Foundations of the Net Present Value Rule

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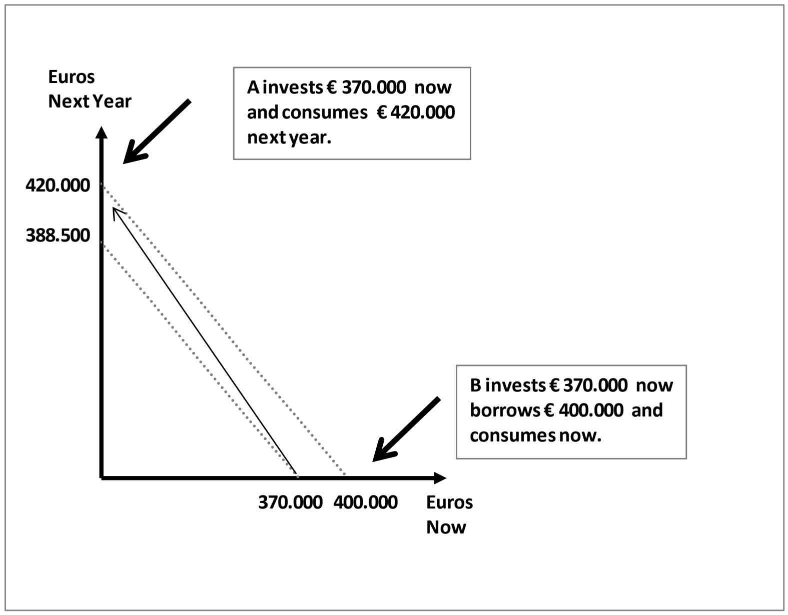
The Net Present Value (NPV) works for investors who decide to invest their money in projects, e.g. a vacant lot and the construction of an office building on it. However, the question is: Will the Net Present Value work for everybody who wants to invest?

How capital markets reconcile preferences for current vs. future consumption

The capital market allows investors to consume and to trade between money now and in the future as it suits them.
For example an investor has € 370,000 to invest. There are several different methods he could use.
If he deposits € 370.000 with a bank with an interest rate of 5% he can consume € 388.500 a year from now but he cannot consume anything today. However, if he splits the money, consuming € 185.000 now and putting the other € 185.000 to work at 5% on his bank account, the next year he will receive € 194.500.
The better alternative is for example to invest € 370.000 in an office building development. Next year the investor will definitely receive € 420.000 from the project. This doesn‘t mean that he cannot consume anything today, he can borrow against his future income from the bank. With an interest rate of 5% he can borrow € 420.000/1,05 = € 400.000. In this example the NPV is € 30.000. The NPV is the difference between the actual value of a project and the amount to be invested.
Whatever you want to invest, to consume, to borrow now and in the future, it i‘s good advice to invest in a positive NPV project, because this will increase your wealth.



A well functioning capital market allows investors with different wealth, age, tolerance for risk and time patterns of individual consumption desire, to invest their money in positive NPV projects. However, one has to observe that not every country has a healthy functioning capital market, e.g. Indonesia and Thailand where economical wealth is owned and controlled by only a few people.

A fundamental result

The NPV rule makes sense for certain and uncertain cash flows that extend into the future.
A finance manager from a big corporation should act in the interest all of its stockholders. Every stockholder wants three things:

a. to maximize their current wealth
b. to invest or consume whenever he/she wants
c. to choose his/her own risk of consumption

As long as stockholders have free access to the capital market they do not need a finance manager for planning their individual time patterns or risk characteristics to invest. The only way for a finance manager to satisfy the stockholders´ interest is to increase the market value of each stake. Their function is to find and invest in positive NPV projects in order to maximize the owners´ wealth.

Other corporate goals

Some corporations want other financial goals, for example to maximize profits. It is better to invest in a profitable company than in an unprofitable one. But, only profit maximization does not make sense for stockholders because:

- they do not want next year profits at the expense of profits in the later years.
- they do not want to cut their actual dividend in order to invest the cash for increase future profits, it is not in their interest to earn a low return on an investment.
- different people can calculate profits in different ways.

In contrast to maximizing profits the NPV rule observes the time value of money, the difference between project rates of return and opportunity costs of capital, and it also focuses on cash flow.

Summary

The NPV is the difference between the actual value of a project and the amount invested. It is the right decision to invest when there is a well functioning capital market and a project with a positive NPV. Furthermore, investing in a project with a positive NPV allows borrowing against future profits which allows consumption right now. Therefore it is good advice for investors to observe the Net Present Value Rule.