates too much

An insurance company may inadvertently find that its insureds may not be as risk-averse as they might otherwise be (since, by definition, the insured has transferred the risk to the insurer), a concept known as moral hazard. To reduce their own financial exposure, insurance companies have contractual clauses that mitigate their obligation to provide coverage if the insured engages in behavior that grossly magnifies their risk of loss or liability.^[citation needed]

For example, life insurance companies may require higher premiums or deny coverage altogether to people who work in hazardous occupations or engage in dangerous sports. Liability insurance providers do not provide coverage for liability arising from intentional torts committed by or at the direction of the insured. Even if a provider were so irrational as to want to provide such coverage, it is against the public policy of most countries to allow such insurance to exist, and thus it is usually illegal.^[citation needed]

Complexity of insurance policy contracts

Insurance policies can be complex and some policyholders may not understand all the fees and coverages included in a policy. As a result, people may buy policies on unfavorable terms. In response to these issues, many countries have enacted detailed statutory and regulatory regimes governing every aspect of the insurance business, including minimum standards for policies and the ways in which they may be advertised and sold.

For example, most insurance policies in the English language today have been carefully drafted in plain English; the industry learned the hard way that many courts will not enforce policies against insureds when the judges themselves cannot understand what the policies are saying. Typically, courts construe ambiguities in insurance policies against the insurance company and in favor of coverage under the policy.

Many institutional insurance purchasers buy insurance through an insurance broker. While on the surface it appears the broker represents the buyer (not the insurance company), and typically counsels the buyer on appropriate coverage and policy limitations, it should be noted that in the vast majority of cases a broker's compensation comes in the form of a commission as a percentage of the insurance premium, creating a conflict of interest in that the broker's financial interest is tilted towards encouraging an insured to purchase more insurance than might be necessary at a higher price. A broker generally holds contracts with many insurers, thereby allowing the broker to "shop" the market for the best rates and coverage possible.

Insurance may also be purchased through an agent. Unlike a broker, who represents the policyholder, an agent represents the insurance company from whom the policyholder buys. Just as there is a potential conflict of interest with a broker, an agent has a different type of conflict. Because agents work directly for the insurance company, if there is a claim the agent may advise the client to the benefit of the insurance company. It should also be noted that agents generally can not offer as broad a range of selection compared to an insurance broker.

An independent insurance consultant advises insureds on a fee-for-service retainer, similar to an attorney, and thus offers completely independent advice, free of the financial conflict of interest of brokers and/or agents. However, such a consultant must still work through brokers and/or agents in order to secure coverage for their clients.

Limited consumer benefits

In United States, economists and consumer advocates generally consider insurance to be worthwhile for low-probability, catastrophic losses, but not for high-probability, small losses. Because of this, consumers are advised to select high deductibles and to not insure losses which would not cause a disruption in their life. However, consumers have shown a tendency to prefer low deductibles and to prefer to insure relatively high-probability, small losses over low-probability, perhaps due to not understanding or ignoring the low-probability risk.^[35] This is associated with reduced purchasing of insurance against low-probability losses, and may result in increased inefficiencies from moral hazard.^[35]

Redlining

Redlining is the practice of denying insurance coverage in specific geographic areas, supposedly because of a high likelihood of loss, while the alleged motivation is unlawful discrimination. Racial profiling or redlining has a long history in the property insurance industry in the United States. From a review of industry underwriting and marketing materials, court documents, and research by government agencies, industry and community groups, and academics, it is clear that race has long affected and continues to affect the policies and practices of the insurance industry.^[36]

In July, 2007, The Federal Trade Commission (FTC) released a report presenting the results of a study concerning credit-based insurance scores in automobile insurance. The study found that these scores are effective predictors of risk. It also showed that African-Americans and Hispanics are substantially

overrepresented in the lowest credit scores, and substantially underrepresented in the highest, while Caucasians and Asians are more evenly spread across the scores. The credit scores were also found to predict risk within each of the ethnic groups, leading the FTC to conclude that the scoring models are not solely proxies for redlining. The FTC indicated little data was available to evaluate benefit of insurance scores to consumers.^[37] The report was disputed by representatives of the Consumer Federation of America, the National Fair Housing Alliance, the National Consumer Law Center, and the Center for Economic Justice, for relying on data provided by the insurance industry.^[38]

All states have provisions in their rate regulation laws or in their fair trade practice acts that prohibit unfair discrimination, often called redlining, in setting rates and making insurance available.^[39]

In determining premiums and premium rate structures, insurers consider quantifiable factors, including location, credit scores, gender, occupation, marital status, and education level. However, the use of such factors is often considered to be unfair or unlawfully discriminatory, and the reaction against this practice has in some instances led to political disputes about the ways in which insurers determine premiums and regulatory intervention to limit the factors used.

