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**Research Article**

**Effect of EVA, CFROI, MVA and CVA Methods on Shareholders Value  
Maximization and Financial Performance Estimation: An Empirical Study**

**Kemal Yaman<sup>a</sup> & Seda Topal<sup>b</sup>**

**Abstract**

With the globalization of markets, competition and performance pressure have accelerated. Investors rightfully expect a reasonable return on the capital they make available to others. Since companies often achieve their growth through capital obtained from new shareholders, the pressure on company profitability increases significantly. The capital market rewards companies' good performance and also punishes their bad performance. At this point, Economic Value Added (EVA), Cash Flow Return on Investment (CFROI), Cash Value Added (CVA) and Market Value Added (MVA), which ensure value maximization, have become increasingly important problems. For this reason, company profitability and growth potential are important. Within the scope of this study, the importance of EVA, CFROI, CVA and MVA indicators and their comparison with traditional methods are discussed in the introduction part. Studies on these indicators that embody value maximization are examined through a literature review. In the methodology section, the data of 11 companies active in the healthcare sector listed on Borsa Istanbul are analyzed through regression and correlation analyzes on the basis of the 2015-2021 period, and the effects of these indicators on stock returns. As a result, when MVA, CVA, CFROI and EVA are positive, economic profit is achieved and shareholder value is expected to increase.

*Keywords:* shareholder value, financial performance, CVA, MVA, EVA, CFROI

*JEL Codes:* G17, I15, L25

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**Araştırma Makalesi**

**EVA, CFROI, MVA ve CVA Yöntemlerinin Hissedarların Değer  
Maksimizasyonu ve Finansal Performans Tahmini Üzerine Etkisi: Ampirik Bir  
Çalışma**

**Kemal Yaman <sup>a</sup> & Seda Topal <sup>b</sup>**

**Öz**

Piyasaların küreselleşmesiyle beraber rekabet ve performans baskısı gittikçe hız kazanmıştır. Yatırımcılar başkalarının kullanımına sundukları sermayelerine karşılık haklı olarak makul bir getiri beklemektedirler. Şirketler çoğunlukla büyümelerini yeni hissedarlardan elde edilen sermaye sayesinde gerçekleştirdikleri için şirket karlılığı üzerindeki baskı önemli ölçüde artmaktadır. Sermaye piyasası şirketlerin iyi performansını ödüllendirdiği gibi kötü performansını da cezalandırmaktadır. Bu noktada değer maksimizasyonunu sağlayan Ekonomik Katma Değer (EVA), Nakit Akışı Yatırım Getirisi (CFROI), Nakit Katma Değer (CVA) ve Piyasa Katma Değeri (MVA) gittikçe çok önemli bir sorun haline gelmiştir. Bu sebepten dolayı da şirket karlılığı ve büyüme potansiyeli önem arz etmektedir. Bu çalışma kapsamında giriş kısmında EVA, CFROI, CVA ve MVA göstergelerinin önemi ve geleneksel yöntemlerle karşılaştırması işlenmektedir. Değer maksimizasyonunu somutlaştıran bu göstergeler ile ilgi yapılmış çalışmalar literatür taraması ile irdelenmektedir. Metodoloji bölümünde Borsa İstanbul'a kote olan 11 sağlık sektöründe aktif olan şirketlerin verileri 2015-2021 dönemi bazında regresyon ve korelasyon analizleri ile bu göstergelerin hisse senedi getirileri üzerinde etkileri incelenmektedir. Sonuç olarak MVA, CVA, CFROI ve EVA pozitif olduğunda ekonomik kâr sağlanmakta ve hissedar değerinin artması beklenmektedir.

*Anahtar Kelimeler:* hissedar değeri, finansal performans, CVA, MVA, EVA, CFROI

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## Introduction

Financial performance is extremely important for shareholders, banks, company managers and potential investors. The most important external measure of financial performance is the market value of the firm. External and internal criteria are needed together in financial performance measurement. Traditional financial performance measures are often inadequate in measuring the financial performance of companies. With this awareness, companies that prefer a value-based management approach use value-based performance measurement methods to maximize company value while measuring their financial performance accurately (Öztürk & Şahin, 2013). Traditional and value-based performance measurement methods, their differences and importance are given below.

