Asset evaluation in companies with implemented controlling

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Abstract: Controlling is becoming an increasingly significant component of modern business management. Controlling tools enable businesses to monitor and manage their assets more effectively. As part of the analysis, it has been found that there is a statistically significant difference between certain asset items and implemented operational and strategic controlling tools. This means that businesses with effective controlling have a better awareness of the status of their assets and are better equipped to respond to risks and opportunities. The analysis was divided into four parts in the same way as the assets are divided in the balance sheet. The Mann-Whitney U test was used, and it was tested at the significance level of 0,05. A statistically significant difference was found for the total assets item, then for the items of fixed assets and long-term tangible assets. In the area of current assets, there was a significant difference in the items current assets, short-term receivables and trade receivables. For the other assets, there was not find any statistically significant difference.

1 Introduction

Controlling is becoming an important part of modern business management, and its importance is constantly growing. The implementation of controlling provides businesses with the ability to better plan and allocate resources, which ultimately increases their competitiveness and profitability. Controlling plays a key role in the effective management of businesses and its importance is particularly evident in the monitoring and management of financial indicators (Horváth, 2003). Financial indicators are a tool with which a company communicates about its management. As part of controlling, various aspects of financial data are monitored and analysed with the aim not only to identify the current state, but also to predict and plan future developments.

Controlling plays a crucial role in ensuring alignment with the organization's plans, guidelines, and established policies. This process involves coordinating activities to efficiently utilize organizational resources for the fulfilment of established plans (Safar et al., 2018). It assesses the deviations between actual performance and predetermined standards, pinpointing the reasons behind these variations. Additionally, controlling aids in implementing corrective measures to address any discrepancies (Cornel & Lavinia-Maria, 2012). This systematic approach not only monitors adherence to organizational directives but also facilitates the proactive management of deviations for sustained organizational effectiveness (Christoffersen et al., 2023).

Controlling guarantees the efficient and effective utilization of the organization's resources to attain established objectives. Various factors, such as the company's size, workforce, industry, and financial metrics like assets and liabilities, liquidity value, profitability, and funding methods, can impact the integration of controlling elements.

The central objective of controlling is to synchronize management systems to encompass information and foster harmonization both internally and externally within the company. Managers necessitate an information system capable of recognizing and resolving challenges, including potential cost overruns or impediments in executing future plans (Drury, 2020). This entails creating a cohesive framework that not only addresses immediate issues but also strategically aligns information systems to proactively navigate potential obstacles and enhance overall operational efficiency.

Controlling can be approached from various perspectives and domains. Simkin (2010) explores the challenges associated with implementing marketing plans within the realm of controlling, drawing insights from years of analysis in the field of marketing planning. This examination extends to controlling activities aimed at surmounting these challenges, leading to additional advantages. Moreover, research conducted by Bui, Tu Le, & Nguyen (2020) indicates that the extent

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and nature of controlling practices vary based on factors such as company size, tenure in the business, and industry. Smaller enterprises often rely on conventional financial accounting methods, while larger corporations employ advanced management accounting techniques, including activity-based costing, activity-based budgeting, decision analysis, target costing, and strategic planning.

Controlling advocates for the methodical surveillance of the potential of enterprise resources such as assets and liabilities, extending beyond real-time monitoring and becoming an integral component of the comprehensive management system through strategic (predictive) management. This approach aims to pinpoint prospective business capabilities and effectively govern the potential inherent in business resources (Čebukina, et al., 2013). In essence, it seeks not only to observe the current state of resources but to strategically anticipate and harness their capabilities for optimal business performance.

As part of monitoring assets in a selected period, controlling processes can identify trends and changes in values, which enables a dynamic response to new business challenges. Established controlling is then a key partner for management and strategic planning, while its influence penetrates from daily operations to decision-making processes at the top of the company's hierarchy. Assets provide a tool that can be used at the managerial and organizational level in controlling. Janik & Ryszko (2019) analyse selected indicators in terms of controlling and evaluate their role in decision-making processes.

The aim of this paper is to carry out a comprehensive assessment of assets in companies with implemented controlling, with an emphasis on management efficiency and achieving long-term sustainability. As part of the research, the hypothesis was established that companies that have implemented controlling achieve higher values of asset´s items than companies that do not have implemented controlling.