An insurance underwriter's job is to evaluate a given risk as to the likelihood that a loss will occur. Any factor that causes a greater likelihood of loss should theoretically be charged a higher rate. This basic principle of insurance must be followed if insurance companies are to remain solvent.^[citation needed] Thus, "discrimination" against (i.e., negative differential treatment of) potential insureds in the risk evaluation and premium-setting process is a necessary by-product of the fundamentals of insurance underwriting. For instance, insurers charge older people significantly higher premiums than they charge younger people for term life insurance. Older people are thus treated differently than younger people (i.e., a distinction is made, discrimination occurs). The rationale for the differential treatment goes to the heart of the risk a life insurer takes: Old people are likely to die sooner than young people, so the risk of loss (the insured's death) is greater in any given period of time and therefore the risk premium must be higher to cover the greater risk. However, treating insureds differently when there is no actuarially sound reason for doing so is unlawful discrimination.

What is often missing from the debate is that prohibiting the use of legitimate, actuarially sound factors means that an insufficient amount is being charged for a given risk, and there is thus a deficit in the system.^[citation needed] The failure to address the deficit may mean insolvency and hardship for all of a company's insureds.^[citation needed] The options for addressing the deficit seem to be the following: Charge the deficit to the other policyholders or charge it to the government (i.e., externalize outside of the company to society at large).^[citation needed]

Insurance patents

New assurance products can now be protected from copying with a business method patent in the United States.

A recent example of a new insurance product that is patented is Usage Based auto insurance. Early versions were independently invented and patented by a major US auto insurance company, Progressive Auto Insurance (U.S. Patent 5,797,134) and a Spanish independent inventor, Salvador Minguijon Perez (EP 0700009).

Many independent inventors are in favor of patenting new insurance products since it gives them protection from big companies when they bring their new insurance products to market. Independent inventors account for 70% of the new US patent applications in this area.

Many insurance executives are opposed to patenting insurance products because it creates a new risk for them. The Hartford insurance company, for example, recently had to pay \$80 million to an independent inventor, Bancorp Services, in order to settle a patent infringement and theft of trade secret lawsuit for a type of corporate owned life insurance product invented and patented by Bancorp.

There are currently about 150 new patent applications on insurance inventions filed per year in the United States. The rate at which patents have issued has steadily risen from 15 in 2002 to 44 in 2006.^[40]

Inventors can now have their insurance US patent applications reviewed by the public in the Peer to Patent program.^[41] The first insurance patent application to be posted was US2009005522 “Risk assessment company”. It was posted on March 6, 2009. This patent application describes a method for increasing the ease of changing insurance companies.^[42]

The insurance industry and rent-seeking

Certain insurance products and practices have been described as rent-seeking by critics.^[citation needed] That is, some insurance products or practices are useful primarily because of legal benefits, such as reducing taxes, as opposed to providing protection against risks of adverse events. Under United States tax law, for example, most owners of variable annuities and variable life insurance can invest their premium payments in the stock market and defer or eliminate paying any taxes on their investments until withdrawals are made. Sometimes this tax deferral is the only reason people use these products.^[citation needed] Another example is the legal infrastructure which allows life insurance to be held in an irrevocable trust which is used to pay an estate tax while the proceeds themselves are immune from the estate tax.

Religious concerns

Muslim scholars have varying opinions about insurance. Insurance policies that earn interest are generally considered to be a form of *riba*^[43] (usury) and some consider even policies that do not earn interest to be a form of *gharar* (speculation). Some argue that *gharar* is not present due to the actuarial science behind the underwriting.

Jewish rabbinical scholars also have expressed reservations regarding insurance as an avoidance of God's will but most find it acceptable in moderation.

Some Christians believe insurance represents a lack of faith^[46] and there is a long history of resistance to commercial insurance in Anabaptist communities (Mennonites, Amish, Hutterites, Brethren in Christ) but many participate in community-based self-insurance programs that spread risk within their communities

Debt consolidation entails taking out one loan to pay off many others. This is often done to secure a lower interest rate, secure a fixed interest rate or for the convenience of servicing only one loan.

