

Conducting A Time Value Analysis

Posted on June 8, 2023

The value of the dollar is currently higher than it will be in the future; however, any business's financial decisions should consider future financial decisions as well. For this purpose, they need to predict their financial assets based on future cash flow. The reason that the value of the dollar is higher at present is due to the "opportunity cost", which means that the money at hand can be consumed immediately and invested in more assets; however, the future dollars cannot be used but only predicted. Due to the high worth of the current dollar compared to the future dollar, financial management would account for the timing differences in the cash flow. This is done through a process called time value analysis, which this paper will discuss in detail.

Time Value Analysis

It is a technique that uses the "time value" of the money to predict the value of the future cash flow. This process allows the assignment of appropriate values to the cash flow that may take place at different points in time, and it is also known as discounted cash flow analysis. This method is extremely important for healthcare organizations as they are always investing in future research and technology, so being able to predict the outcome of their investment is extremely important so that they can reduce the probability of loss. This technique is the most important compared to other financial analysis techniques as it considers the future in decision-making, so having a deep knowledge of this process is invaluable (Reiter et al., 2021). The common terminologies associated with this analysis technique are explained below.

Time Lines: The representation of time and cash flow in the form of a graph is called a timeline. This can be presented as an actual line or shown through cells in a spreadsheet. In time value analysis, creating the timeline is the first step as it makes the visualization of cash flow, in particular analysis, easier. The timeline starts with "0", which represents the starting point, and every consecutive number marks a single period; for instance, one will mark one period from the starting point, two will mark two periods from the starting point, and so on. These numbers are shown above the timeline graph, whereas the cash flow is shown below the graph.

Future Value of a Lump Sum: Compounding: Before this step is explained, a brief look at present value, future value, and the lump sum is needed. The present value is the estimation derived from the current assets, while the future value is the estimation derived from the present value regarding the time in the future, and the lump sum is a chunk of money at one time. Compounding is the process in which the future value is estimated through the analysis of the present value.

Future Value of a Lump Sum: Discounting: In contrast to compounding, discounting is the process of finding present values of the lump sum.

Opportunity Costs: This refers to the business opportunities and benefits that a company sacrifices for another set of opportunities and benefits. It also refers to the alternative approach of using the same funds, which means that if an amount is used for investment in asset “A”, it is no longer available for investment in asset “B”, thus creating opportunity cost.

Annuities: The fixed amount of payments allocated to specific periods are called annuities. In simple words, a single amount is called a lump sum, but multiple amounts are called an annuity. If the outflows are made at the conclusion of every retro, then it is known as an ordinary annuity, but if the outflows are prepared at the start of every retro, then it is known as an annuity due. When an annuity has no maturing age and lasts forever, then it is called Perpetuities.

Importance of Time Value Analysis

The reason that this analysis technique is important for financial managers is because it allows them to make financial decisions about the future. It also allows them to prepare against liquidity, risk, and inflation (Chandra & Bahner, 2007). The interest rates in this analysis are calculated to make sure that the value of money does not face erosion during inflation. The interest rate formulae of this analysis are calculated at a flat rate or compound rate over a certain period. The ability to calculate the interest rate on each investment gives a clear visualization of future investment return and allows the company to choose the best route in managing its finances (Crundwell, 2008).

Case Study 11 “Gulf Shores Surgery Centers”

The bank that Gary should choose for the opening certificate of deposits (CD) is Sun Trust, and he should consider Bank South for opening the savings account because their compounding periods are more frequent; thus, their EARs are higher, ensuring more return on the interest rates. For the South Bank, he should choose to take out a term loan as the bank has a less frequent compounding period, which means that the EARs are low and less interest will be owed to the bank.

Conclusion

The time value analysis is the best analysis strategy as it takes into consideration the future value of the current money. This can be beneficial for the financial managers working with healthcare organizations as they need to reduce the risk of loss in their investments as healthcare organizations cannot afford setbacks.

References

Chandra, M. J., & Bahner, M. L. (2007, April 3). The effects of inflation and the time value of money on

some inventory systems: International Journal of Production Research: Vol 23, No 4.

<https://www.tandfonline.com/doi/abs/10.1080/00207548508904740>

Crundwell, F. K. (Ed.). (2008). Time Value of Money. In Finance for Engineers: Evaluation and Funding of Capital Projects (pp. 125–161). Springer. https://doi.org/10.1007/978-1-84800-033-9_5

Reiter, K. L., Song, P. H., Gapenski, L. C., & Association of University Programs in Health Administration. (2021). Gapenski's healthcare finance: An introduction to accounting and financial management.

<https://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=255848>

5