Traditional performance measurement methods do not focus on shareholders and focus on company performance. In these methods, the items in the accounting records are taken as the main criteria. Among the traditional performance measurement criteria, measures such as return on assets, return on equity and earnings per share are the most important performance measurement methods. These criteria are insufficient in measuring the value created by the company. Net Present Value and Internal Rate of Return are among the frequently used traditional performance measurement methods. This method, based on the discount technique, takes into account the time values of money during valuation (Grant, 1997). Operating profit, net profit and profit margin aim to measure the income generated by the company's single-period activities (Ehrbar, 1998).

Measuring performance in financial terms is very valuable for different interest groups. These measurements are used by management and shareholders to evaluate a company's past financial performance and current financial situation, as well as by potential investors and financial analysts to predict future financial performance (Brigham & Houston, 2001).

Accounting-based (traditional) financial performance measurement methods are as follows;

- return on assets (ROA)
- return on equity (ROE)
- earnings per share (EPS)
- price/earnings (P/E Ratio)
- net present value (NPV)
- internal rate of return (IRR)

Especially since 1980, the increasing number of public offerings and shareholders in businesses has enabled business performance to be monitored more closely by internal stakeholders. The inadequacy in measuring non-financial but value-adding elements with profit and return criteria has revealed that performance must be evaluated in a multidimensional way. (Bayyurt, 2007). Therefore, taking non-financial elements into consideration in performance evaluations increases the diversity of information and stakeholders can have broader information. Data containing some reports and process analyzes such as corporate governance, sustainability and effectiveness cannot be analyzed with accounting and share-based measures (Santos, et.al., 2012). Businesses' transition to budget practices based on strategic plans and investment performance analysis creates a wider range of information for all stakeholders of the business (Jacobs, 2014). There is a very wide set of information and data in value-based financial performance measurement methods. Since measurement and analysis of unnecessary elements among these will cause loss of time and resources in businesses, choosing the right

evaluation criteria is also important for the efficiency of the performance analysis of the business (Powel, 2004).

Value-based (modern) financial performance measurement methods are as follows;

- method 1: economic value added (EVA)
- method 2: cash value added (CVA)
- method 3: market value added (MVA)
- method 4: cash flow return on investment (CFROI)<sup>a</sup>

The research examines the outcome of MVA, CVA, EVA and CFROI methods on business performance prediction of shareholder value maximization. It is aimed to contribute to the literature by evaluating all value-based performance measurement methods together.

The research is based on examining the 2015-2021 data of 11 healthcare sector companies whose shares are traded on Borsa Istanbul. Using the financial reports of the companies, the final values at the end of the fiscal year are given as share values. In this case, the dependent variable is the share value. EVA, CFROI, MVA and CVA methods constitute the independent variables.

## **Conceptual Framework**

### **Definition of Method 1**

EVA shows how much net income the company has earned by subtracting the cost of foreign resources and equity used for the activities in question from the operating income it has earned in a certain period (Figankaplan, 2021).

The aim of financial management is to maximize the net present value of the company for its partners. However, measurement systems that are not value-based are insufficient both to realize the expectations of partners to increase their earnings and to make decisions for new investors (Köroğlu, 2008).

EVA shows how much more or less the real economic profit or income is than the minimum return rate desired to be obtained from other investments with similar risk levels (Köroğlu, 2008, p. 8). Economic profit or economic value added is one of the most recently used concepts regarding the calculation of profitability. In order to create value for shareholders, operating profits must exceed the costs incurred for capital (Helfert, 2000). In short, EVA measures whether the operating profit covers the cost of the total capital used (Köroğlu, 2008).

### **Definition of Method 2**

Cash Value Added is the difference between operating cash flow and operating cash flow requirement. In other words, it is a valuation method based on the cash generated by a business from its activities (Gümüş, 2018).

CVA is a net present value model in which net present value calculations are made periodically and investments are divided into strategic and non-strategic. While strategic

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<sup>a</sup> This paper examines these four methods together. So, these methods will not be written anymore by name from now on “these four methods” will be used.

investments are investments such as expansion investments that aim to create new values for shareholders; Nonstrategic investments, on the other hand, are investments aimed at protecting the value created by strategic investments (Top, 2013).

