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Value Based Financial Performance Measurements: A Conceptual Framework[1]

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Abstract

The phenomenon of "globalisation" has made it possible to do business anywhere in the world by removing barriers to corporate trade and financial investment. As a result, firms have greater opportunities for development and can effectively achieve higher performance. Depending on the spread of the technology, the added value achieved is more important to investors than the profitability of the investment. It is difficult to determine whether the investment will increase shareholder value and wealth using the traditional "earnings-based" approach, which takes into account the company's current and past performance data. These limitations have allowed measurements based on a value-based management strategy to gain acceptance in the research community. This study discusses the factors that make value-based measures superior to traditional techniques. In addition, explanatory and comprehensive information is provided on all methods that can be used in determining value.

Değere Dayalı Finansal Performans Ölçümleri: Kavramsal Bir Çerçeve

Anahtar Kelimeler:
Değere Dayalı, Katma Değer, Finansal Performans, Hissedar Getirisi

Özet

Kurumsal ticaret ve finansal yatırımlardaki mevcut engellerin ortadan kalmasını sağlayan "küreselleşme" olgusu, dünyanın her yerinde iş yapılabilmesinin de önünü açmıştır. Bu durum firmalar için daha fazla büyüme fırsatı ile karşılaşılması ve yüksek performans edininiminin kolaylaşması anlamına gelmektedir. Teknolojinin yayılımına bağlı olarak, işlerini herhangi bir yerden yürütmek isteyen yatırımcılar için önemli olan, yatırımın karlılığından ziyade yarattığı katma değerdir. "Kazanç odaklı" yaklaşımı savunan, firma cari ve geçmiş performans verilerini kullanan, "geleneksel yöntemler" ile yatırımın hissedar değerine ve servetine katkı sağlayıp sağlamadığını belirlemek olanaksızdır. Söz konusu kısıtlar, değere dayalı yönetim anlayışı ile hareket eden yöntemlerin bilim dünyasında yankı bulmasına zemin hazırlamıştır. Bu çalışmada, değere dayalı ölçümleri geleneksel yöntemlere göre çekici kılan unsurlara değinilmiş ve değerin belirlenmesinde yararlanılabilecek tüm yöntemler hakkında açıklayıcı, kapsayıcı bilgilere yer verilmiştir.

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1. INTRODUCTION

The business environment has changed in the new century due to complexity and unpredictability. In this context, firms have been under intense competitive pressure to complete tasks more efficiently, quickly and less costly. As persistence and sustainability are the main objectives, firms should evaluate their potential for environmental adaptation to cope with the growing number of environmental challenges. This may be achieved through performance evaluation and measurement. Because the level of efficiency and productivity of all types of business operations is directly associated with the degree of performance success (Taouab and Issor, 2019: 93).

The term "performance" is derived from the French word "parfournir," which means to execute, realize, make, and reveal; is the act of completing, implementing, and fulfilling the assigned duties on time. In the finance literature, this idea, which is described as the financial output of the firms' operations and strategies, is also an important indicator of the company's performance. It is also inevitable that positive results have a positive impact on the return on investment and profitability (Naz et al., 2016: 82; Fatihudin et al., 2018: 553). Due to the evolving nature of work, increasing competition, specific improvement initiatives, different organizational rules, external demands and the rapid development of information technology the evaluation of firm performance has become the most important topic of recent years. Using the right key figures is crucial for evaluating the company's success. Only in this way can the available resources be deployed correctly and used for profitable investments. According to Fatihudin et al. (2018: 553), "financial performance outputs," which provide important information on the firm's capital adequacy, liquidity, solvency, efficiency, financial structure and market position also define the firm's capacity to manage and control its own resources. The most important tools in assessing financial performance are cash flow statement, balance sheet, profit and loss statement and statement of changes in capital. Financial performance is the extent to which a firm's financial health is measured over a period of time. The main purpose is to provide the shareholders with all the information they need to make decisions (Naz et al., 2016: 82). Financial performance reflects the competitiveness of the firm, the potential of the work done, the management's financial motivations and the credibility of potential customers. As a result, the firm's strengths and weaknesses can be assessed using financial performance indicators, while significant information about the firm's financial status can be communicated to relevant stakeholders, investors, and lenders (Dufera, 2010: 5-6).

