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INVESTING IN A BUSINESS SYSTEM

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Abstract

Every company tends to maintain current liquidity and to make progress, ie. to develop. This is something that can be achieved through investment. Investment can be in production, in terms of new technologies, new products etc. And with this form of investing, there are cases of companies investing in the securities finance market, which makes a profit. When investing, there are micro and macro aspects.

When the conducting investment analysis is performed, and during the investment management, respectively the evaluation and ranking of the project it is significant classification of independent and mutually exclusive investment projects. The theory and practice are two main approaches to present the assessment and measurement of financial benefit or impact of investment projects: traditional or contemporary approach and accounting or financial access.

The investment decision is taken on acceptance or rejection of the proposal based on the 4 methods of determining the required capital: methods of evaluating the rate of return, payback period method, the method of internal rate of return and net present value method.

The method estimates the rate of return is actually the ratio of the average annual profit after tax and investment in a particular project.

Methods of repayment period taking into account the size and temporal separation of cash flow for each period of the project. The method of the discount flows are internal rate of return and present value method.

With the method of the present value all cash returns are discounted to present value, using the required rate of return.

The index of profitability of the project in other words, ratio of benefits and costs, is the ratio of the current value and subsequent cash flow and start-up costs.

In times of inflation, the company invests less, because of the smaller rate of return and therefore the motivation factor is decreased.

Therefore, the consideration of improving and prediction should be the main priority in the process of gaining the optimal decision.

Keywords: investment / methods of determining the necessary capital / profitability

Term of investment and investments

Each company as a starting point, has the preservation and the provision of continuous existence of the planned development.

The company which wants to ensure the current survival and the future, to ensure continuity of current and future efficient operation. Basically, the main synthesized goal of the company still specifies the two additional objectives:

- ensuring of the operation continuity, i.e. ensuring the existence of the business system;
- ensuring of the continual continued efficient operation, i.e. the ensuring continual development of the desired business system.

Its goal the company is trying to realize in the present conditions and in the present time, but think about the near future. When the conditions are provided for the current survival, the company constantly tends to develop and achieve a high level of quality for the future work. Thus, the long-term plan is defined and the policy that contains the basic objectives and ways of their implementation. Goals of the investment and the investment policy, as a direct result of company goals, are retained in long-term development policy of the company.

On the other hand, only with the specific investment actions within a defined investment policy, the realization can be establish and the development of the company policy.

The selection criterion of investment is actually a validity measure of the certain investment actions, the measures of achieving the goals of investment and on that basis the available investment actions that should be implemented is determined.

As well as other economic phenomena, investments have their micro and macro aspects too. At the macro level that are discount flows of different variants of the capital ratio as the ratio between investment and production in the finance literature and in practice they are mostly average and marginal capital coefficient. The average capital ratio indicates how many units of capital (fixed and current assets), respectively the total investment is engaged in the creation of production units, while the marginal capital coefficient is the ratio between the growth of investment and production growth. The investment Management at the micro level, respectively the at the company level is intended to a limited capital investment allocated to optimal use, programs to maximize the realization of its economic goals.

In terms of developed financial markets and market access of the company to such investment must be understood in a broad sense. In addition to investments in projects, business projects in the company, either in the modernization of existing ones, either in new production facilities, plant and processes, and the free company can uninvolved capital invest in securities of financial markets and thus make money.

The investments, an integral part of the integrity of the allocation process of the economic resources in time, are valid for one of the most important areas of economic theory, from two main economic characteristics:

- limitations and the possibility of alternative use of economic resources;
- the future development as a prerequisite of totally meet the needs of the future.

Investment projects and investment criteria

The investment proposals or projects, as well as alternative investment opportunities internally within the company can be classified as:

- New production or expanding existing ones;
- Relocation of equipment or facilities;
- Research and development;
- Research activities;
- Other projects

For the purposes of investment analysis and the investment management, respectively the evaluation and ranking of the project is vital to the division of independent and the mutually exclusive investment projects. Independent projects are those that do not compete with one another, respectively the if the selection of one of the project does not involve the rejection of another. In contrast, mutually exclusive projects are mutually exclusive, so the selection of a project means automatic rejection of another one.

Capital investments involve:

- Generating investment proposals;
- Assessment of cash or cash flows for these proposals;
- Valuation of cash flows;
- Project selection based on standard criteria;
- Continuous re-evaluation of investment projects after their acceptance.