### ***Features of Method 2***

Method 2 uses cash flows to measure financial performance and can measure the value created by the subunits of the company as well as the total value created by the company. Method2 highlights cash flows as the main factor in control and decision-making processes, and this situation is a reliable, precise and effective control measure for managers (Erasmus, 2008). It also establishes meaningful relationships between strategic decisions and the economic consequences of these decisions. In addition, it facilitates financial comparability between the resulting economic results and the units of the company (Öztürk & Şahin, 2013).

Method 2 aims to create cash flows that will provide returns above the capital's cost used in the firm, based on cash flows, and argues that this creates economic value. In doing so, it uses a standard cost of capital rate (Öztürk & Şahin, 2013).

### ***Advantages of Method 2***

In addition to being used as a performance measure, Method 2 is a modern criterion that is highly effective, especially in company acquisitions and in the evaluation of new investment projects (Başaran, 2018).

Method 2 can be easily divided into key performance indicators related to each management area and, in general, can be used to ensure that the company can make improvements at many points in the management process (Başaran, 2018).

It is also possible to calculate the method 2 value as an index. Since the method 2 index is a ratio, it removes the effect of companies' scale sizes and enables them to be compared. Therefore, the method2 index eliminates the problem of scale differences between businesses in analyzes and makes the method 2 value a comparable indicator for businesses of different sizes (Figankaplan, 2021).

Method 2 can be calculated by taking into account the cash flows generated both on the basis of each business unit of the company and on the basis of the company as a whole. Since it allows performance measurement on a business unit basis, it also enables comparative evaluation of activity types. In this way, it is stated that it is one of the two best criteria, along with method 1, among value-based indicators in terms of providing application diversity (Figankaplan, 2021).

### ***Disadvantages of Method 2***

The measurement of current performance is based on comparisons of cash flow estimates and the actual cash flow of that period. It is a very complicated method in terms of calculation (Top, 2013).

In order to apply the method, a lot of information about the asset structure of the companies is needed. If accurate information cannot be accessed, the application of the method is both difficult and costly (Gümüş, 2018).

### **Definition of Method 3**

Method 3 is a measure that compares the market value of a company's capital with its book value. Method 3 is the difference between the company's market value including the

company's capital and debt and the supplied capital by shareholders and lenders. In this sense, Method 3 is the difference between the capital investment investors have made in the company and the value they will obtain if they dispose of their investments at the share price in the current period. In other words, Method 3 can be defined as the difference between the market value and book value of the company (Okumuş, 2004).

Method 3 is also a realistic measure of how much shareholder value is increased. Because this criterion reveals both the degree to which shareholder welfare is increased and the extent to which company managers use company resources beneficially in the long term (Özevren, 2008). Since method 3 is a measurement tool that indicates how effectively the firm's limited resources are used, it is a good external measurement tool that evaluates the success of company management. It also has a criterion feature as it allows the evaluation of past business performance and the prediction of future business performance (Topal, 2008).

### ***Features of Method 3***

The features of method 3 can be summarized as follows (Bayrakdaroğlu, 2009):

Method 3 is a realistic measure of the extent to which shareholder value is created. Because this criterion reveals both the degree to which shareholders' welfare is increased and the extent to which company managers use resources effectively by positioning the company in the long term.

Method 3 shows to what extent the current and future value created by the company is reflected in the market value of the company and aims to cumulatively measure the wealth created for investors. Method 3 also theoretically shows the value of a stock market or a stock. As a result, the maximization of Method 3 for the future period reveals the shareholder value of the partners and checks whether the firm adds a premium to the capital it provides from capital owners and lenders.

Method 3 is the best external measure reflecting management's performance. Because this criterion reflects the reflex of the company management in the market by showing the ability of the company management to transform the resources under its dominance and control into value. In other words, it is a measure of the market's judgment regarding the quality of management. Method 3 reflects the net present value of the company in the market as an indicator of how economic profitability expectations affect the market value of companies. Method 3, which is an indicator of the capital market's perspective on the company or companies, can be used to explain expected future returns.

Method 3 performance measure is an effective performance indicator that reveals information about the quality of strategic decisions and signs of strategic changes. Additionally, Method 3 is used in planning the amount of wages to be paid to managers and in developing the company's strategy.