2. VALUE-BASED FINANCIAL PERFORMANCE MEASURES

In today's competitive economy, generating value and wealth for shareholders is among the most important goals of firms (Largani et al., 2012: 490). Only if the resources are used effectively and efficiently and the shareholders receive more returns on their investment than they expected would the aim be reached. Thus, it is important to make sure that the financial performance indicators that significantly affect the firm's value can be identified and applied in planning process (Mengi and Bhatia, 2015: 71-72).

Traditional financial performance measures are not considered adequate for corporate valuation (Bognarova, 2017: 793). The first reason is that cash flows are not taken into account since profit is calculated on an accrual basis. This condition leads to a huge mismatch between the firm's profit and its value. The second concern is on agency problems. The main task of managers is to make the correct decisions and execute the necessary steps to maximize shareholder wealth. However, the management may act in line with the company's profit maximization, which leads to profit and value differentiation. The third reason is risk. It is questionable what risks resulted in the profit reported in the financial statements. It is improbable that two companies with equal profits will achieve the same profit at the same risk levels. Therefore, a relationship between risk and return is established in the financial literature and returns are calculated on the basis of risk. The fourth concept is time. Profits reported in financial statements are provided without considering the time value of money, and the fact that the value of money may change over time is ignored. In traditional accounting, cost of equity is not taken into account in profit disclosures. These perceived limitations have led to the development of value-oriented measures of financial performance. The main difference between traditional and value-based measures is the use of cost of capital in the calculations of value-based measures. Advocates of the value-based approach accepted these measures as a significant improvement over traditional financial performance measures claiming a high level of correlation between the measures and stock returns. In cases where the measurement findings are

positive, financial gains are realized and rising shareholder value is expected. If the contrary occurs, the shareholder's value decreases (Bognarova, 2017: 793).

Some measurements that may be used to evaluate firm value include Cash Flow Return on Investment (CFROI), Total Shareholder Return (TSR), Market Value Added (MVA), Shareholder Value Added (SVA), Cash Value Added (CVA) and Economic Value Added (EVA).

2.1. Cash Flow Return On Investment

The company Holt Value Associates, which split off from Deloitte/Holt Value Associates and is now a member of the Boston Consulting Group, was the first to design the technique that has been empirically used and methodologically supported for many years of value-based understanding. This cash flow-based technique, which was first created as an analytical guide for portfolio managers, transforms a company's financial results into cash flow profitability of investment through a number of adjustments (Helfert, 2000: 408). Balteş and Vasiu (2015: 97) state that the cash flow profitability of investment CFROI method is the best measurement of value creation that can be used in determining the value creation capacity of listed companies. According to Helfert (2000: 403), CFROI is an internal rate of return that focuses on operating cash flow, cash outflow and cash profits. Designed to minimize accounting and inflation-related distortions in the evaluation of economic performance, CFROI also provides important benefits for calculating a company's potential return on its future investments (Madden, 1999).

Although it is calculated similarly to the internal rate of return method, the CFROI has a different interpretation, can be calculated for all years, eliminates the negative effects of accrual accounting on the financial statements more than the economic value added method due to its emphasis on cash flow, corrects the gross amount in the calculation for inflation, and considers the return available to all capital providers for both shareholders and competitors (Bognarova, 2016: 785).

The average life of depreciable assets, the total amount of assets adjusted for inflation, the inflation-adjusted cash flows generated by assets over their economic life, and the inflation-adjusted residual values of non-depreciable assets at the end of their life cycle are the four inputs required for the calculation of CFROI (Madden, 1999: 12). The calculations of the method are as follows (Bognarova, 2016: 785). It is required to first determine the "asset life" for CFROI.

Asset Life = Adjusted Tangible Fixed Assets/Tangible Fixed Assets Depreciation **(1)**

In formula (1), "*the asset life*" is calculated by dividing the adjusted tangible fixed assets by the depreciation of the tangible fixed assets. Asset life refers to the economic life of the firm's depreciable tangible assets and indicates how long it takes for the asset to generate cash flow to the firm. The "inflation adjusted property, plant and equipment amount" in equation (1) is the sum of depreciated and non-depreciated assets. Its formulation is given in equation (2).

Current Cost Depreciated Assets = Inflation Adjusted Tangible Fixed Assets + Construction in Progress + Inflation Adjusted Gross Leased Property + Adjusted Intangible Fixed Assets **(2)**

The next step after calculating the asset life is to determine the amount of "inflation-adjusted non-depreciable asset". The calculation of this amount is given in equation (3).

