UMBB
Faculty of Economics, Commercial and Management sciences
Management Sciences department

Finance

01-Introduction to finance:

Finance is the science of funds management. The general areas of finance are **business finance**, **personal finance**, and **public finance**. Finance includes saving money and often includes lending money. The field of finance deals with the concepts of time, money, risk and how they are interrelated. It also deals with how money is spent and budgeted.

One facet of finance is through individuals and business organizations, which deposit money in a bank. The bank then lends the money out to other individuals or corporations for consumption or investment and charges interest on the loans.

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.

02- Branches of finance:

02-01-Personal finance: 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.

02-02-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 (Small and Medium Enterprises). It generally involves balancing risk and profitability, while attempting to maximize an entity's wealth and the value of its stock.

02-03-Finance of public entities: 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

03- Some fields of finance:

03-01- 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.

03-02- Financial mathematics: Financial mathematics is a main branch of applied mathematics concerned with the financial markets. Financial mathematics is the study of financial data with the tools of mathematics, mainly statistics. Such data can be movements of securities—stocks and bonds etc.—and their relations. Another large subfield is insurance mathematics. This is also known as quantitative finance, practitioners as Quantitative analysts.

03-03-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.

03-04-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.

03-05-Intangible Asset Finance: Intangible asset finance is the area of finance that deals with intangible assets such as patents, trademarks, goodwill, reputation, etc.