Method 3 reflects the return generated by the firm in that period on behalf of all shareholders (interest groups) as a group. Therefore, method 3 is a superior measure as firms should aim to maximize the wealth of all interest groups, not just their partners. The method 3 measure is a risk-adjusted measure because the firm's market value combines investor judgments about both performance and risk. This feature allows comparison of companies of different scales and geographies. It is also a useful measure as it allows direct comparison of companies in different industries.



## **Definition of Method 4**

Method 4 is based on the principle that the market value of the business is equal to the sum of the present values of its future cash flows. It is based on the comparison of the inflation-adjusted cash flow generated by the business and the inflation-adjusted cash investment required to achieve it (Young & O'Byrne, 2001).

Method 4 is calculated as a ratio and usually on an annual basis. Method 4 is a rate of return that measures the company's long-term expected return on its investments based on cash flows, taking into account the time value of money (Damodaran, 2018). In this respect, method 4 establishes a relationship between the company's cash flows and the return on its investments (Akalu & Turner, 2002).

## **Literature Review**

Chen and Dodd (1997) analyzed the ability of accounting methods and different criteria regarding method 1. It is concluded that method 1 values perform better than accounting earnings in netting stock returns.

Günther (1999) in his study of companies traded on the German Capital Market, compared shareholder returns with method 2, method 4 and method 1 measures. He finds low correlations between shareholder returns and benchmarks. He concluded that the CVA measure is more effective than others at low correlation levels.

Li and Guoxiao (2003) compared EVA and CVA criteria in their study. They stated that EVA focuses on accounting adjustments, while CVA is a more accurate method of determining business performance. As a result, they suggested using CVA or using EVA and CVA together and in a supportive manner in determining financial performance.

Gürbüz and Ergincan (2004) used data from 119 companies traded on the ISE between 1995 and 2000 in their research. They found that EVA has a statistically high correlation with MVA and Market Capitalization for stocks.

Şamiloğlu (2004) aimed to determine the relationship between EVA and MVA with the data of 184 companies traded on the ISE between 1995 and 2002. According to the findings of the study, 28.2% of the variance of companies MVA values in 1995, 39.7% in 1996, 10.2% in 1998, 31.5% in 1999 and 11% in 2000. While 8 of them were explained by the EVA variable, no significant relationship was detected between MVA and EVA values in 2001 and 2002.

Kara (2005) in his research based on data between 1993 and 2000 of 67 companies traded on the ISE, found that the economic added value (EVA) created by the ISE companies had a positive relationship with the firm's market value and the MVA they created has revealed.

The main purpose of Yılğör's (2005) study is to examine how to use EVA and MVA methods and their power to explain stock returns in comparison with ROE, ROA and EPS. In conclusion; It was observed that none of the businesses could create economic added value (EVA) throughout the review period (1997-2002), and only 11 businesses created market added value (MVA) throughout the review period. It has been determined that some businesses do not create market added value in the years when they create positive economic added value, and in some years, although they obtain negative economic added value figures, they create market added value in the same years. This does not confirm the common view that there is a close relationship between EVA and MVA.

Hejazi and Oskuei (2007) examined the relationship between stock returns, CVA and Price-Earnings ratio in the Tehran Stock Exchange between 1999 and 2003. They concluded that the CVA measure better explains the change in stock returns, except for the year 2001.

Küçükkapılı (2011) calculated the five-year EVA and MVA values of businesses in the ISE 100 index and investigated whether there was a relationship between them and, if so, to what extent this relationship was. The relationship between EVA and MVA values was examined by correlation analysis. As a result, it was found that there was a positive, significant and moderate relationship between EVA and MVA.

Topal (2011) aimed to determine the power of EVA to explain MVA by investigating the relationship between EVA and MVA values of manufacturing enterprises traded on the ISE. A positive relationship of 44.4% was observed between the six-year EVA and MVA values of the companies in the sample. However, it has been determined that EVA has a significant but insufficient explanatory power in explaining MVA. There is an important and meaningful relationship between EVA and MVA values of businesses on the basis of all businesses. However, it was concluded that it is impossible to explain the change in MVA by looking at EVA values alone. Within the framework of sectors, a higher relationship between EVA and MVA was observed in some sectors, while no significant relationship was found between EVA and MVA in some sectors.