Debt consolidation can simply be from a number of unsecured loans into another unsecured loan, but more often it involves a secured loan against an asset that serves as collateral, most commonly a house. In this case, a mortgage is secured against the house. The collateralization of the loan allows a lower interest rate than without it, because by collateralizing, the asset owner agrees to allow the forced sale (foreclosure) of the asset to pay back the loan. The risk to the lender is reduced so the interest rate offered is lower.

Sometimes, debt consolidation companies can discount the amount of the loan. When the debtor is in danger of bankruptcy, the debt consolidator will buy the loan at a discount. A prudent debtor can shop around for consolidators who will pass along some of the savings. Consolidation can affect the ability of the debtor to discharge debts in bankruptcy, so the decision to consolidate must be weighed carefully.

Debt consolidation

Debt consolidation is often advisable in theory when someone is paying credit card debt.^[2] Credit cards can carry a much larger interest rate than even an unsecured loan from a bank. Debtors with property such as a home or car may get a lower rate through a secured loan using their property as collateral.^[2] Then the total interest and the total cash flow paid towards the debt is lower allowing the debt to be paid off sooner, incurring less interest.

PENSIONS

A **pension** is a fixed sum paid regularly to a person, typically, given following a retirement from service.^[1] Pensions should not be confused with severance pay; the former is paid in regular installments, while the latter is paid in one lump sum.

The terms retirement plan or superannuation refer to a pension granted upon retirement.^[2] Retirement plans may be set up by employers, insurance companies, the government or other institutions such as employer associations or trade unions. Called *retirement plans* in the United States, they are commonly known as *pension schemes* in the United Kingdom and Ireland and *superannuation plans* or *super*^[3] in Australia and New Zealand. Retirement pensions are typically in the form of a guaranteed life annuity, thus insuring against the risk of longevity.

A pension created by an employer for the benefit of an employee is commonly referred to as an occupational or employer pension. Labor unions, the government, or other organizations may also fund pensions. Occupational pensions are a form of deferred compensation, usually advantageous to employee and employer for tax reasons. Many pensions also contain an additional insurance aspect, since they often will pay benefits to survivors or disabled beneficiaries. Other vehicles (certain lottery payouts, for example, or an annuity) may provide a similar stream of payments.

The common use of the term *pension* is to describe the payments a person receives upon retirement, usually under pre-determined legal and/or contractual terms. A recipient of a retirement pension is known as a *pensioner* or *retiree*.

Types of pensions

Employment-based pensions (retirement plans)

A retirement plan is an arrangement to provide people with an income during retirement when they are no longer earning a steady income from employment. Often retirement plans require both the employer and employee to contribute money to a fund during their employment in order to receive defined benefits upon retirement. It is a tax deferred savings vehicle that allows for the tax-free accumulation of a fund for later use as a retirement income. Funding can be provided in other ways,

such as from labor unions, government agencies, or self-funded schemes. Pension plans are therefore a form of "deferred compensation". A SSAS is a type of employment-based Pension in the UK.

Social and state pensions

Many countries have created funds for their citizens and residents to provide income when they retire (or in some cases become disabled). Typically this requires payments throughout the citizen's working life in order to qualify for benefits later on. A basic state pension is a "contribution based" benefit, and depends on an individual's contribution history. For examples, see National Insurance in the UK, or Social Security in the USA. Many countries have also put in place a "social pension". These are regular, tax-funded non-contributory cash transfers paid to older people. Over 80 countries have social pensions.[4] Examples are the Old Age Grant in South Africa and the universal Superannuation scheme in New Zealand^[4].

Disability pensions

Some pension plans will provide for members in the event they suffer a disability. This may take the form of early entry into a retirement plan for a disabled member below the normal retirement age.

Benefits

Retirement plans may be classified as *defined benefit* or *defined contribution* according to how the benefits are determined.^[5] A defined benefit plan guarantees a certain payout at retirement, according to a fixed formula which usually depends on the member's salary and the number of years' membership in the plan. A defined contribution plan will provide a payout at retirement that is dependent upon the amount of money contributed and the performance of the investment vehicles utilized.

