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6381 907 438



ijircce@gmail.com



www.ijircce.com

Time Value of Money it Important

Lapasov Shaxzod Anvaro'g'li

3rd year student of Tashkent State University of Economics, Uzbekistan

ANNOTATION. This article explains the importance of cash flow in the economy and its basic concepts. It is also explained what causes changes in the value of money over time. Several methods of evaluating monetary values have been analyzed.

KEYWORDS: Cash flow, Discounted cash, Annuity cash, risk, valuation, complex value, present value and future value.

"Time value of money" is important to the concept of finance. Recognizes that the value of money is different at different points in time. Because money can be put to good use, its value varies depending on when it is received or paid.

Simply put, a certain amount of money is worth more today than it is worth tomorrow. This is not because of the uncertainty about the time, but because of the time. The difference between the value of money today and tomorrow is called the time value of money.

This basic financial principle states that if the money can earn interest, the sooner any money is earned, the more valuable it will be. Time value of money is also known as net present value. Explain why interest is paid or earned: Interest pays the depositor or lender the time value of money, whether on a bank deposit or loan.

The time value of money is one of the main theories of financial management, in which "the value of money available now is greater than the reliable promise to receive the same amount of money at a future date." Time value of money is the idea that money available now is worth more than the same amount in the future because of its potential earning capacity. Finance holds that this is the main principle, you can find interest in the money provided, any amount of money is worth more than it is accepted.

The time value of money is the big benefit of taking money now rather than later. This time is preferably arranged. The time value of money principle explains why interest is paid or earned? Interest, whether it is on a bank deposit or loan, is eliminated by the depositor or lender for the time value of money.

Important terms or concepts used in calculating the time value of money include:

- Cash flow.
- Cash flow.
- Discounted cash flow.
- Annuity cash flows.
- Uneven/mixed cash flows.
- Single cash flows.
- Multiple cash flows.
- Future value.
- Current value.
- Effective interest rate and time preference rate.
- Risks and types of risks [1].

Cash flow is a single amount or a series of receipts or payments that occur over a specified period of time. Cash flows can be of two types, i.e. cash flow and non-cash flow, sometimes very different; single cash flow, mixed cash flow streams, even cash flows, or uneven cash flows.

Cash flow refers to cash receipts for investments in an asset/project at a time in the hands of an individual or in the account of a business organization. Cash inflows can be a single amount or a series (even or uneven/mixed) over a period of time.

The present value of future cash flows (inflows or outflows) is the current amount of cash that has an equivalent value to the decision maker today. The process of determining the present value of a series of future payments (or receipts) is called discounting. The compound interest rate used to discount cash flows is called the discount rate.

Annuities are also defined as "a series of uniform receipts or payments over a number of years arising from an initial deposit." In simple words, constant periodic sums are called annuities [2].

The unevenness of cash flows, as the concept itself states, is the presence of unequal or mixed cash flows resulting from investments in assets or projects.

A single cash flow is a single amount of cash receipts from the project during this period, for which the present value is determined by multiplying the cash receipts by a discount factor.

Multiple cash flows (even or mixed cash flows) are a series of cash flows that can be annuities/mixed cash flows from the project over the life of the asset.

The concept of future value indicates the value of a current cash flow or cash flows at the end of a specified period of time at a given discount rate or interest rate. Future value refers to the value of a present amount or series of cash flows invested or lent at a specified rate of return or interest at the end of a specified period. Simply put, the future value of a fixed-time preference rate for money means the value of a cash flow or a series of cash flows at some specified future time.

Present value is the opposite of future value. Present value refers to the present value of a future sum of money or a stream of cash flows at a given interest rate or rate of return. It is also called a discounted value. Simply put, it means the present value of a future cash flow or series of cash flows.

Effective interest rates are time preference rates used to translate different amounts received at different time intervals; to the amounts currently equivalent to the value of the legal/individual person in the general point reference.

In business, a financial manager has to make a series of decisions in different situations. Risk is the 'variability of returns' or 'possibility of financial loss' associated with an asset. Assets with high probability of loss or high volatility of returns are considered 'risky assets' and vice versa. Therefore, care should be taken to identify and measure the level of risk associated with the assets before deciding to invest in such risky assets[3].

Timing is important and getting it right when making financial decisions is equally important and inevitable. Most financial decisions, such as the purchase of funds, the purchase of assets, the provision of liquidity and the distribution of profits, affect the firm's cash flows/the movement of cash into and out of the organization at different time intervals.

Cash flows that occur in different periods are not comparable, but they must be measured correctly. Therefore, it takes time and risk to adjust cash flows for their differences. It is necessary to calculate the value of the cash flows to a common point in time.

In order to maximize the owner's capital, it is important to consider the timing and risk of cash flows. To calculate the present value of cash flows, it is important to choose a risk-adjusted discount rate (interest rate).