Yılmaz (2013) calculated the EVA and MVA values of the manufacturing industry companies traded on the ISE according to the data of the 2006-2010 period and examined the companies as a whole, separately according to their ownership status and number of employees. According to the outcomes of the study, in the examination in which all companies were considered, in the analysis in which domestic and foreign companies were examined separately, and in the analysis in which company groups were examined separately according to their size, the correlation between EVA and MVA was generally found to be relatively low and EVA did not explain MVA. It was concluded that its power was quite low.

Top (2013) determines the effect of EVA and MVA on stock returns and also examines the effect of EVA on MVA. According to the study results, it was found that the EVAs of the companies in the ISE Industrial Index had a statistically significant and positive effect on their MVAs. Although the same study concluded that the EVA of the companies in the ISE Industrial Index in 2009 had a statistically significant and positive effect on their MVA, the effect of their EVA in 2008 and 2010 on their MVA was not statistically significant.

Nakhaei and Hamid (2013) examined the explanatory power of EVA over MVA according to accounting-based measures (ROA and ROE). In the study, data of companies traded on the Tehran Stock Exchange (TSE) for the period 2004-2008 were used. The study found that there was a significant relationship between EVA and ROE and MVA, but there was no significant relationship between ROA and MVA. It also shows that EVA is an effective measure in defining the stock market value of the firm.

Kırlı et al. (2013) examined the relationship between CVA and financial performance using data obtained from the balance sheet, income statement and cash flow statement footnotes and annexes of 10 companies whose stocks are included in the industrial index traded in Borsa Istanbul between 2009 and 2012. In conclusion; It has been determined that the cash flow demand (OCFD) is higher than the cash-based NOPAT (Net Operating Profit After Tax) value. In addition, it has been determined that the weighted average costs of capital (WCC) of enterprises are relatively lower than in previous years.



Ünlü (2014) analyzed the 2012 performances of 10 cement companies whose shares are traded in Borsa Istanbul with CFROI and CVA, which are value-based methods. By comparing CFROI and WACC values, it was evaluated whether companies achieved returns over the capital's cost. It was found that, with the exception of two firms, firms are unable to create worth for stockholders.

Mert and Demir (2016) examine the 2014-2015 financial information of various energy companies with Cash Flow Return on Investment (CFROI), a value-based performance measurement model. An evaluation of the CFROI and WACC values of these companies was made. When companies in the sector are examined one by one, stockholder price does not increase at the same level. Nevertheless, when looking at industry average, it is also seen that value is created for shareholders.

Bognárová (2016) aimed to measure and compare the relationship between net profit, earnings per share, and EVA and MVA. According to the results of the study, EVA has a higher explanatory power than net profit and profit per share in explaining the changes in MVA in the companies selected between 2010 and 2015.

Yaman and Kurtlar (2022) examined the consequence of EVA and CFROI methods on commercial performance estimation of shareholder value maximization. The scope of the study consists of healthcare sector companies whose shares are traded on Borsa Istanbul (BIST) between 2015 and 2021. As a result, it has been observed that method4 and method1 have a positive consequence on companies' share earnings. The method4 method has a more serious impact. Therefore, the best financial performance measure for shareholder value is the CFROI method.

### **Method and Analysis**

The scope of the research consists of 11 healthcare sector companies (pharmaceuticals, pharmaceutical warehouses, hospitals and insurance) of which stocks are dealt on the Turkish stock market. The healthcare sector was chosen for the research on the grounds that the topic is in the area of healthcare organization and there is a gap in the literature regarding the techniques used. Companies subject to the research; MLPCare, LOKMAN HEKİM Health Group, AK Sigorta, ANADOLU HAYAT EMEKLİLİK Anonim Şirketi (ANHYT), ANADOLU Sigorta (ANSGR), AGESA, RAY Sigorta, TÜRKİYE Sigorta, DEVA, ECZACIBAŞI and SELÇUK ECZA DEPO (SELEC). Data for the period 2015-2021 of companies in the healthcare area traded on BIST are examined. For this reason, financial reports of companies starting from 2015 were used. Final values at the end of the financial year are provided as share values, and in this situation the dependent variable is the share value. EVA, CFROI, MVA and CVA methods constitute the independent variables.