This research is needed because it deals with the growing importance of controlling in modern business management. It must be emphasized that controlling allows companies to monitor and manage their assets more effectively. Effective controlling makes it possible to react quickly to changes in the market, to plan and allocate resources more efficiently, which ultimately increases the competitiveness and profitability of companies (Safar et al., 2018).

2 Methods

The data for the analysis were gathered from two sources. In the initial phase, it was necessary to determine whether the companies under study had implemented elements of the controlling or not. This information was collected through questionnaire surveys, creating a proportional sample of over 12,500 enterprises to match the distribution in the Czech Republic. A questionnaire was specially created for this study, which was then distributed to companies. In this way, the acquisition of relevant data from companies that have implemented controlling as part of their corporate management was ensured. Sending out questionnaires made it possible to get direct and specific answers from companies that are directly involved in the practical application of controlling. The process of distributing the questionnaires was managed systematically and purposefully to ensure the representativeness of the sample. This increased the chance of obtaining complex and relevant data that could be used for a deeper analysis of the relationship between controlling and individual asset items. In 2023, data were obtained from 197 companies, representing an almost 2% response rate. The companies were then classified based on their engagement with the controlling. Out of the total 147 analysed enterprises, it was found that 89 had implemented elements of controlling, while 58 had not.

In the subsequent steps, the accounting data values were determined for these classified companies using the Albertina Gold Edition database. However, financial data from balance sheets could only be obtained from 98 out of the 147 companies. The relationship between these factors was then analysed using a statistical Mann-Whitney U test., a method designed for assessing unpaired experiments when comparing two distinct samples. This test is specifically applied to examine the hypothesis that two variables share the same probability distribution. Importantly, these variables are not necessarily required to follow a Gaussian normal distribution; it is adequate to assume their continuity. The test involves calculating a statistic, and the distribution of this statistic under the null hypothesis is well-established. The null hypothesis posits that the medians of the two samples are identical, as outlined by Freund, Wilson, and Mohr (2010) and Budíková, Králová, and Maroš (2010).

Statistically, it has always been tested at a significance level of 0.05 where zero hypothesis H0: μ1 - μ2 = 0 against alternative hypothesis HA: μ1 - μ2 ≠ 0. U is then given by:

$$U_1 = R_1 - \frac{n_1(n_1+1)}{2}, \tag{1}$$

Where:

n1   the sample size for sample 1,
R1   the sum of the ranks in sample 1.

An equally valid formula for U is:

$$U_2 = R_2 - \frac{n_2(n_2+1)}{2} \tag{2}$$

The smaller value of U1 and U2 is the one used when consulting significance tables. The sum of the two values is given by:

$$U_1 + U_2 = R_1 - \frac{n_1(n_1+1)}{2} + R_2 - \frac{n_2(n_2+1)}{2} \tag{3}$$

Knowing that $R_1 + R_2 = \frac{N(N+1)}{2}$ and $N = n_1 + n_2$, and doing some algebra, we find that the sum is $U_1 + U_2 = n_1 n_2$.

3 Research results

As part of the statistical analysis, the statistical dependence between the amount of assets and the implementation of controlling tools in enterprises was investigated. As described above, the data was obtained from the balance sheets of individual companies and based on a questionnaire survey. The analysis was divided into four parts in the same way as the assets in the balance sheet are broken down:

1. Analysis of total assets.

2. Analysis of fixed assets.

3. Analysis of current assets.

4. Analysis of other assets.

The author assumes a dependence between the implementation of controlling and the amount of assets in companies based on the theoretical foundations of corporate management and logical arguments (Horváth, 2003; Safar et al., 2018). Overall, the implementation of controlling is expected to have the potential to positively impact the value and management of corporate assets.

3.1 Dependency analysis in the total assets

As part of the first analysis, the value of total assets was examined in relation to the implemented elements of controlling. The hypotheses H0 = x0,50 – y0,50 = 0 were tested, where it is assumed that the influence of implementation of controlling in these enterprises is the same in both groups and the hypothesis HA= x0,50 > y0,50, which assumes that the enterprises without implementation of controlling will have lower assets. As shown in table 1, at the significance level of 0,05, the null hypothesis in favour of the alternative was rejected based on a p-value very close to zero. Therefore, we can argue that companies with implementation of controlling have a higher value of total assets. The differences you can see in the figure 1 (on the left).