Each of the listed activities respectively the correctness of its implementation improves the quality and the objectivity of the investment management and a chance for the optimal placement of capital.

In theory and in practice there are two basic approaches to assessing and measuring the financial benefits or effects of investment projects:

- The traditional or accounting approach;
- Modern or financial access.

The first is a projection of annual financial results of economic age of a project and their comparison with imported resources - capital. Expression of profitability of investment in this way depends on the sources and their combinations, and whether it is expressed based on gross or net profit.

The latest financial theory is therefore promoted, practice accepted approach of expressing the effects of investment projects through their effect on cash flows.

The advantages of net cash flow or financial accesses of cash flow in relation to or accounting, based on its differential gain are:

- Intelligibility of decision makers, even those who are not financially educated;
- Determination of future investment activities of the company in managed cash flows.

Here you will point out only the basic elements of the projection of cash flows as a function of the budget and effects of investment programs, which include:

- Initial and any subsequent capital investment in the realization of the given project as a cash outflow;
- Net increase in future cash flows expected from project or the course of annual financial benefits in economic age of a project;
- The amount of cash that will be released when the project is liquidated by the system of his lifetime as a cash inflow.

As primary criterion of investment in financial literature are presented the new capital costs and the standard cost of capital rate of return.

Cost of capital as a criterion is based on the indisputable fact that the capital regardless of its sources has a price on a logic that is worth of investing if the expected earnings from other reasonably available alternative investment opportunities. In addition, determining the cost of capital of the company is essential for any company not only a function of investment criteria, but also the optimal composition of its financial structure.

Unlike the cost of capital, the classical transmission rates on investment are discount flows of more empirically based criterion, despite the fact that there are plenty of wide practical application. As a standard rate of return is encountered or used:

- The required rate of return on new investments;
- The actual rate of return on existing investments;
- The average rate of return for a given economic sector;
- The target rate of return on existing investments.

Methods of assessment

The investment decisions will be either adoption or rejection of the proposal based on the 4 methods of determining capital requirements:

- methods of evaluating the rate of return;
- methods of recovery period;
- the internal rate of return;
- net present value method.

The assessment rates of return

This calculation measures presents the ratio of the average annual profit after taxation and investment in the project. In the previous example of new machines, the average annual salary for carrying a five-year period is 2100 $, and the initial investment in the project is $ 18,000. This is why: The average return rate = 2100/18000 = 11.76%.

If the income was variable for observed 5 years, the average would be calculated and included in the numerator. Once, when the average rate of return investment proposal is calculated, it can be compared with the required rate of return to a specific investment proposal to be accepted or rejected.

If it is assumed that there are three investment proposals, each costing $ 9,000, and each of which has economic and depreciation expectancy of 3 years and will be expected that each of the three investment will proposals to ensure the accounting profit and cash flow through the next 3 years, it follows:

	PROJECT A		PROJECT B		PROJECT C	
PERIOD	profit	income	profit	income	profit	income
1	3000	6000	2000	5000	1000	4000
2	2000	5000	2000	5000	2000	5000
3	1000	4000	2000	5000	3000	6000

Each proposal will have the same average rate of return on $ 2999/9000 $ or 22.22%, and yet, it is rarely that a company will observe the projects regarded as equally good. Most companies would give priority to projects that provide a higher overall unemployment benefits in the first year. Therefore, the average rate of return does not satisfy all the desires of the project as a method of choice.

The period of return of the investment project refers to the number of years needed to compensate for the initial financial investment. It is the ratio of initial investment and annual cash income in the period of return. In the example that follows: Period of return = 18000/5700 = 3.16 years.

If annual cash revenues are not equal, the job of the calculations is somewhat more difficult. If one assumes that the annual cash income in the first year $ 4,000 in the second and third year of $ 6,000, while the fourth and fifth year of $ 4,000, the first three years of $ 16,000 initial deposit be returned in the fourth year of the next $ 4,000. In relation to the initial investment of 18,000 $, payback period is 3 years + $ 2000/4000 $ or 3.5 years.

Internal Rate of Return

The general impression is that because of various shortcomings of internal rates of return and payback period method, discounted cash flow methods provide a more objective basis for evaluating and selecting investment projects. These methods take into account the size

and temporal separation of cash flow for each period of life of the project. DCF method is the internal rate of return and present value.

It should be noted that the internal rate of return on the investment proposal discount rate that equates the present value of expenditures with the present value of expected income.