**Method 1.** is an evaluation of a company's economic profit after its net operating profit after tax (NOPAT) less its total cost of capital. The formula for EVA is as follows (Stewart, 1991):

$$EVA_t = NOPAT_t - (WACC_t * CE_{t-1}) \quad (1)$$

**Where;**

**$EVA_t$** : Economic Value Added in period t

**$NOPAT_t$** : Net Operating Profit after Taxes in period t

**$WACC_t$** : Weighted Average Cost of Capital in period t

**$CE_{t-1}$** : Total invested Capital in period t-1

The calculation of WACC is as follows (Rehman et al, 2010):

$$WACC = W_d * K_d * (1 - T) + W_e * K_e \quad (2)$$

**Where;**

**$W_d$** : Debt ratio

**$K_d$** : Cost of borrowing

**$T$** : Tax rate

**$W_e$** : Equity ratio

**$K_e$** : Cost of equity

**Method 4.** is a method for determining the expected profit on an investment by focusing on disposable income and the present discounted value. Method4 is determined by the following formula (Damadoran, 1999 & Chandra, 2011):

$$CFROI = \frac{\text{Gross Cash Flow} - \text{Economic Depreciation}}{\text{Gross Cash Investment}} \quad (3)$$

**Gross Cash Flow =**

NOPAT + Depreciation Expenses + Interest Expenses + Leasing Expenses +/-Increases

or Decreases in Monetary Reserves + Allowance for Retirement Pay + Minority Share Profit

**Gross Cash Investment =** Depreciable Assets + Net Monetary Assets + Non – Depreciable Assets

Economic Depreciation (ED) is the annual investment that gives the opportunity cost of a firm's funds. Maintaining depreciable assets at an amount that is the same as the asset's early cost at the end of its life (Martin & Petty, 2000).

**Method 2.** is a valuation method based on the cash generated by a business from its activities (Gümüş, 2018).

CVA is calculated as follows (Gümüş, 2018):

$$CVA = \text{Operating Cash Flow} - \text{Operating Cash Flow Request} \quad (4)$$

$$\text{Operating Cash Flow} = \text{Change in Operating Surplus Capital} +/- \text{Business Non – Strategic Investments} \quad (5)$$

$$\text{Operating Surplus} = \text{Sales} - \text{Costs} \quad (6)$$

$$\text{Cash Value Added} = \text{Operating Cash Flow} - \text{Targeted Operating Cash Flow} \quad (7)$$

**Method 3.** shareholder wealth is maximized by maximizing the difference between the firm's stock market value and the amount of equity capital provided by shareholders. This difference is called Market Value Added (MVA) (Başaran, 2018).

MVA is calculated as follows. Here (Köroğlu, 2008);

$$\text{MVA} = \text{Total Value of the Firm} - \text{Total Capital} \quad (8)$$

**Total Value of the Firm =**

$$\begin{aligned} & (\text{Number of shares outstanding} \times \text{Market price of shares}) + \\ & (\text{Number of Preferred Shares} \times \text{Market Price of Preferred Shares}) + \\ & (\text{Market Value of Debt}) \end{aligned} \quad (9)$$

If the market value of the debt equals the book value, MVA can be expressed as follows:

$$\text{MVA} = \text{Market Value of Equity} - \text{Book Value of Equity} \quad (10)$$

In this study, F-Test, Regression and Correlation methods were used in statistical data analysis. The regression equation is as follows (Subramanyam and Kumar, 2020; Yaman & Kurtlar, 2022):

$$\text{StMRe} = \alpha + \beta_1 \text{EVA} + \beta_2 \text{CFROI} + \beta_3 \text{MVA} + \beta_4 \text{CVA} + \mu \quad (11)$$

**Where;**

**StMr** = Stock Market Returns of firms selected

$\alpha$  = Constant

**EVA** = Economic Value Added

**CFROI** = Cash Flows Return on Investment

**MVA** = Market Value Added

**CVA** = Cash Value Added

$\mu$  = Error term

EVA, CFROI, MVA and CVA performance measures on stock exchange yields, the hypothesis is presented below:

H0: The impact of EVA, CFROI, MVA and CVA on share yields does not produce stockholder price.

H1: The impact of EVA, CFROI, MVA and CVA on share yields produce stockholder price.