Current Cost of Non-Depreciable Assets = Monetary Assets - Adjusted Current Liabilities + Investments and Loans + Current Inventory Costs + Current Costs And Improvements **(3)**

"Assets that are non-depreciable adjusted for inflation", formulated in equation (3), are included in the total assets invested at the beginning of the considered period. At the end of the asset life, this value represents a cash in flow. The next step is to calculate the "inflation adjusted gross cash flow". The calculation of this amount, which is a reflection of the total cash flow generated by the company's activities, is presented in equation (4).

Gross Cash Flow Amount Adjusted for Inflation = Net Profit After Tax + Depreciation and Amortisation + Adjusted Finance Cost + Rental Expense + / - Monetary Holding Gain / (Loss) - Cost of Sales Adjustment for Replacement Value of Inventories + Net Pension Expense + Minority Interest + Special Item After Tax **(4)**

Using the items in equations (1), (2), (3) and (4), the CFROI value can be calculated as follows.

CFROI = Sustainable Cash Flows / Current Cost of Gross Investment **(5)**

CFROI is the discount rate which ensures that the present value of all future cash flows equals the initial investment. The CFROI value is calculated by determining an internal rate of return that includes the estimated useful life of a company's depreciable assets as well as the expected residual values of its non-depreciable assets. The CFROI figure is then compared to the company's actual cost of capital. If the CFROI value is lower than the company's actual cost of capital, the net present value of the investment will be negative, indicating that the investment has not contributed to the shareholder's wealth. If the CFROI is higher than the cost of capital, there will be an increase in the shareholder's wealth due to the increase in the net present value of the investment (Bognarova, 2016: 784).

Among the advantages of generating cash flow method are converting accounting profits into cash flow figures, using inflation-adjusted total cash flows instead of amortized book values, accounting for the lifespan of assets owned to generate cash flow and expressing them as a return percentage rather than a monetary amount. However, in addition to its benefits, the method also has several disadvantages, including the complexity of calculation, the need to identify numerous accounting adjustments, the combination of large capital expenditures in initial projects with generally low or negative cash flows, the difficulty of determining low or high CFROI projects due to the different CFROI levels of projects in the portfolio and the significant impact of estimated inflation adjustments on the quality of the method (Bognarova, 2016: 786).

2.2. Total Shareholder Return

The impact of managers on stock prices and the market value of the company has long been an ongoing debate in finance theory and practice. Some argue that managers control several elements that drive value generation and price allocation, while others believe that their level of influence is limited. To establish a judgment on management's contribution to value creation and their potential influence on shareholder wealth, appropriate performance measures must be employed. The "Total Shareholder Return" (TSR) technique, for example, reveals the value generated by managers' decisions (Cupic and Todorovic, 2011: 1).

TSR is defined by Basso (2015: 76) as the total value produced for shareholders over time. TSR, as a measure of value creation, is considered by Nicola et al. (2016: 182) as an important criteria that investors can use to evaluate the success or failure of their investments. Total shareholder return is the actual measure of the total return earned by shareholders (Sharma, 2013: 81). A shareholder's total return is comprised of two major components: dividend income and capital gains or losses resulting from changes in stock price. The approach for calculating the percentage contribution of invested capital to shareholder value is appealing to shareholders (Cupic, 2010: 88). The method's formula is provided in equation (6).

Total Shareholder Return = [(Current Share Price – Initial Share Price) + Paid Dividend] / Initial Share Price **(6)**

The TSR, which can take negative or positive values, is calculated by dividing the exchange price of the stock and the closing price of the dividend payments according to the formula (6) above. The adoption of return as a key measure in indicating stock performance demonstrates how crucial it is to use TSR in establishing the firm's real value.

2.3. Market Value Added

Financial markets and corporate activities are affected by various factors such as globalization, increasing competition, interest rate volatility, currency fluctuations, uncertainty and risk caused by international crises. Today's business environment must adress these issues, which can have a significant impact on the performance and efficiency of firms. These factors as well as the information included in financial statements often do not reflect the true performance of firms, which has made it necessary for managers to adopt different techniques in determining firm value. As a result, corporate finance advocates have developed a variety of theories and indicators whose results can be reflected in firm value and used by firms in decision-making. However, these developed methods are still focused on historical data and are often far from reflecting the true value. Financial theory, on the other hand, is based on the idea that a firm's ultimate goal is to increase shareholder value, and

that raising shareholder value leads to a rise in firm value. At this point, using techniques developed within a value-based management framework can be seen as the most important tool that firms can use to increase their value (Sichigea and Vasilescu, 2015: 488). The "Market Value Added" (MVA) method developed by Joel Stern and Bennett Steward, the founders of the consulting firm Stern Stewart & Company (Gs et al., 2017: 6), is considered the best indicator of wealth creation for shareholders from an investor's perspective (Niresh and M., 2014: 127).