Denoted r, so that:

$$\sum_{i=0}^{n} (Ai / (1 + r)) = 0$$

where: Ai - refund of money in period t, whether the costs or revenues,

n - a period in which the expected cash flow.

If the average cash cost of going in time 0, the previous expression can be expressed as:

$$Ao = A1 / (1 + r) + A2 / (1 + r)^{2} + ... + An / (1 + r) n$$

Thus, r is the rate that discounts estimated future cash flows - A1-An to be reduced to the initial expense 0. In the example problem is solved as follows:

$$NJ\ 1800 = 5700 / (1 + r) + 5700 / (1 + r)^{2} + 5700 / (1 + r)^{3} + 5700 / (1 + r) 4 + 5700 / (1 + r) 5.$$

Solving this task it leads to the solution to the internal rate of return of 17.57%. Criteria based on which is accepted or rejected the project, is a comparison of internal rates of return with the required rate of return. If the internal rate is higher than the required rate, the project is accepted, if the smaller project will be rejected. If the required rate is 12%, if the application of this criterion is use that the investment proposal will be considered as accepted. The acceptance the project whose internal rate of return is higher than the required rate of return, it should result in an increase in stock market prices, because the company accepted a project with returning more than is required.

The net present value

The method of the internal rate of return is and the method of present value of discounted money returns, have a similar approach in planning the necessary capital. The method of the present value of all cash returns are discounted to present value, using the required rate of return. Net present value for the proposed investment is obtained by the formula:

$$NPV = \sum_{t=0}^{n} At / (1 + k) t$$

where: k-required rate of return. If the sum of the discounted cash flows of 0 or more, the proposal is accepted, if the sum is less than 0, the proposal is rejected. Another way you can prove the following acceptance criteria: The project will be accepted if the present value of cash income is higher than present value of cash expenditures. Access to the acceptance criteria in this case is the same principle as the internal rate of return. If the required rate of return is such that it provides a return use that investors expect that the company will earn on an investment project and the company accepts the proposal of the net present value higher than 0, the market price per share should increase. The Company will accept a project that is greater than the refund that would be required to make the market price of the shares remained unchanged.

If it is assumed that the required rate of return is after tax 12% it is easy to determine the net present value in the example using the following expression:

$$NPV = -18000 + 5700 / (1 +0.12) + 5700 / (1 +0.12)^{2} + 5700 / (1 +0.12)^{3} + 5700 / (1 +0.12) 4 + 5700 / (1 +0.12) 5 = -18\,000 + 20\,547 = \$\ 2{,}547$$

Profitability index

The index of profitability of the project or ratio the utility and costs, is the ratio of the present value of future cash flows and the initial cost. Calculated with the following formula:

$$Pi = [\Sigma At / (1 + k) t] / Ao \; \overset{N}{t = 1}$$

for example, a given profitability index is:

$$Pi = 20\ 547\ NJ / 18000 = 1.14\ NJ$$

While the profitability index is always 1 or higher, investment proposal is acceptable. When the profitability index is calculated, the net index is calculated, not the aggregate index. The aggregate index is the ratio of present value of cash income and the present value of cash expenditures. The net index is used to distinguish between initial cost and future cash expenditures.

Inflation and investment decisions

When there is inflation to be manifested by a lower real rate of return and reduced motivation of companies to invest the capital. State of cash flow would improve the introduction of progressive methods of depreciation, but even so the previous statement still be effective. Companies simply at the time of inflation are not motivated. Thus invest less, and look for investments with shorter recovery.

In estimating cash flows, it is important that the company take into account the anticipated inflation. Very often, there is a presumption that in useful life of the project will remain the same price level. Favoritism occurs in the selection process, and because the required rate of return of the project usually is based on current costs of capital, which contain a premium for anticipated inflation.

By calculating the net cash flow in this way, we get the same result as before when, after deducting of amortization, net incomes determined, calculated tax on such income and then deducted from the annual tax savings to get the net cash flow.

The mathematical expression:

$$NPV = [\Sigma [It\ (1.10)\ t\text{-}Ot\ (1.10)\ t] \bullet (1\text{-}.40) + .40 \bullet 20\ 000] / (1.13)\ \overset{5}{t} - = 100\ 000\ 11\ 056\ NJ$$

where: It - the money supply in the year, Ot - cost money in the year, t - observed years.

The results are biased even though in a sense the discount rate includes the elements of anticipated of future inflation while estimation of cash flows does not contain these elements. The assumption that the current inflation rate of 10% and that such movement is expected in the next five years, means that if the cash receipts and cash expenditures grew at that rate, the net present value would be under $ 11,056 according to the previous expression.