**Table 1***Model Summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,666 <sup>a</sup>	,443	,411	4,9354480	,443	13,745	4	69	,000

Note. a. Predictors: (Constant), mva, cva, cfroi, eva.

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In Table 1, the adjusted R<sup>2</sup> value is calculated as 41.1%. The model states that 41.1% of the change in stock prices determined as the dependent variable can be stated by the independent variables MVA, CVA, CFROI and EVA.

**Table 2***ANOVA Test*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1339,242	4	334,810	13,745	,000 <sup>a</sup>
	Residual	1680,747	69	24,359		
	Total	3019,989	73			

Note. Dependent Variable: Share. a. Predictors: (Constant), mva, cva, cfroi, eva.

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According to Table 2 (ANOVA Test), sig. Since the value is lower than 0.05, the suggested model is statistically important. The change in stock return is caused by the variation in MVA, CVA, CFROI and EVA values.

**Table 3***Coefficients*

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,092	1,066		2,901	,005
	CFROI	11,222	4,397	,241	2,552	,013
	EVA	9,170E-10	,000	,043	,435	,665
	CVA	1,133E-9	,000	,397	4,301	,000
	MVA	3,010E-11	,000	,417	4,215	,000

Note. Dependent Variable: Share.

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In Table 3, the coefficients CFROI 11.222, EVA  $917 \times 10^{-12}$ , CVA  $113 \times 10^{-11}$ , MVA  $301 \times 10^{-13}$  were calculated. The independent variables MVA, CVA, CFROI and EVA have a positive impact on share profits. Consequently, the importance degree of MVA, CVA, CFROI is less than 0.05 shows that the independent variables have an important and positive influence on share yields. When CFROI increases by one unit, the share profit grows by 11,222 units, when CVA increases by one unit, the stock return increases by  $113 \times 10^{-11}$  units, when MVA increases by one unit, the share profit increases by  $301 \times 10^{-13}$  units, and when EVA increases by one unit, the share yields increases by  $917 \times 10^{-12}$  units<sup>7</sup>. However, the importance degree of EVA is greater than 0.05, which means that its positive impact on stock returns is not substantial. When MVA, CVA, CFROI and EVA are positive, economic profit is achieved and stockholder worth is predicted to increase.

### **Discussion and Conclusion**

In this study, EVA, CFROI, MVA and CVA performance determination methods were implemented to the stock exchange yields evaluated based on the annual records in the financial reports of the firms and the share prices published in Borsa Istanbul (BIST). Descriptive statistics are used to sum up the mean, standard deviation,  $R^2$  statistical methods, regression, and coefficient of the study variables. The investigation uses hypotheses and tests using Linear Regression through SPSS statistical software to forecast the worth of a variable based on the value of financial performance variables.

Independent variables MVA, CVA, CFROI and EVA according to the research model It can explain 41.1% of the change in stock prices determined as the dependent variable. According to the ANOVA test, sig. Since the value is lower than 0.05, the research model created is statistically significant. As a result, the alteration in share profit is produced by the modification in MVA, CVA, CFROI and EVA values.

According to the calculated coefficients of CFROI, EVA, CVA and MVA, the independent variables MVA, CVA, CFROI and EVA have a positive effect on stock returns. The significance level of MVA, CVA, CFROI is less than 0.05. This shows that the independent variables have a significant and positive impact on stock returns. However, the significance level of EVA is greater than 0.05. This indicates that the positive effect of EVA on stock returns is not statistically insignificant. In conclusion, the research indicates that positive MVA, CVA, CFROI and EVA have a positive impact on stock returns, but CFROI is the best measure of financial performance in comparison to other independent variables. Particularly, positive CFROI has a large and important impact on stock returns.

The small number of companies in the healthcare sector traded in Borsa Istanbul and the small amount of data obtained for the period covered by the research are among the limitations of the research. In addition, the period covered by the research coincides with the COVID-19 pandemic. The COVID-19 pandemic has affected the health sector in many ways. This is another important limitation of the research. Because although the COVID-19 pandemic started as a health crisis, it quickly became a global economic crisis. Therefore, companies' share values, market value, and potential to attract investors are among the affected topics.



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Yazarlar makale hazırlanırken arařtırma ve yayın etięine uyulduęunu beyan etmiřtir.

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The authors have no conflict of interest to declare.

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