Some types of retirement plans, such as *cash balance* plans, combine features of both defined benefit and defined contribution plans. They are often referred to as *hybrid* plans. Such plan designs have become increasingly popular in the US since the 1990s. Examples include Cash Balance and Pension Equity plans.

Defined benefit plans

Main article: Defined benefit pension plan

A traditional defined benefit (DB) plan is a plan in which the benefit on retirement is determined by a set formula, rather than depending on investment returns. In the US, 26 U.S.C. § 414(j) specifies a defined benefit plan to be any pension plan that is not a defined contribution plan (see below) where a defined contribution plan is any plan with individual accounts. A traditional pension plan that *defines a benefit* for an employee upon that employee's retirement is a defined benefit plan.

Traditionally, retirement plans have been administered by institutions which exist specifically for that purpose, by large businesses, or, for government workers, by the government itself. A traditional form of defined benefit plan is the *final salary* plan, under which the pension paid is equal to the number of years worked, multiplied by the member's salary at retirement, multiplied by a factor

known as the *accrual rate*. The final accrued amount is available as a monthly pension or a lump sum, but usually monthly.

The benefit in a defined benefit pension plan is determined by a formula that can incorporate the employee's pay, years of employment, age at retirement, and other factors. A simple example is a Dollars Times Service plan design that provides a certain amount per month based on the time an employee works for a company. For example, a plan offering \$100 a month per year of service would provide \$3,000 per month to a retiree with 30 years of service. While this type of plan is popular among unionized workers, Final Average Pay (FAP) remains the most common type of defined benefit plan offered in the United States. In FAP plans, the average salary over the final years of an employee's career determines the benefit amount.

Averaging salary over a number of years means that the calculation is averaging different dollars. For example, if salary is averaged over five years, and retirement is in 2009, then salary in 2004 dollars is averaged with salary in 2005 dollars, etc., with 2004 dollars being worth more than the dollars of succeeding years. The pension is then paid in first year of retirement dollars, in this example 2009 dollars, with the lowest value of any dollars in the calculation. Thus inflation in the salary averaging years has a considerable impact on purchasing power and cost, both being reduced equally by inflation

This effect of inflation can be eliminated by converting salaries in the averaging years to first year of retirement dollars, and then averaging.

In the United Kingdom, benefits are typically indexed for inflation (known as Retail Prices Index (RPI)) as required by law for registered pension plans.^[6] Inflation during an employee's retirement affects the purchasing power of the pension; the higher the inflation rate, the lower the purchasing power of a fixed annual pension. This effect can be mitigated by providing annual increases to the pension at the rate of inflation (usually capped, for instance at 5% in any given year). This method is advantageous for the employee since it stabilizes the purchasing power of pensions to some extent.

If the pension plan allows for early retirement, payments are often reduced to recognize that the retirees will receive the payouts for longer periods of time. In the United States, under the Employee Retirement Income Security Act of 1974, any reduction factor less than or equal to the actuarial early retirement reduction factor is acceptable.^[7]

Many DB plans include early retirement provisions to encourage employees to retire early, before the attainment of normal retirement age (usually age 65). Companies would rather hire younger employees at lower wages. Some of those provisions come in the form of additional *temporary* or *supplemental benefits*, which are payable to a certain age, usually before attaining normal retirement age.^[8]

Funding

Defined benefit plans may be either *funded* or *unfunded*.

In an *unfunded* defined benefit pension, no assets are set aside and the benefits are paid for by the employer or other pension sponsor as and when they are paid. Pension arrangements provided by the state in most countries in the world are unfunded, with benefits paid directly from current

workers' contributions and taxes. This method of financing is known as *Pay-as-you-go* (PAYGO or PAYG).^[9] The social security systems of many European countries are unfunded^[citation needed], having benefits paid directly out of current taxes and social security contributions, although several countries have hybrid systems which are partially funded. Spain set up the Social Security Reserve Fund and France set up the Pensions Reserve Fund; in Canada the wage-based retirement plan (CPP) is funded, with assets managed by the CPP Investment Board while the U.S. Social Security system is funded by investment in special U.S. Treasury Bonds.