The risk of investments

Risk and uncertainty on investment

All decisions regarding capital investments are disclosed to this step as it is without exception based on an accurate prediction of future costs and revenues. The projected rate of return in the event of a given concrete proposals in this case it results from these figures. In the examples shown, the investment is strictly defined. Few investment projects that are limited to the precise specified life exposed to the original predictions given for the purpose, as any, that any decision regarding the expenditure of capital is always prone to drift in the unknown later date. The course of future events may affects the future cost of investment, current costs, the

market size, and therefore the final sales volume and the price at which the possible sale of the product. Therefore, we can say that it is very difficult if one fine table, a calculation that would be gathered and included all uncalculated and hidden influences and variables that can affect the outcome of a project, and business decisions are still based on a single type of data rates. This does not mean that the criteria of development, that were used and presented, is poorly designed and installed. They in the best possible way take advantage of the information on which they are based. Represent a conventional approach to valuation of investments; assess future outcomes as a result most stricken timing of future events, the level of future costs and revenues. With so best affected, the predicted flat rate of return manager may apply in person judging appearance of the proposed costs to survive or to make a profit. Otherwise, anticipation, and speculation continues to play a central role in selecting investments. Nevertheless, it is true when it is said, that during the last twenty years in connection with the investment experience went through significant modifications in the methods and techniques of evaluation of proposals. However, these improvements are not related to time-adjusted and adjusted rates of return that take into account the time value of money. The mentioned changes in the method are not sufficient in themselves to ensure the best possible tools for decision making in the analysis of investments in the future. Even if one accepts that the judgment of an experienced director is able to be a sustainable criterion for choosing between alternative investment projects, it is not enough to enable him to make an optimal decision. This can be done only by considerable experience in relation to specific types of investments. Some previous experience obtained in connection with concrete proposals for spending capital can certainly forms the basis for the judgment assessment of similar projects in the future. When a company enters many times small investment, the probability that the final variation to distinguish between the predicted and actual values to get to the simplification that is valid for a number of such projects. In these cases, one indicator of the desirability and acceptability of the project may be sufficient.

In contrast, when a project of the expenditure is expected be to influence the existing capital of the company and the structure of its assets, these conclusions regarding the sufficiency of a single best prediction criteria cannot provide support. It is probably really poorly and failed conduct of a major project to make a significant impact on the financial success of companies. Consequently speaking, still dividend potential of companies and its market strength may be difficult affected and damaged, and thus the power and ability of companies to raise capital for further term expansion, may suffer significant limitations. In the case of proposals for a large outlay is an essential need more information about the possible outcomes and future prospects for the efficiency of the project, to better long-term of corporate planning.

Improving information for decision making

The elaboration of improvement and the predictions should be a top priority in terms of finding the right decisions. As long as the expansion of market research, for example, or extrapolation can be the blind to manage errors and independence, and action should be taken and made. However, just as the price evaluation has always been and remains a major concern of senior accountants, and cost predictions should be compared to the additional benefits they produce. Where there is a necessary expense in order to achieve minimum increase prediction accuracy, and can be and how to demonstrate that such expenditure is necessary.

Again, most managers can give examples optimal and pessimistic mood of assessment. One frequently used method for the prevention of hidden risks and uncertainties occurs where the decision maker calls for a higher yield of a proposal that he considers risky. When it looks to those many variable factors that determine the profitability of a project may have

significant hidden independence, raising the percentage seems that the project is rejected, it may be represent some kind of shield to engage in uncertainty. Good faith explanation, however here is that this method is weak in some way since a decision-maker can never know the size of the final acceptance of risk, and may or may not know the right measure of risk which resists, better to say to avoid. Moreover, the precarious practice of raising the rate of rejection may restrict and narrow the flow of profitable opportunities that are necessary for permanent existence and growth and qualitative development of the company.

Examination of the results, the study will point to those estimates that are critical to the outcome of a given proposal. On this basis, they can highlight areas where further research is necessary of accuracy and precision of the forecast data. Additional and special attention was devoted those areas that are vital to productivity proposal can provide and how it improve predictions. To say the numbers point of view should be a stronger and more reliable basis for making conclusions. Predictions of provided investment and final evaluation of the investment will provide significant information, to one who makes decisions, in proportion of prediction costs and to available knowledge.

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