For example, if the time preference rate is 10 percent, this investor initially invested 1000 soums, if he is offered 1100 soums after one year. The value of 1000 dollars of money is 1100 - the future value of the soums. Today at 10% interest rate.

Time value adjustments are important for both short-term and long-term decisions. If the amounts involved are very large, adjusting the time value even for a short period of time will have significant consequences.

However, other things being equal, timing is relatively more important for financial decisions that have long-term effects than short-term effects.

The concept of time value of money is very much used in all financial decisions.

Using the concept of time value:

1. Comparison of investment alternatives to assess feasibility of proposals.
2. When choosing the best investment proposals to accept or reject an investment proposal.
3. In determining interest rates, thereby solving problems related to loans, mortgages, leases, savings and annuities.

4. Finding a possible time to recover the original investment or get the expected return.

5. Helps determine wages and prices.

The three main reasons for the time value of money are repeated investment opportunities; uncertainty and risk; preference for current consumption.

Reinvestment option is Early withdrawal funds can be reinvested to earn money on them. The main leader here is to find some return in terms of income, so it is considered that the money received today can be bank account money.

Let's say that the savings bank rate of Uzbekistan is 4 percent, and the fixed deposit rate for a one-year deposit in public sector banks is 7 percent. Therefore, even if a person has no other profitable investment option to invest his funds, he can put his money in a savings bank account and earn interest on it.

He can invest or deposit this 100,000 soums in a term deposit account and earn 7% per annum. Therefore, at the end of one year, his 100,000 soums will grow to 107,000 soums without any effort. The time value of this money is compensation for time.

Uncertainty and risk Another reason for the time value of money is that funds received early resolve the uncertainty and risk surmounting future cash flows. We all know that the future is uncertain and unpredictable. At best, we can make a best guess about the future with some possible future outcomes [4].

Therefore, given the choice between 100 soums received today or 100 soums received in the future, let's say one year from now, every intelligent person will choose 100 soums today. This is because the future is uncertain. earn money as soon as possible rather than waiting for it. Basic principle: "A bird in the hand is better than two birds in the bush." It should be noted that there is a difference between risk and uncertainty. In a risky situation, we can assign probabilities to expected outcomes. Probability is the probability that an event or outcome will occur [5]. For example, I can get 100 soums in the future with 90 percent probability. Therefore, the probability of not getting it at all is 10 percent. In a risky situation, outcomes are predicted by probabilities [6].

In an uncertain situation, it is impossible to assign probabilities to expected outcomes. In such a situation, the results cannot be predicted.

Current Consumption Preference The third major reason for the time value of money is current consumption preference. Everyone prefers to spend money today, not in the future, but for necessities or luxuries, if he is not sure that he will get more money to spend in the future.

Let's say your father offers you two options - get a Wagon R today at age 20 or get a Wagon R in a year when you turn 21.

Undoubtedly, the Wagon R was better a year later than today. Thus, every rational person prefers current consumption. People who save for the future do so in order to have more money in the future and therefore more to consume. Thus, we can say that the amount of money received early (or today) is worth more than the amount of money received later (or in the future). This is the time value of money.

There are two concepts of assessment:

- 1) the concept of complex value (future value or combination)
- 2) Concept of present value (Discounting).

The concept of compound value is used to determine the future value (FV) of present money. Future value means that a certain amount of money is worth more today than it will be at some point in the future [7].

This concept is similar to compound interest, in which the interest received in the previous year is reinvested at a superior rate of interest for the rest of the period. Thus, the accumulated amount at the end of the period (principal + interest) becomes the principal amount for calculating interest for the next period [8].

$$\text{Future value (FV)} = \text{present value (PV)} + \text{percentage}(r)$$

Current values allow all figures to be put on a current basis so that comparisons can be made in today's rupees. The present value concept is the opposite of the compounding technique and is known as the discounting method.

There are FVs of currently invested funds, which are calculated using the compounding technique, as well as present values of future cash flows.

The present value is calculated using the discounting method using the following equation:

$$PV = FV_n / (1 + r)^n$$

Here: PV- present value; FV_n - future value in n years; r-annual interest rate; n – discounted for n years [9].

We can cite this as an example. An individual deposits 5,000 soums in a bank that pays 10% compounded interest every year. You need to know the amount you will get after 5 years.

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

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

$$FV = 5000 \times (1 + 10)^5$$

$$FV = 5000 \times 3,791$$

$$FV = 18,955$$

The answer to the question is as follows: if an individual invests 5000 soums at 10 percent for 5 years, it will be 18,955 soums.

In short, to summarize, money and its flows and movements are very important in the economy. If the value of money decreases over time, its purchasing power also decreases. Economists are conducting research in this regard and are considering many measures as solutions. This means that any business should consider the future value of money when making plans for its future. The reason is that over the years, it is impossible to buy things and items of current value at the prices of the old years, so the company takes all this into account. Value for money is important in every industry.



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