Maximizing shareholder wealth is becoming the primary objective of the companies of today. Shareholder wealth is maximized by increasing the stock market value of a nominal equity provided by shareholders. The value of the firm's stocks represents the wealth of the shareholders which also judges firm's efficiency in utilising its capital. The book value of the firm shares reflects the capital supplied by the shareholders. "MVA," also known as "shareholder value creation," refers to the fraction of a company's market value that exceeds its book value (Niresh and M., 2014: 127).

Bennett Stewart defined MVA as the difference between the stock's market value and the amount of equity provided by the shareholders. It is defined in the literature in the same way as Stewart (Al-Awawdeh and Al-Sakini, 2018: 45; Gs et al., 2017: 8).

MVA = Total Market Cap - Economic Capital **(7)**

In formula (7), the total market value is the sum of the market value of the debts and the market value of the equity capital. Economic capital or capital employed is also referred to as "capital invested" in the firm. And this value is calculated through adding fixed assets and net working capital (Bognarova, 2017: 794).

A positive MVA indicates that the business's return exceeds its cost of capital, resulting in an increase in firm value. A high MVA shows that managers' and shareholders' activities are efficient and successful. Stewart considers organizations that succeed in raising their MVA to be worthy of investment (Gs et al., 2017: 8). MVA will be 0 if the firm has made a return equal to its cost of capital. If the cost of capital exceeds the return, the firm's value falls and the MVA decreases. MVA represents the amount of wealth generated from capital and reflects a market assessment of the firm management's effectiveness and competitive position in using and controling available resources. Although MVA and the market cap/book value ratio terms have the same meaning, the only difference is that MVA is an absolute measurement tool, a nd the market cap/book value ratio is not. Also, where the MVA is positive, the market cap/book value ratio will be less than 1 (Thenmozhi, 2000: 1).

2.4. Shareholder Value Added

Creating value and profit for shareholders is one of the most essential aims of firms in the competitive world of today. Upon reaching these goals, investors assess each investment tool against other available options. It is clear that these tools, which support the investor's decisions, will also offer significant information on future prediction. The most popular indicators are Earnings per share (EPS) and return on investment (ROI). While these tools can be applied in many ways, they do not have any direct connection to the creation of shareholder value or wealth, at least in theory. Modern evaluation methods that rely on economic theories have gained significant popularity in recent times, supplanting traditional criteria that were primarily based on accounting information.

According to Largani et al. (2012: 490), the "shareholder value added method" is a technique used to track the assessment of performance changes in value and optimize returns for long-term shareholders.Following the publication of Alfred Rappaport's book "Creating Shareholder Value" in 1986, the SVA approach became extensively acknowledged by the scientific community. The book emphasizes why the SVA method should be employed, as well as which tools should be used throughout the technique's implementation as a benchmark for corporate performance (Elali, 2007: 13).

SVA refers to the evaluation of how decisions impact a company's cash flow in terms of net present value for shareholders. This approach assesses a company's ability to generate profits that exceed its total cost of capital and can be applied at both the level of individual business units and the entire organization. When used at the business unit level, SVA examines the value generated by the unit by examining cash flows over time. At the

institutional level, SVA provides a framework for assessing options to enhance shareholder value by striking a balance between reinvesting in existing or new businesses and returning cash to shareholders (Pandey and Arora, 2013: 2129).

SVA is a useful tool that links firm decisions and strategies to value creation, with a focus on long-term profits for shareholders instead of short-term gains. Therefore, when making important financial decisions, company managers should prioritize shareholder value (Panigrahi et al., 2014: 284). SVA can also serve as a key metric for formulating, evaluating, and acquiring strategic decisions. The value of a company's operations can be determined by discounting the expected future free operating cash flows at an appropriate cost of capital. To calculate shareholder value, the business valuation should be combined with the value of securities and other investments, while subtracting the debt value (Largani et al., 2012: 491).