In a *funded* plan, contributions from the employer, and sometimes also from plan members, are invested in a fund towards meeting the benefits. The future returns on the investments, and the future benefits to be paid, are not known in advance, so there is no guarantee that a given level of contributions will be enough to meet the benefits. Typically, the contributions to be paid are regularly reviewed in a valuation of the plan's assets and liabilities, carried out by an actuary to ensure that the pension fund will meet future payment obligations. This means that in a defined benefit pension, investment risk and investment rewards are typically assumed by the sponsor/employer and not by the individual. If a plan is not well-funded, the plan sponsor may not have the financial resources to continue funding the plan. In many countries, such as the USA, the UK and Australia, most private defined benefit plans are funded^[citation needed], because governments there provide tax incentives to funded plans (in Australia they are mandatory). In the United States, non-church-based private employers must pay an insurance-type premium to the Pension Benefit Guaranty Corporation, a government agency whose role is to encourage the continuation and maintenance of voluntary private pension plans and provide timely and uninterrupted payment of pension benefits.

Criticisms

Traditional defined benefit plan designs (because of their typically flat accrual rate and the decreasing time for interest discounting as people get closer to retirement age) tend to exhibit a J-shaped accrual pattern of benefits, where the present value of benefits grows quite slowly early in an employee's career and accelerates significantly in mid-career: in other words it costs more to fund the pension for older employees than for younger ones (an "age bias"). Defined benefit pensions tend to be less portable than defined contribution plans, even if the plan allows a lump sum cash benefit at termination. Most plans, however, pay their benefits as an annuity, so retirees do not bear the risk of low investment returns on contributions or of outliving their retirement income. The open-ended nature of these risks to the employer is the reason given by many employers for switching from defined benefit to defined contribution plans over recent years. The risks to the employer can sometimes be mitigated by discretionary elements in the benefit structure, for instance in the rate of increase granted on accrued pensions, both before and after retirement.

The age bias, reduced portability and open ended risk make defined benefit plans better suited to large employers with less mobile workforces, such as the public sector (which has open-ended support from taxpayers). This coupled with a lack of foresight on the employers part means a large proportion of the workforce are kept in the dark over future investment schemes.

Defined benefit plans are sometimes criticized as being paternalistic as they enable employers or plan trustees to make decisions about the type of benefits and family structures and lifestyles of their employees. However they are typically more valuable than defined contribution plans in most

circumstances and for most employees (mainly because the employer tends to pay higher contributions than under defined contribution plans), so such criticism is rarely harsh.

The "cost" of a defined benefit plan is not easily calculated, and requires an actuary or actuarial software. However, even with the best of tools, the cost of a defined benefit plan will always be an estimate based on economic and financial assumptions. These assumptions include the average retirement age and lifespan of the employees, the returns to be earned by the pension plan's investments and any additional taxes or levies, such as those required by the Pension Benefit Guaranty Corporation in the U.S. So, for this arrangement, the benefit is relatively secure but the contribution is uncertain even when estimated by a professional.

Examples

Many countries offer state-sponsored retirement benefits, beyond those provided by employers, which are funded by payroll or other taxes. The United States Social Security system is similar to a defined benefit pension arrangement, albeit one that is constructed differently than a pension offered by a private employer.

Individuals that have worked in the UK and have paid certain levels of national insurance deductions can expect an income from the state pension scheme after their normal retirement. The state pension is currently divided into two parts: the basic state pension, State Second [tier] Pension scheme called S2P. Individuals will qualify for the basic state pension if they have completed sufficient years contribution to their national insurance record. The S2P pension scheme is earnings related and depends on earnings in each year as to how much an individual can expect to receive. It is possible for an individual to forgo the S2P payment from the state, in lieu of a payment made to an appropriate pension scheme of their choice, during their working life. For more details see UK pension provision.

Defined contribution plans

In a defined contribution plan, contributions are paid into an individual account for each member. The contributions are invested, for example in the stock market, and the returns on the investment (which may be positive or negative) are credited to the individual's account. On retirement, the member's account is used to provide retirement benefits, sometimes through the purchase of an annuity which then provides a regular income. Defined contribution plans have become widespread all over the world in recent years, and are now the dominant form of plan in the private sector in many countries. For example, the number of defined benefit plans in the US has been steadily declining, as more and more employers see pension contributions as a large expense avoidable by disbanding the defined benefit plan and instead offering a defined contribution plan.

Money contributed can either be from employee salary deferral or from employer contributions. The portability of defined contribution pensions is legally no different from the portability of defined benefit plans. However, because of the cost of administration and ease of determining the plan sponsor's liability for defined contribution plans (you do not need to pay an actuary to calculate the lump sum equivalent that you do for defined benefit plans) in practice, defined contribution plans have become generally portable.

