PREDICTION OF RETURN ON INVESTED CAPITAL INDEX

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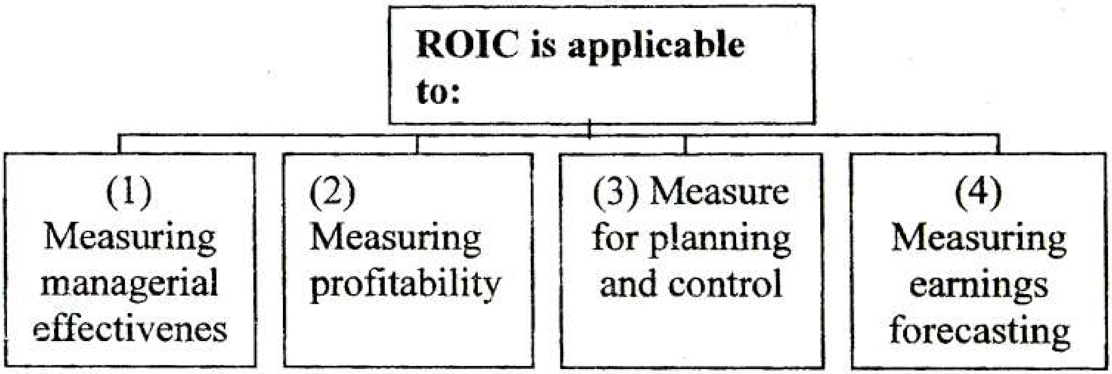
Return on invested capital, or ROIC, is one of the most fundamental financial metrics. In economics, it is a financial measure that quantifies how well a company generates cash flow relative to the capital it has invested in its business. Fig. 1 shows the directions of ROIC index use.

Figure 1. Application of return on invested capital.



Usually ROIC is defined as Net operating profit less adjusted taxes divided by invested capital and is usually expressed as a percentage. In this calculation, capital invested includes all monetary capital invested: shareholders' equity plus financial debt.

$$\mathrm{ROIC} = \frac{\text{Net Income After Tax}}{\text{Invested Capital}} = \frac{\text{After Tax Operating Earnings}}{\text{Total Assets - Excess Cash - Non - Interest - Bearing Current Liabilities}}$$

Even more adequately, ROIC for a single time period:

$$\mathrm{ROIC} = \frac{\text{Net Operating Earnings before Interest and Amortization Charges, but after Cash Taxes}}{\text{Total Assets - Excess Cash - Non - Interest - Bearing Current Liabilities}}$$

But some researches shows that ROIC index its not enough useful for practice. That's why in our investigation profitability of capital (or ROIC) is considered as a complex parameter dependent on macroeconomic, branch-wise and subjective factors. The main accent in the research is made on the investigation of the following macroeconomic factors: inflation, cyclic recurrence of macroeconomic and microeconomic processes and instability in political situation.

An influence of inflation on the capital's profitability have been calculated using a Savchuk's model in Matlab environment. The following conclusions have been made:

1) inflation always reduces profitability of own capital invested in the project;

2) for extra resources there is an optimum level of inflation at which the size of extra capital' s profitability reaches the maximal value.

This behaviour can be explained by the fact that the speed of cash resources generation by the investment project is higher than growth of credit rate when inflation is low. With further increasing of inflation the given rate(speed) ratio is reversed.

It is necessary to consider, displacement of inflation optimum level in which profitability of extra capital is maximized is influenced by:

- inflation unpredictability in time;
- ratio of own and extra capital involved for investment project realization;
- values ratio of cost of extra capital, reinvestment rates and profit tax rates;
- time between realization expenses and income reception after project realization.

But enough easy to predict inflation changes, but it's quite another matter to predict economic risk, sovereign risk and political risk. The risk of further Ukrainian political instability is still high, given that the president now shares power uncomfortably with a heterogeneous coalition drawn primarily from groups that until recently opposed him. Government effectiveness risk is high. The leadership and the bureaucracy have traditionally performed poorly and erratically. Corruption is widespread and red tape is pervasive.

Taking into account the revealed impact of various factors on capital's profitability the economic-mathematical model for the estimation and forecasting of company's capital profitability has been developed. Using this model allow to make conclusions about low, practically negative capital's profitability of the chosen Sumy's enterprises. This results can be explained by unprofitability activity of the enterprises or they shadow activities.

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