Calicut University

COURSE
BBA

SEMESTER
2

SUBJECT
FINANCIAL MANAGEMENT

MODULE
1

DegreeLive
degreelive.in

Time Value of Money & Sources of Financing

1.Meaning of Time value of money – Future value of single cash flow & annuity, present value of single cash flow

Meaning of Time Value of Money

The time value of money means that money available today is more valuable than the same amount received in the future.

This is because money received today can be invested and earn returns over time. Inflation also reduces the purchasing power of money in the future.

Example:

₹10,000 today is worth more than ₹10,000 received after two years because the current amount can be invested to earn interest.

Time value of money is widely used in business decisions, investment analysis, loans, savings, and project evaluation.

Future Value of Single Cash Flow

Future value refers to the value of a present amount after a certain period when interest is added.

If money is invested today, it grows over time due to interest.

The formula for future value is:

$$FV = PV(1 + r)^n$$

Where:

FV = Future Value

PV = Present Value

r = Rate of interest

n = Number of periods

Explanation

Suppose ₹5,000 is invested at 10% annual interest for 2 years.

After one year:

₹5,000 becomes ₹5,500.

After the second year, interest is calculated on ₹5,500, not only on the original amount.

This process is called compounding.

Problem

Find the future value of ₹8,000 invested for 3 years at 5% annual interest.

Solution:

$FV = 8000(1 + 0.05)^3$

FV=8000(1.1576)

FV≈9261

Future Value ≈ **₹9,261**

Future Value of Annuity

An annuity is a series of equal payments made at regular intervals.

Examples include insurance premiums, monthly savings, and pension payments.

Future value of annuity shows the total accumulated amount after making regular payments for a period of time.

The formula is: $$FVA = A\left(\frac{(1+r)^n - 1}{r}\right)$$

Where:

FVA = Future Value of Annuity

A = Annual payment

r = Interest rate

n = Number of periods

Explanation

When regular amounts are invested repeatedly, each payment earns interest for different lengths of time.

Earlier payments earn more interest because they remain invested longer.

Present Value of Single Cash Flow

Present value means the current worth of a future amount of money.

It helps determine how much a future amount is worth today after considering interest.

The formula is:

$$PV = \frac{FV}{(1+r)^n}$$

Explanation

Businesses and investors use present value to compare future cash flows with current investments.
A future amount is discounted back to the present using a discount rate.

Problem

Find the present value of ₹12,000 receivable after 2 years at 8% interest.

Solution:

$$PV = \frac{12000}{(1+0.08)^2} PV = (1+0.08)212000$$

$$PV = \frac{12000}{1.1664} PV = 1.166412000$$

$$PV \approx 10288 PV \approx 10288$$

Present Value ≈ ₹10,288

2. Annuity & perpetuity. Simple interest & Compound interest, Capital Recovery & Loan Amortization.

Annuity

An annuity is a fixed payment received or paid regularly over a period of time.
Examples include monthly salaries, pension payments, and EMI payments.
Annuities may be annual, monthly, or quarterly depending on the agreement.

Perpetuity

A perpetuity is a series of equal payments that continues forever.
Unlike annuity, perpetuity has no ending period.

Example:

Certain government securities and preference shares may provide perpetual income.
The present value of perpetuity is calculated as:

$$PV = \frac{A}{r} PV = rA$$

Where:

A = Annual payment

r = Interest rate

Simple Interest

Simple interest is calculated only on the original principal amount.

The interest remains constant throughout the period.

The formula is:

$$SI = \frac{PRT}{100} SI = 100PRT$$

Where:

P = Principal

R = Rate of interest

T = Time period

Problem

Find the simple interest on ₹15,000 at 6% for 3 years.

Solution:

$$SI = \frac{15000 \times 6 \times 3}{100} SI = 10015000 \times 6 \times 3$$

$$SI = 2700 SI = 2700$$

Simple Interest = **₹2,700**

Compound Interest

Compound interest is calculated on both the principal and accumulated interest.

Interest keeps getting added to the principal amount.

This results in faster growth compared to simple interest.