Table 1 Dependence of total assets on the implementation of controlling tools

	Controlling YES	Controlling NO	U	Z	P-value	N YES	N NO
Total assets	3488	1363	697	3,08404	0,00204	62	36

Source: Own processing

The existence of differences in the area of total assets in connection with the implemented controlling can be caused by several factors. One of the key elements can be more efficient allocation of resources and better management of assets in enterprises with implemented controlling. This way, these businesses can achieve optimal results and use their resources more efficiently. Furthermore, established controlling can contribute to better strategic planning and decision-making, which can be reflected in an increased value of total assets. The ability to respond to changing market conditions

and adequately manage risk can be factors that contribute to a better performance profile and higher asset values. Improved tracking and transparency of financial information that controlling allows could also play a role. This can lead to greater confidence on the part of investors and other stakeholders, which could positively affect the financial situation of the company.

### 3.2 Dependency analysis in the fixed assets

The second analysis examined the value of total fixed assets in relation to the established control-ling elements. Fixed assets were further divided into long-term intangible assets, long-term tangible assets and long-term financial assets. The hypothesis was established as in the first analysis. As shown in table 2, at the significance level of 0,05, the null hypothesis in favour of the alternative was rejected based on a p-value very close to zero. Therefore, we can argue that companies with implementation of controlling have a higher value of long-term tangible assets and fixed assets. The differences you can see in the figure 1 (on the right).

Table 2 Dependence of fixed assets on the implementation of controlling tools

	Controlling YES	Controlling NO	U	Z	P-value	N YES	N NO
Long-term in-tangible assets	955	320	184	1,81976	0,06879	34	16
Long-term tangible assets	3182	1378	783	1,96801	0,04906	61	34
Long-term fi-nancial assets	547	194	103	1,81538	0,06946	25	13
Fixed assets	3325	1331	736	2,43227	0,01500	62	34

Source: Own processing

Figure 1 Total assets (on the left) and fixed assets (on the right) in the companies with and without implementation of controlling
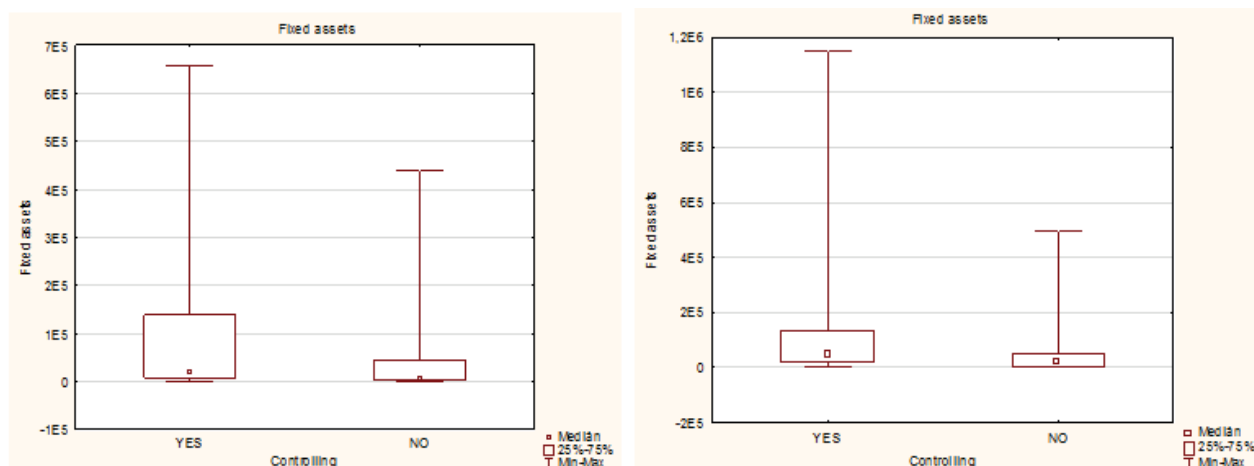
Source: Own processing

The existence of this difference in tangible fixed assets can be interpreted in several ways. One possibility is that controlling businesses better optimize their tangible fixed assets, which may include better management, maintenance, and investment in these assets. This efficiency could be reflected in a statistically significant difference. Conversely, the absence of a statistically significant difference for long-term intangible assets and long-term financial assets could be due to the specific characteristics of these categories. For example, long-term intangible assets may be more associated with intellectual property and may not be as influenced by operational processes and management. For long-term financial assets, the influencing factors can be complex and can include external investment strategies.