Pandey and Arora (2013: 2129) explain that the "shareholder value added method" involves three main calculations: firstly, calculating the actual costs of all investments in a particular business using the appropriate cost of capital for that business and discounting it to the present day; secondly, estimating the economic value of the business by discounting the expected cash flows to the present day; and finally, determining the economic value of each business by calculating the difference between the figures obtained from these two analyses. However, to ensure the effectiveness of this method, it is crucial to accurately represent the amount of investments and expected cash flows, and to have a comprehensive understanding of the business. According to Limarev et al. (2015: 491), there is a technique that offers insights into the returns on investments made. This method involves subtracting the book value of the equity from the estimated cost of equity capital.

SVA is a method used to assess the performance of a company by calculating the value of its investments through discounting the estimated future cash flow to the cost of capital. This provides the value of an investment, company, or company division. To determine the value of a shareholder the value of the liabilities is subtracted from the total discounted cash flow. Rappaport proposed that the present value of operating cash flows during the forecast period can be divided into three components: residual value and market value of securities. To calculate the residual value, the investments are recapitalized at the end of each year. The resulting cash flow and residual value are then discounted (Giurca, 2007: 662). According to SVA, the difference between the present value of the cash flow that increased before the new investment and the present value of the investment in fixed and working capital can be calculated using Equation 8 (Largani et al., 2012: 492).

SVA = (Present Value of Cash Flow from Operations During the Forecast Period + Residual Value) – Liabilities **(8)**

Fernandez (2002) defines SVA as the variance between the wealth of shareholders at the end of a particular year and the wealth they held in the preceding year, indicating the change in shareholders' wealth. Based on this definition, SVA can be expressed as follows (Fernandez, 2002: 3).

SVA = Increase in Market Value of Equity + Dividends Paid During the Year – Outlays for Capital Increases + Other Payments to Shareholders - Conversion of Convertible and Debentures **(9)**

According to Fernandez, shareholder value creates when return on stock exceeds cost. Shareholder value created within this framework (Fernandez, 2002: 6).

Shareholder Value Created = Market Value of Equity * (Shareholder Return - Cost of Equity)

Shareholder Value Created = SVA- (Market Value of Equity * Cost of Equity) **(10)**

A clearer idea about the performance of the firm can be given by comparing the shareholder return with the following factors (Fernandez, 2002: 11);

- SVA can be evaluated in comparison to a value of zero, where a positive shareholder return (above zero) indicates an increase in the shareholder's par value compared to the beginning of the year.

- SVA can be compared to the return on treasury bonds. If the shareholder return exceeds the treasury bond return, then there will be an increase in return proportionate to the increase in risk.
- SVA can be compared to the expected return on equity capital. If the shareholder return surpasses the cost of equity, the company creates value. By opting for additional risk, the firm can generate higher returns instead of investing in treasury bonds.
- SVA can also be compared to the shareholder returns of other companies within the same industry. If a company's shareholder return exceeds that of other firms in the industry, then it can be said that the company creates more value than its competitors.
- SVA can be compared to the return on the stock market index. If the shareholder return exceeds the return on the stock market index, then the company is performing better in the market as a whole.

2.5. Cash Flow Added

CVA or Cash Flow Added, is the difference between the yearly cash flow necessary to amortize an investment and the actual cash flow produced. It utilizes the cost of capital as a benchmark and assesses the economic value created by cash flows beyond the cash flow needed to recover the invested capital. CVA is similar to the net present value standard and aligns with internal investment analysis (Helfert, 2000: 405-406).

The Ottoson and Weissenrieder approach defines the CVA as a "net present value model" that divides investments into strategic and non-strategic categories. Strategic investments aim to create new value for shareholders, while non-strategic investments aim to protect the value created by strategic investments. The capital base in the CVA model is formed by strategic investments, whether they are tangible or intangible assets, as they are the source of the financial requirements of shareholders. Other investments made to preserve the original value of the venture, such as buying new furniture, are considered costs. The capital base is determined by calculating the operating cash flow demand for each strategic investment and adjusting it for inflation. The operating cash flow demand is not an estimate of future cash flow, but a fixed measure of future cash flows that can be discounted using an appropriate cost of capital. A strategic investment creates value if the operating cash flow exceeds the operating cash flow demand over time. Accurately calculating the capital cost is essential for determining the capital base correctly in this framework (Weissenrieder, 1997: 5).