In a defined contribution plan, investment risk and investment rewards are assumed by each individual/employee/retiree and not by the sponsor/employer, and these risks may be substantial. In addition, participants do not necessarily purchase annuities with their savings upon retirement, and bear the risk of outliving their assets. (In the United Kingdom, for instance, it is a legal requirement to use the bulk of the fund to purchase an annuity.)

The "cost" of a defined contribution plan is readily calculated, but the benefit from a defined contribution plan depends upon the account balance at the time an employee is looking to use the assets. So, for this arrangement, the *contribution is known* but the *benefit is unknown* (until calculated).

Despite the fact that the participant in a defined contribution plan typically has control over investment decisions, the plan sponsor retains a significant degree of fiduciary responsibility over investment of plan assets, including the selection of investment options and administrative providers.

Examples

In the United States, the legal definition of a defined contribution plan is a plan providing for an individual account for each participant, and for benefits based solely on the amount contributed to the account, plus or minus income, gains, expenses and losses allocated to the account (see 26 U.S.C. § 414(i)). Examples of defined contribution plans in the United States include Individual Retirement Accounts (IRAs) and 401(k) plans. In such plans, the employee is responsible, to one degree or another, for selecting the types of investments toward which the funds in the retirement plan are allocated. This may range from choosing one of a small number of pre-determined mutual funds to selecting individual stocks or other securities. Most self-directed retirement plans are characterized by certain tax advantages, and some provide for a portion of the employee's contributions to be matched by the employer. In exchange, the funds in such plans may not be withdrawn by the investor prior to reaching a certain age—typically the year the employee reaches 59.5 years old-- (with a small number of exceptions) without incurring a substantial penalty.

In the US, defined contribution plans are subject to IRS limits on how much can be contributed, known as the section 415 limit. In 2009, the total deferral amount, including employee contribution plus employer contribution, was limited to \$49,000 or 100% of compensation, whichever is less. The employee-only limit in 2009 is \$16,500 with a \$5,500 catch-up. These numbers may increase each year and are indexed to compensate for the effects of inflation.

Examples of defined contribution pension schemes in other countries are, the UK's personal pensions and proposed National Employment Savings Trust (NEST), Germany's Riester plans, Australia's Superannuation system and New Zealand's KiwiSaver scheme. Individual pension savings plans also exist in Austria, Czech Republic, Denmark, Greece, Finland, Ireland, Netherlands, Slovenia and Spain

Hybrid and cash balance plans

Hybrid plan designs combine the features of defined benefit and defined contribution plan designs.

A cash balance plan is a defined benefit plan made by the employer, with the help of consulting actuaries (like Kwasha Lipton, who it is said created the cash balance plan) to appear as if they were

defined contribution plans. They have *notional balances* in hypothetical accounts where, typically, each year the plan administrator will contribute an amount equal to a certain percentage of each participant's salary; a second contribution, called *interest credit*, is made as well. These are not actual contributions and further discussion is beyond the scope of this entry suffice it to say that there is currently much controversy. In general, they are usually treated as defined benefit plans for tax, accounting and regulatory purposes. As with defined benefit plans, investment risk in hybrid designs is largely borne by the plan sponsor. As with defined contribution designs, plan benefits are expressed in the terms of a notional *account balance*, and are usually paid as cash balances upon termination of employment. These features make them more portable than traditional defined benefit plans and perhaps more attractive to a more highly mobile workforce.

Target benefit plans are defined contribution plans made to match (or resemble) defined benefit plans.

Contrasting types of retirement plans

Advocates of defined contribution plans point out that each employee has the ability to tailor the investment portfolio to his or her individual needs and financial situation, including the choice of how much to contribute, if anything at all. However, others state that these apparent advantages could also hinder some workers who might not possess the financial savvy to choose the correct investment vehicles or have the discipline to voluntarily contribute money to retirement accounts. This debate parallels the discussion currently going on in the U.S., where many Republican leaders favor transforming the Social Security system, at least in part, to a self-directed investment plan.

Financing

There are various ways in which a pension may be financed.

Defined contribution pensions, by definition, are funded, as the "guarantee" made to employees is that specified (defined) contributions will be made during an individual's working life.