The formula is:

$$CI = P(1 + r)^n - P$$

Problem

Find compound interest on ₹10,000 at 10% for 2 years.

Solution:

$$CI = 10000(1 + 0.10)^2 - 10000$$
$$CI = 12100 - 10000$$

Compound Interest = **₹2,100**

Capital Recovery

Capital recovery refers to recovering the original investment amount over time through regular cash inflows.

Businesses use this concept while evaluating long term investments and projects.

The recovery amount generally includes both principal and interest.

Loan Amortization

Loan amortization means repaying a loan through regular instalments over a specified period.

Each instalment includes:

Interest component

Principal repayment component

At the beginning, a larger portion goes towards interest. Gradually, more of the payment goes towards principal repayment.

Examples include housing loans, vehicle loans, and education loans.

3.Sources of Financing, Shares, Debentures, Term loans, Lease financing, Hybrid financing, Venture Capital

Sources of Financing

Businesses require finance for starting operations, expansion, purchasing assets, and managing working capital.

Finance may be obtained from internal or external sources.

Internal Sources

Internal finance comes from within the business.

Examples include retained earnings and reserves.

External Sources

External finance comes from outside sources such as banks, investors, and financial institutions.

Shares

Shares represent ownership in a company.

People who buy shares become shareholders and receive a part of the company's profits.

Equity Shares

Equity shareholders are the real owners of the company.

They receive dividends and have voting rights.

Dividends are not fixed and depend on company profits.

Preference Shares

Preference shareholders receive fixed dividends before equity shareholders.

They generally have limited voting rights.

Debentures

Debentures are long term borrowing instruments issued by companies.

Debenture holders are creditors, not owners.

Companies pay fixed interest on debentures regardless of profit levels.

Debentures are considered less risky than equity shares because interest payments are fixed.

Term Loans

Term loans are loans borrowed from banks or financial institutions for a fixed period.

They are usually used for purchasing machinery, equipment, or expansion projects.

The borrower repays the amount in instalments along with interest.

Term loans may be short term, medium term, or long term.

Lease Financing

Lease financing allows a business to use an asset without purchasing it immediately.
The owner of the asset is called the lessor, while the user is called the lessee.
The lessee pays periodic lease rentals.
Examples include leasing vehicles, machinery, or office equipment.

Advantages of Lease Financing

Lower initial investment
Flexibility
Easy access to modern equipment

Hybrid Financing

Hybrid financing combines features of both ownership capital and borrowed capital.
It provides flexibility to companies in raising funds.
Convertible debentures are common examples of hybrid financing.

Venture Capital

Venture capital refers to investment provided to new or high growth businesses with strong future potential.
Venture capital firms invest mainly in startups and innovative businesses.
These investments involve high risk but also the possibility of high returns.
Venture capitalists may also provide guidance, management support, and business expertise.

4.Angel Investing and Private Equity, Warrants and Convertibles

Angel Investing

Angel investors are wealthy individuals who invest their personal money in startup businesses.
They usually invest during the early stages of a business when risk is very high.
Apart from money, angel investors may provide business advice, industry contacts, and mentorship.

Features of Angel Investing

Investment in early stage businesses
High risk and high return potential
Personal involvement of investors
Support for innovation and entrepreneurship

Private Equity

Private equity refers to investment in private companies that are not publicly traded on stock exchanges.

Private equity firms invest large amounts to improve business performance and increase company value.

They may later sell their investment for profit.

Private equity investments are generally long term in nature.

Difference between Venture Capital and Private Equity

Venture capital mainly supports startups and new businesses.

Private equity generally invests in established businesses that require expansion or restructuring.

Warrants

A warrant gives the holder the right to purchase shares of a company at a fixed price within a specified period.

Warrants are often issued along with bonds or debentures to attract investors.

If the market price rises above the fixed price, the investor can benefit by purchasing shares at a lower price.

Convertibles

Convertibles are financial instruments that can later be converted into equity shares.

Convertible debentures are common examples.

Initially, they function as debt instruments and provide fixed interest.

Later, investors may convert them into company shares according to agreed terms.

Convertibles help companies raise funds at lower interest rates while giving investors the possibility of future ownership.