3.3 Dependency analysis in the current assets

As part of the third analysis, the value of current assets was examined in relation to the implementation elements of controlling. Current assets were further divided into stocks, long-term receivables, short-term receivables, trade receivables and short-term financial assets. The hypothesis was established as in previous analyses. As shown in table 3, at the significance level of 0,05, the null hypothesis in favour of the alternative was rejected based on a p-value very close

to zero. Therefore, we can argue that companies with implementation of controlling have a higher value of current assets, short-term receivables, and trade receivables. Some differences you can see in the figure 2.

Table 3 Dependence of current assets on the implementation of controlling tools

	Controlling YES	Controlling NO	U	Z	P-value	N YES	N NO
Current assets	3471	1380	714	2,95877	0,00308	62	36
Stocks	2750	1255	759	1,20129	0,22963	58	31
Long-term receivables	1149,5	503,5	293,5	1,27079	0,20380	37	20
Short-term receivables	3353	1207	612	3,29555	0,00098	61	34
Trade receivables	2302	779	344	3,78408	0,00015	49	29
Short-term financial assets	3328	1523	857	1,90496	0,05678	62	36

Source: Own processing

Figure 2 Current assets (on the left) and Short-term receivables (on the right) in the companies with and without implementation of controlling
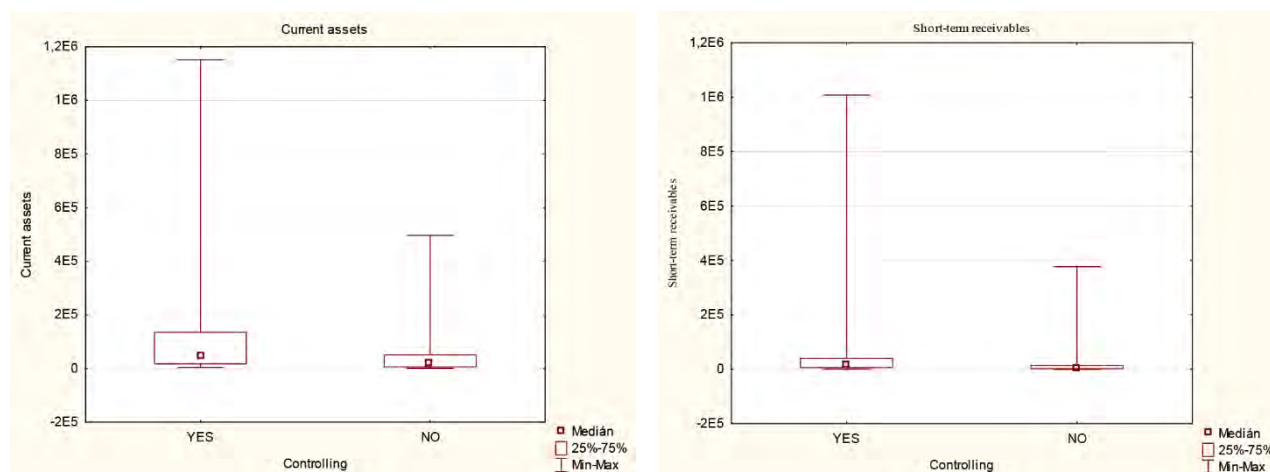
Source: Own processing

The existence of a difference in these items could be interpreted in several ways. In the case of current assets, the controlling in place can lead to more efficient management and use of these assets, which may include better storage and inventory management. Differences in short-term and trade receivables may be the result of better management and monitoring of collection processes, which may lead to a reduction in receivables and an increase in liquidity. Conversely, the non-appearance of a difference in long-term receivables may be due to the fact that these may be influenced by long-term business relationships and more complex factors that are not as straightforward as short-term receivables. Short-term financial assets can be affected by complex investment strategy factors and market conditions.