+ Sales
- Costs
= Operating Profit
+/- Change in Working Capital
- Non-Strategic Investments
= Operating Cash Flow
- Operating Cash Flow Demand
= Cash Value Added (CVA)

The CVA method measures the value created for shareholders, which can be expressed using monthly, quarterly, or annual data, or as an index. The CVA index is a distinct aspect of the CVA approach and is calculated by dividing the operating cash flow by the operating cash flow demand. This index is compatible with the profitability index and is a useful tool for evaluating a company's performance from a shareholder perspective (Ottosson and Weissenrieder, 1996: 6).

$$\textit{Profitability Index} = \textit{Cash Flow (Operating Cash Flow}_{1\text{-}n}\textit{)} \;/\; \textit{- Investment} = \textit{[Cash Flow (Operating Cash Flow}_{1\text{-}n}\textit{]/ [Cash Flow (Operating Cash Flow Demand}_{1\text{-}n}\textit{)} \quad \textbf{(11)}$$

The CVA index allows for a comparison of the profitability of different units in accordance with financial theory. A CVA index greater than 1 suggests that the strategic investment is producing an adequate operating cash flow. Moreover, the CVA index can be computed by dividing the four key value elements related to sales, which are the operating margin, working capital variation margin, non-strategic investment margin, and operating cash flow demand margin (Ottosson and Weissenrieder, 1996: 6).

CVA Index = (Operating Profit Margin + Working Capital Movement Margin + Non-Strategic Investment Margin) / Operating Cash Flow Demand Margin **(12)**

By thoroughly analysing the four most important elements of value, companies can determine which element has created the most value in the past. Based on this analysis, the company can make necessary adjustments to these variables to align with future conditions. This provides management with a valuable tool to evaluate the value and profitability of their current and future strategies. If management can determine whether past margins are sufficient, they can better understand if their plans for the future will benefit investors. Specifically, if the CVA index for planned strategic investments is projected to be >1, this information can significantly enhance the decision-making process for management (Ottosson and Weissenrieder, 1996: 6).

The valuation method for companies focuses exclusively on cash amounts and takes into account all essential value metrics, including the economic life cycle, expected future cash flows over a given period, and the associated cost of risk capital. This approach enables the assessment of a firm's performance, taking into account its potential to generate future cash flows, estimated business longevity, and market criteria. The method provides a concise measure of a company's cash generation capacity and solvency, revealing the solvency of companies that generate cash premiums beyond expected levels while creating value. Additionally, the method enables companies to assess their value based on the sum of invested capital and discounted cash value added. This measure is widely applicable to all types of businesses, as it is based on reporting data and is an expected measure. Thus, CVA serves as a universal criterion that businesses can use both in the planning phase of selecting a solvency strategy and in the later control phase (Urbanczyk et al., 2005: 7).

2.6. Economic Value Added

Traditional financial performance measures, such as return on assets and equity, have been criticized for their inability to provide guidance for strategic decision-making. One of the main criticisms is that they do not consider the cost of capital used to finance investment projects, fail to identify the underlying causes of success or failure, and lack tools to assist management in projects that have the potential to create value (Bontis et al., 1999: 394). In contrast, the value management approach emphasizes the importance of creating value through the effective and efficient use of all company resources, including physical and intellectual capital. Economic value added is a crucial aspect of value management as it emphasizes the value-creating and non-value-creating units. Therefore, it can be said that the understanding of value-based management and economic value added complement each other.The primary goal of companies has shifted from maximizing profits to maximizing shareholder value, and assets play a critical role in creating value. Various methods are used to measure the economic value of assets including the value-based method of "Economic Added Value" (EVA), which was introduced by Stern Stewart & Co in the early 1980s (Sabol and Sverer, 2017: 19).

This approach calculates the portion of the investment gain that exceeds the cost of capital and indicates whether the investment has been profitable or not (Helfert, 2000: 405). In essence, the method reveals the relationship between total return and cost (Costin, 2017: 168). A positive difference suggests that value has been created for shareholders, while a negative difference indicates a decrease in shareholder value.

The popularity of the value-based method known as economic value added (EVA) is on the rise. This trend can be attributed to the liberalization movement in capital markets, which has resulted in the removal of capital controls, increased liquidity in capital markets, recognition of the value of institutional investor positions, and facilitated cash flow transfers across markets (Young, 1997: 335).

