

## FIXED TANGIBLE ASSETS ANALYSIS IN ASPECT OF CASH FLOWS

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**Introduction.** In conditions of free market and strong competition economy every company seeks to earn more profit as a guarantee for company's expansion and continuance of activities. Usually, most authors analyse this problem in certain aspects: sales profitability, return of assets or return of equity. It is also very important to evaluate the cash flows of the company, to estimate the coherence between profitability and cash flows.

Fixed tangible assets usually form an important part in each company's activity and according to database of Statistics of Lithuania presents more than 70 per cent of total assets in average Lithuanian company [1]. This shows the importance of the economic element and pinpoints the relevance to analyse it not only in aspect of company's profit, but in cash flows, too.

*The goal of the article* is to prepare analysis method of the net cash flows to fixed tangible assets ratio.

*Resources of the research* – Lithuanian and foreign authors' scientific literature, data bases of Statistics Lithuania, etc.

*Methods of the research* – analysis of scientific literature and statistical data, analysis of net cash flows from fixed tangible assets factors, systematisation, comparison and summary of information, explanation of factors.

### **Ordinary methods of analysis of fixed tangible assets**

There are three main approaches of fixed tangible assets analysis described: horizontal analysis, which identifies changes that have occurred over an accounting period; vertical analysis, which evaluates structure of the object; and comparative analysis, which estimates different aspects of company's activity and is based on ratios.

Ratios help managers to monitor the performance of their operations and evaluate their efforts in meeting a variety of goals. By tracking a selected set of ratios, managers are able to maintain a fairly accurate perception of the effectiveness and efficiency of their operations [2]. Ratios are generally classified by the type of information they provide and can be divided to five common ratio groups: liquidity, solvency, activity, profitability, operating. Liquidity ratios measure a business's ability to meet its short-term obligations (one year or less). Solvency ratios measure business's ability to meet its long-term obligations (over one year). Activity ratios are used to measure the effectiveness of how the assets have been managed. Profitability ratios measure the efficiency of management in achieving profit margins and return-on-investment goals. Operating ratios assist management in determining how

efficient the operations are [3]. Sources for analysis are mostly based on financial statements, but additional reports and accounting registers may be used as well. C. Gowthorpe [4] supports an idea that a typical set of financial statements contains many figures, and it is possible to calculate almost infinite permutations expressing their relative dimensions. J. Mackevičius [5] explains that there is no meaning in calculating many ratios. It is important to select and calculate only those ratios, which are applicable in practice and most informative. Author offers to use more than two or three ratios in the process of the evaluating the company's chosen aspect.

All described approaches and accounting information sources include analysis of fixed tangible assets as a part of total assets or fixed assets, but previously mentioned authors do not offer to study fixed tangible assets apart.

#### **Net cash flows to fixed tangible assets analysis method**

Various authors [4; 6; 7; 8] in the process of analysis of fixed tangible assets pay more attention to structure of this type of assets and to effectiveness of fixed tangible assets, expressed as turnover of fixed tangible assets or profitability of fixed tangible assets. The latter ratio for the use of deeper analysis is usually expanded to several more detailed ratios/factors, which show relationships between profitability of fixed tangible assets and other economic elements of company.

Each ratio demonstrates a certain aspect of company's activity; however, ratios are not entirely independent from one another as in the case of fluctuation in one ratio value, it can have influence on changes in another ratio value. Du Pont pyramid system of analysis is [9] applied to assess the interconnection of ratios. The key principle of this type of analysis lies in the fact that ratios are divided into multipliers which in their turn are divided into comparative ratios or absolute ratio elements. The only difference is within chosen divided ratios [10].

According to L. Berstein [11] Du Pont pyramid analysis can be used for evaluation of return on assets ratio decomposed to ratio elements, which are shown in figure 1.

As it is shown in figure 1 there are two factors: net profit margin and turnover of assets, influencing the profitability of assets. Influence of these factors may be expressed in two ways: increase of net profit margin increases profitability of assets, acceleration of turnover of assets improves company's financial condition and also increases profitability of assets. On the other hand, if net profit margin decreases and turnover of assets slows down, the profitability of assets decrease [11]. For the purpose of deeper analysis decomposed ratios may be disaggregated too.

According to this method, important information is provided not only on return on assets, but also about company's profitability, effectiveness of activity and other

aspects, which help management to make appropriate decisions. Nevertheless, this approach does not estimate cash flows. Nowadays, when most purchasing and sale transactions follow on loan, it is very important for the management of the company to evaluate and manage cash flows.



Fig. 1. Decomposition of return on assets ratio

For the purpose of fixed tangible assets analysis in aspect of cash flows, authors of the article propose to use principle of Du Pont pyramid. For evaluation of net cash flows to fixed tangible assets the following formula is used [12]:

$$\text{Net cash flows from fixed tangible assets} = \frac{\text{Net cash flows}}{\text{Fixed tangible assets}}$$

Authors of the article offer to decompose this ratio to three ratios, refer to figure 2 for the details. Those ratios should be evaluated as first level factors, which have the biggest impact on net cash flows to fixed tangible assets ratio: net profit to fixed tangible assets, net profit to sales revenue and net cash flows to sales revenue. Net profit to fixed tangible assets ratio expresses, how much monetary units of net profit fall to one monetary unit of fixed tangible assets, how managers of companies are capable of using fixed tangible assets and earn profit. Net profit to sales revenue ratio measures management’s overall effectiveness in generating sales and controlling expenses. Net cash flows to sales revenue ratio show how much sales revenue generates cash flows.