3.4 Dependency analysis in the other assets

As part of the last analysis, the value of other assets was examined in relation to the implemented controlling elements. The hypothesis was established in the same way as in the previous analyses. Unfortunately, at the significance level of 0.05, no significant difference was found in this analysis between companies that have implemented controlling elements and those that have not.

The analysis showed that there is a statistically significant difference between certain asset items, thanks to the operational and strategic controlling tools. This shows that companies with effective controlling have a detailed awareness of the state of their assets and are able to respond better to risks and opportunities.

In the context of the increasing complexity of the business environment and increasing demands for risk management, asset valuation is increasingly essential for business success. Investments in the introduction of controlling thus become a strategic decision that can significantly affect the long-term prosperity of the company. Overall, it can be said that controlling in today's business world cannot be attributed only to the role of monitoring accounting data, but rather as a key partner in achieving strategic goals and sustainable growth.

Urbinati et al. (2020) scrutinize and define distinct controlling methodologies designed to generate and seize value within business models. They underscore the imperative nature of establishing comprehensive data and providing recommendations for the effective execution of these methodologies. In essence, the study delves into specialized controlling approaches tailored to enhance value creation in the context of circular business models, emphasizing the significance of actionable insights and guidance for successful implementation.

It is important to remember that controlling is not just a numbers game. Its impact on the assets of the business can permeate various areas, including human resources, processes and technology. Effective controlling can, for example, support innovation and modernization, which is key in an environment of constantly evolving technologies.

Furthermore, at a time when global markets are experiencing turbulent events, the ability to respond quickly and flexibly to change is a key element of staying competitive. Controlling enables businesses to achieve this goal through flexible asset management and dynamic planning.

Most studies to date have focused more on general trends or areas, but this paper contributes to the development of knowledge by focusing in more detail on specific asset items and their relationship to implemented controlling tools. In this way, it brings a new perspective to a hitherto neglected area. The paper provides valuable information on how different aspects of assets respond to controlling, which can lead to a deeper understanding of the importance of controlling in corporate governance.

Further research will be carried out on liability items and further analysis of data from profit and loss statements, namely costs, revenues and profit and loss. This research will be followed by an analysis of financial indicators, such as profitability, liquidity, etc., in relation to companies that have introduced controlling elements and those that do not.

4 Conclusions

The role of controlling in modern business is not static, but dynamic and adaptable. His ability to adapt and deliver value at different levels of the business makes him an integral part of strategic leadership. Controlling tools allow companies to monitor and effectively manage their assets. In this way, they can identify weaknesses in the asset portfolio and quickly respond to dynamic changes in the market. As part of the research, the impact of the implementation of controlling elements on total assets and sub-items of assets was evaluated. The analysis was divided into four parts in the same way as the assets are divided in the balance sheet, namely: analysis of total assets, analysis of fixed assets, analysis of current assets and analysis of other assets. A statistically significant difference was found for the total assets item. The existence of differences in total assets in relation to implemented controlling can be caused by more efficient allocation of resources and better management of assets in enterprises with implemented controlling. Furthermore, implemented controlling can contribute to better strategic planning and decision-making, which can be reflected in an increased value of total assets. Another significant difference was found in the items of fixed assets and long-term tangible assets. This may be because companies with implemented controlling better optimize their tangible fixed assets, which may include better management, maintenance and investment in these assets and thus total fixed assets are also affected. In the area of current assets, there was a significant difference in the items current assets, short-term receivables and trade receivables. For current assets, implemented controlling can lead to more efficient management and use of these assets, including optimized storage and inventory management. Differences in short-term receivables and trade receivables may be due to better management and monitoring of collection processes, which may lead to improved liquidity.

Overall, it can be said that the combination of controlling and financial indicators, especially assets reported on the balance sheet, creates a robust tool for effective business management. Thanks to the regular analysis and interpretation of this data, the company can better plan and make decisions and achieve its goals more effectively.

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