Capital budgeting techniques

Finance

Businesses often have the need to invest in projects to increase the revenues of the firm. These decisions involve the use of capital budgeting techniques. Capital budgeting can be defined as the process of analyzing projects and deciding which of them are acceptable investment and which actually should be purchased (Besley & Brigham, 2000). Managers must consider that these projects affect the company in the long term. Four capital budgeting techniques are net present value (NPV), internal rate of return (IRR), payback period, and profitability index (PI). The purpose of this paper is to describe these techniques and to compare and contrast the pros and cons associated with each of these four capital budgeting techniques. The payback period is used to quantify the expected number of years required to recover the original investment made on a project based on the cash flows that the project generates over its lifetime. The main advantage of this capital budgeting technique is its simplicity. The way to calculate payback period is by adding up the expected cash flows for each year until the original investment of the project is recovered. The basic logic of the method is that it is better to recover the original investment sooner than later. A disadvantage of the payback period method is that it disregards the time value of money. Another capital budget technique to evaluate projects is the net present value or NPV. This method evaluates capital investment projects by finding the present value of future net cash flows, discounted at the rate of return required by the firm (Besley, et al. 2000). One of the pros associated with this capital budgeting technique is that it takes into consideration the time value of money. A project is accepted based on this technique if the NPV output is above cero, while projects that have a negative NPV should be rejected. A disadvantage of the NPV method is that

it does not measure the interest rates, profitability, and other benefits relative to the amount invested (Glann, 2009).

A third capital budgeting method is the internal rate of return or IRR. The internal rate of return is the rate of return the firm expects to earn if the project is purchased; thus it is defined as the discount rate that equates the present value of a project's expected cash flow to the investment outlay, or initial cost (Besley, et al. 2000). A pro of the IRR method is that it takes into consideration the time value of money. A project evaluated based on IRR is accepted if the IRR result is greater than the rate of return required by the firm for that type of investment. A con associated with this method is that it is difficult to calculate by hand. A fourth capital budgeting technique is the profitability index (PI). The PI is an index that attempts to identify the relationship between the costs and benefits of a proposed project (Investopedia, 2013). A pro of the profitability index is that it tells whether a project increases the firm's value. A con associated with this metric is that an estimate about the cost of capital is required in order to calculate the index. A table to compare and contrast the pros and cons of all four capital budgeting techniques is illustrated below.

Strength

Weakness

Payback period

Simple to calculate

Does not use TVM

Net present value

Takes into consideration TVM

Ignores interest rates and profitability

Internal rate of return

Uses TVM

Difficult to calculate

Profitability index

Tells if project adds value

Requires estimate cost of capital

References

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