There are many ways to finance your pension and save for retirement. Pension plans can be set up by your employer, matching your contribution each month, by the state or personally through a pension scheme with a financial institution, such as a bank or brokerage firm. Pension plans often come with a tax break depending on the country and plan type.

For example Canadian's have the option to open a Registered Retirement Savings Plan (RRSP), as well as a range of employee and state pension programs^[12]. This plan allows contributions to this account to be marked as un-taxable income and remain un-taxed until withdrawal. Most country's governments will provide advice on pension schemes.

Wealth management is an investment advisory discipline that incorporates financial planning, investment portfolio management and a number of aggregated financial services. High Net worth Individuals (HNWIs), small business owners and families who desire the assistance of a credentialed financial advisory specialist call upon wealth managers to coordinate retail banking, estate planning, legal resources, tax professionals and investment management. Wealth managers can be an independent Certified Financial Planner, MBAs, Chartered Strategic Wealth Professional,^[1] CFA

Charterholders or any credentialed professional money manager who works to enhance the income, growth and tax favored treatment of long-term investors. Wealth management is often referred to as a high-level form of private banking for the especially affluent. One must already have accumulated a significant amount of wealth for wealth management strategies to be effective.

Financial risk management is the practice of creating economic value in a firm by using financial instruments to manage exposure to risk, particularly credit risk and market risk. Other types include Foreign exchange, Shape, Volatility, Sector, Liquidity, Inflation risks, etc. Similar to general risk management, financial risk management requires identifying its sources, measuring it, and plans to address them.

Financial risk management can be qualitative and quantitative. As a specialization of risk management, financial risk management focuses on when and how to hedge using financial instruments to manage costly exposures to risk.

In the banking sector worldwide, the Basel Accords are generally adopted by internationally active banks for tracking, reporting and exposing operational, credit and market risks.

When to use financial risk management

Finance theory (i.e., financial economics) prescribes that a firm should take on a project when it increases shareholder value. Finance theory also shows that firm managers cannot create value for shareholders, also called its investors, by taking on projects that shareholders could do for themselves at the same cost.

When applied to financial risk management, this implies that firm managers should not hedge risks that investors can hedge for themselves at the same cost. This notion was captured by the hedging irrelevance proposition: *In a perfect market, the firm cannot create value by hedging a risk when the price of bearing that risk within the firm is the same as the price of bearing it outside of the firm.* In practice, financial markets are not likely to be perfect markets.

This suggests that firm managers likely have many opportunities to create value for shareholders using financial risk management. The trick is to determine which risks are cheaper for the firm to manage than the shareholders. A general rule of thumb, however, is that market risks that result in unique risks for the firm are the best candidates for financial risk management.

The concepts of financial risk management change dramatically in the international realm. Multinational Corporations are faced with many different obstacles in overcoming these challenges. There has been some research on the risks firms must consider when operating in many countries, such as the three kinds of foreign exchange exposure for various future time horizons: transactions exposure,^[1] accounting exposure,^[2] and economic exposure.^[3]

Megaprojects (sometimes also called "major programs") have been shown to be particularly risky in terms of finance. Financial risk management is therefore particularly pertinent for megaprojects and special methods have been developed for such risk management.^{[4][5]}

A **financial market** is a market in which people and entities can trade financial securities, commodities, and other fungible items of value at low transaction costs and at prices that reflect

supply and demand. Securities include stocks and bonds, and commodities include precious metals or agricultural goods.

There are both general markets (where many commodities are traded) and specialized markets (where only one commodity is traded). Markets work by placing many interested buyers and sellers, including households, firms, and government agencies, in one "place", thus making it easier for them to find each other. An economy which relies primarily on interactions between buyers and sellers to allocate resources is known as a market economy in contrast either to a command economy or to a non-market economy such as a gift economy.

In finance, financial markets facilitate:

- The raising of capital (in the capital markets)
- The transfer of risk (in the derivatives markets)
- Price discovery
- Global transactions with integration of financial markets
- The transfer of liquidity (in the money markets)
- International trade (in the currency markets)

– and are used to match those who want capital to those who have it.

Typically a borrower issues a receipt to the lender promising to pay back the capital. These receipts are securities which may be freely bought or sold. In return for lending money to the borrower, the lender will expect some compensation in the form of interest or dividends. This return on investment is a necessary part of markets to ensure that funds are supplied to them.

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