While economic value added (EVA) is a well-known concept, its underlying idea is not new. The concept of "residual income," which is similar to EVA, was first introduced by Cambridge economist Alfred Marshall in 1890. Marshall argued that residual income occurs when a company earns sufficient profits to cover its operating and capital costs, meaning that it can create value beyond these costs (Young, 1997: 335; Friedl and Deushinger, 2008: 1). Some researchers suggest that the concept was also known to Alfred Sloan, the patriarch of General Motors, in the 1920s, although it was not referred to by that name at the time (Bontis et al., 1999: 394). Stern Stewart & Co, a consultancy firm based in New York, began branding the concept as EVA when it was introduced to the market in 1989 (Geyser and Liebenberg, 2003: 108).

The calculation of EVA involves utilizing data from conventional financial statements. Two formulas can be used to compute EVA.

Table 1. Calculation Methods of EVA

1. Calculation Method
EVA = NOPAT-CC = NOPAT – (WACC*NOA)
2. Calculation Method
EVA = (ROCE –WACC)*NOA = ROCE = NOPAT /NOA
NOPAT: Net Operating Profit AfterTaxes CC: Cost of Capital WACC: WeightedAverageCost of Capital NOA: Net Operating Assets ROCE: Return on Capital Employed

Source: Göğüş, 2011: 11

The two formulas presented above provide the same result for calculating EVA. The first formula requires the knowledge of net operating profit after tax, net operating investment, and weighted average cost of capital. Using this equivalence, EVA is calculated by deducting the cost of capital from net operating profit after tax. On the other hand, the second formula requires information on the return on capital ratio, average cost of capital, and net operating investment amount to calculate EVA. The formula derives the net profitability ratio by subtracting the weighted average cost of capital from the return on capital ratio. EVA is calculated by multiplying the net operating profit after tax by the weighted average cost of capital, and then subtracting the resulting value from the net operating investment amount. The return on capital ratio in the formula reflects the profitability of the capital used for operations, rather than the profitability of all capital. A positive EVA value (EVA>1) indicates that the investment is more profitable than the total cost of capital, and that the company is effectively using its resources to increase its value. An EVA of zero (EVA=0) indicates that the return on investments is equal to the cost of capital, while a negative EVA (EVA<0) indicates that the return is lower than the cost, the company is not using its resources efficiently, and its value is decreasing (Alexei, 2012: 35).

Despite the straightforward nature of the formula for calculating EVA, there are challenges involved in the process. Proponents of EVA argue that traditional accounting methods based on accruals can lead to inaccurate accounting profits, which can in turn impact the reliability of EVA results. Therefore, to arrive at a more accurate EVA, certain adjustments need to be made. Additionally, calculating the cost of capital for the formula poses challenges since this determination is influenced by various factors that are difficult to quantify. Some of these factors include the availability of capital sources, market prices for funds, market risks, commercial risks, investor expectations, and macroeconomic variables (Sabol and Sverer, 2017: 22).

EVA is a significant tool that supports investment and managerial decisions, identifies growth opportunities, sets short and long-term goals, and makes assumptions about future value growth. By shifting the mindset of managers and employees from a shareholder perspective, EVA promotes long-term thinking in all organizational activities. However, in an inflationary context, EVA may not accurately reflect the true value of the company. To address this issue, adjusted EVA can be used instead (Geyser and Liebenberg, 2003: 108; Costin, 2017: 170).

3. CONCLUSION

In the face of globalization and technological progress, companies face tough competition and sustainability can no longer be achieved through profit orientation alone. The key to sustainability lies in increasing shareholder value. In determining the value of a firm, traditional methods are commonly used, although they may not reflect the true value of the firm. One of the main reasons for this is that cash flows are not considered due to the accrual basis of profit calculation. Additionally, managers may prioritize investments with high profitability, leading to a divergence between profit and value. The financial statements may not clearly reflect the risks associated with the company, and the time value of money is often disregarded. As traditional methods fail to

reflect the true value of a firm, managers are turning towards different techniques to determine its value. Methods developed under the value-oriented management approach are becoming increasingly important and necessary, since they aim to increase shareholder value. However, these methods require more items in their calculations and can be complex and time-consuming, which discourages investors from using them. To encourage the use of value-based methods, theoretical studies are needed that provide comprehensive and explanatory information about these methods. Such studies can help interested parties to better understand these methods and enable them to use them more frequently to determine the true value of the company.

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