Additionally, for deeper analysis of net cash flows to sales revenue ratio may be disaggregated to second level factors: types of cash flows – net cash flows from operating activities, net cash flows from investing activities, net cash flows from financing activities and effect of changes in exchange rates; and types of sales revenue – sales revenue from provided services, sales revenue from goods for resale, sales revenue from produced products.

For evaluation of trends and fluctuations of net cash flows to fixed tangible assets ratio, it is appropriate to base the calculations on 3 – 5 year data.

Such pyramid system of analysis of net cash flows to fixed tangible assets ratio identifies problems and provides more information for dealing with them. It also shows the reasons for them because the system of the pyramid analysis combines various ratios.

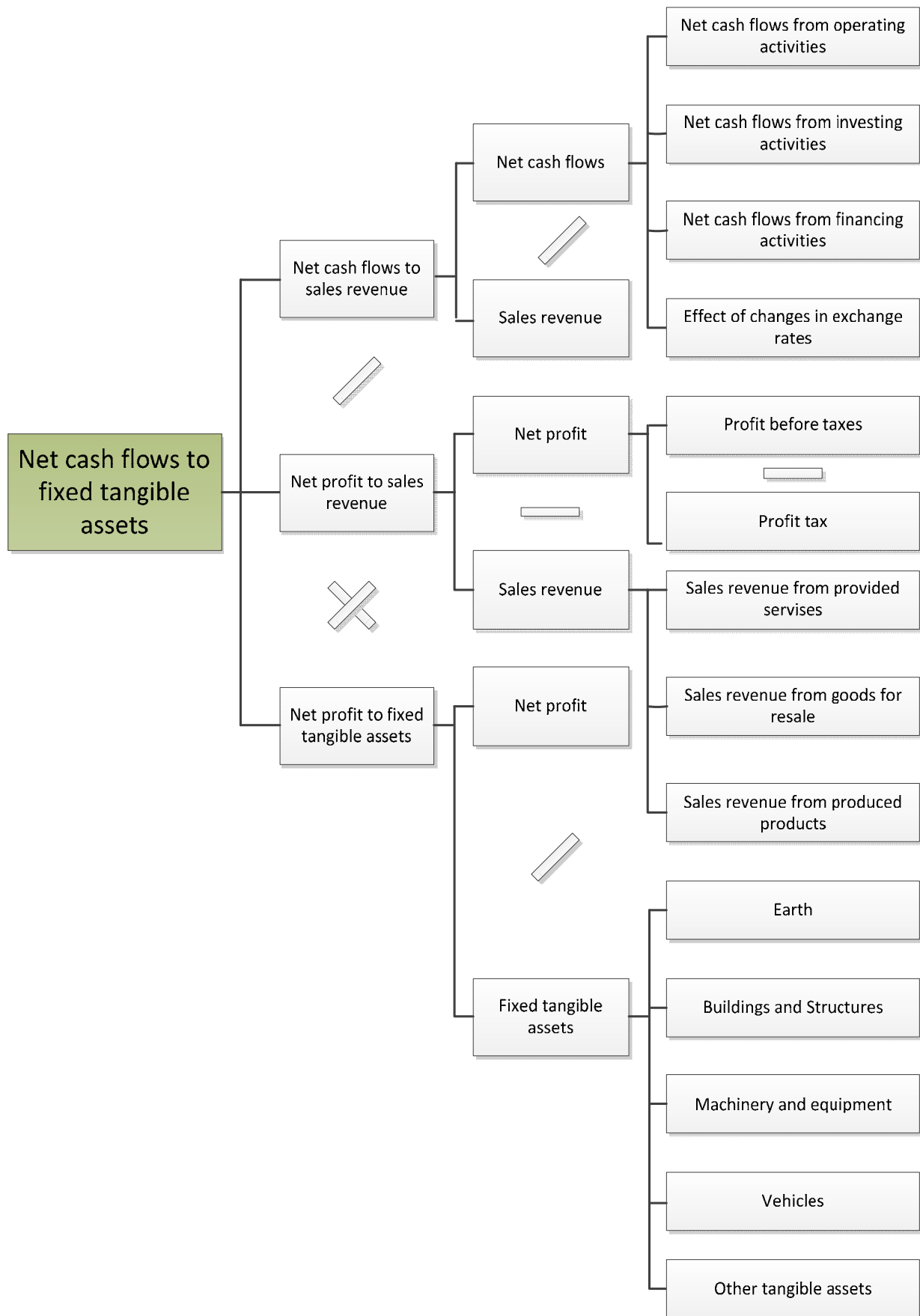


Fig. 2. Pyramid analysis of net cash flows to fixed tangible assets

**Conclusions.** Usually authors present three approaches of analysis: horizontal analysis, vertical analysis and comparative analysis. Any type of analysis approaches help managers to monitor the performance of their operations and evaluate their efforts in meeting different goals. In the process of analysis of fixed tangible assets various authors pay more attention to the structure of fixed tangible assets, turnover of fixed tangible assets or profitability of fixed tangible assets.

Each ratio discloses a certain aspect of a company's activity and is not entirely independent but is related to the other ratios. Du Pont pyramid system of analysis is used for evaluation of the relationships among ratios. The key principle of system's pyramid analysis is that ratios are divided into multipliers which in their turn are divided into comparative ratios or absolute ratio elements.

Authors of the article propose to decompose net cash flows to fixed tangible assets ratio to three ratios – first level factors: net profit to fixed tangible assets, net profit to sales revenue, net cash flows to sales revenue and other ratios – second level factors: net cash flows from operating activities, net cash flows from investing activities, net cash flows from financing activities and effect of changes in exchange rates, sales revenue from provided services, sales revenue from goods for resale, sales revenue from produced products. This method of analysis of net cash flows to fixed tangible assets combines various ratios, identifies problems and shows their reasons.

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