Comparing Value - Based And Traditional Measuring Tools.Evidance From Pakistan

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Abstract

Basic objective of the research is to identify different value based and accounting measuring tools i.e., MVA, SVA, CVA, ROA, PAT ROE and EPS in describing stock returns in non-financial companies of Pakistan. Relationship of these variables with stock return and information content of these stock return is also tested. Pakistani 97 nonfinancial listed companies are used in this study between 2016 and 2021. We have compared and find relations of SVA, MVA, CVA, ROE, ROA, EPS and PAT and relation of these performance tools with the stock return. Informational assessment tools i.e., SVA, MVA, CVA, ROE, ROA, EPS and PAT plaining shareholders' returns examined using multiple regression models. Study conclude that these relative information-content models differ significantly from one another. The study's empirical findings do not support the premise that, value-based measuring tools outperforms accounting performance measurements in terms of relative information content, only SVA among other value based and accounting based relatively have strong relation with stock return. EPS and ROE have strong relation with stock return and they outperform then other measuring tools. The outcomes of various worldwide research are similar with our hypothesis i.e. (Sura, Panchal et al. 2022, Makhija and Trivedi 2020) Different tests i.e. random effect and for fixed effect as Hausman's test and (BPG) Breusch Pagan Godfrey test for the heteroscedasticity is used to evaluate data i.e. panel data. Additionally, we have evaluated and tested the accuracy of different performance metrics' information and their connection to stock returns.

Keywords EVA, MVA, Earning per Share, Stock return.

Introduction

In recent years, creating wealth and value for shareholders has been the primary goal of business. Researchers find and compare relationship between various performance indicators and how they affect stock returns. Those companies which covers worth of Shareholders now a days are healthier. How to calculate and create value for shareholders, these questions come in the mind of every businessman? The answer of this question is difficult because creation of value for shareholders, measures are continuously observed by the researchers. Therefore, researchers are finding difficulty for new measures creations. Accounting based measures such as ROA, PAT ROE and EPS etc. reduce value creation of shareholders. Traditional measures are now criticized due to overview to fit in accrual-based, cash flows, time value and cost of capital. Further the direction for strategic management don't offer by these measures. Drawbacks in these measures give opportunity to value based measures i.e., EVA economic value added.

CFROI, Shareholder value added and MVA market value-added etc. The argument for EVA over conventional financial performance assessments as the superior financial performance metric and shows that EPS and ROE outperforms so EVA hypothesis of better explanatory power will be rejected, stock return variation was not significant and performance measure EVA is not superior then traditional (Sura, Panchal et al. 2022). Value-based or accounting-based measures have the highest information richness and are the best at explaining overall shareholder return. The results indicates that in contrast to value based measurements, measures based on accounting provide a higher comparative information substance for complete shareholder return forecast, CVA and EVA do not increase the informational value of metrics derived from accounting, a description of the total shareholder-return, the (VAIC) value added intellectual-coefficient slightly enhances informational substance offered based on accounting measurements and revenue to shareholders is significantly influenced by ROA, ROCE, ROE and EVA (Makhija and Trivedi 2020). Financial management's main objective is to maximize shareholder value. First thing is that occurs to us after reading this is how investors know that the business with which they have trusted in their hard earned money is effectively using and generating worth for them? To learn more about a company's "top line" or "bottom line," we have traditionally studied its annual reports. Various financial ratios, as the Return on Capital Employed ROCE, RONW, Earnings Per-Share EPS and DPS, etc. are also available for our assistance. Alfred in 1890 developed an idea of residual returns, which may be calculated by deducting the charge for capital used.

The question of which performance indicators provide an exact information on the change in the shareholder return or the firm's market-value is one that is currently being discussed in corporate finance. When it comes to its relationship with a market value of a company or SR of company, few studies do empirical analysis to test Stern Stewart and Co.’s assertion that EVA is superlative explanatory performance indicator above conventional accounting measurements. The statement of the Stern Stewart that EVA is a superior towards other conventional metrics connection with the worth of a company or the stock returns was refuted by several studies, however. As a result of explanatory effectiveness and evaluating the consequence of contemporary value-based performance metrics or an accounting based measurements, the findings of empirical investigations are contentious and debatable. This section presents several important research on the topic of measuring corporate performance. The affect EVA's sample for assessing performance in banking industry. According to empirical findings, Banks' ability to manage their assets is negatively impacted. EVA whereas operational efficiency, the level of innovation, and association of credit-risk positive. Productivity of bank is positively impacted by executive compensation (Zhang and Aboud 2019). As a result, a growing number of study findings reduce the challenge of coming up with new measures and announce the production of value of investor. Investor worth creation is calculated using measures that focus on value, like EVA, MVA and ROE etc. These measurements are presently under study due to the failure to take into account the total outlay of assets, money's value over time, flow of money, and accounting principles based on accruals. Furthermore, they don't provide guidance for strategic value management. Modern value-based measurements as EVA, and MVA, and SVA benefit from shortcomings of classic measures. Implementation of EVA varies widely between firms, according to prior research, and these variations are caused by variations in ruling contexts with industry-particular traits (Worthington and West 2001, Burkert and Lueg 2013, Chiwamit, Modell et al. 2017). EVA, a metric support also started by United States consulting companies Sterns’ firm, is

one of the most significant innovations in these measures. Stern assumption, which claims economic value-added is superior to standard accounting measurements and that appraise boosts shareholder worth in respect to stock-returns, is supported by Indian corporations(Gupta and Sikarwar 2016).

The study contains the sample of 97 nonfinancial registered companies in Pakistan between 2016 and 2021 are used. We have compared and find relations of MVA, SVA, CVA, ROA, PAT EPS and ROE and relation of these performance tools with the stock return. Informational assessment tools (MVA, SVA, CVA, ROA, PAT EPS and ROE) in explaining shareholders' returns are examined using multiple regression models. We have used the test for random effect and for fixed effect as Hausman's test and (BPG) Breusch Pagan Godfrey test for the heteroskedasticity is used to evaluate data i.e. panel data. Additionally, we have evaluate and tests the accuracy of different performance metrics' information and their connection to stock returns.

Literature review

EVA is the most appropriate metric to use for assessing shareholder value (Reddy, Rajesh et al. 2011).How corporate governance practices affect how well organizations are performing financially, suggest lack of significance between EVA, ROE and TSR. Significant and positive relationship was obtain when measuring performance through Tobin's Q factor, outcome also recommend that it is difficult to check the real contact of corporate governance as different factors have an impact on these measures(Pintea, Pop et al. 2020). The argument for the supremacy of (EVA) economic value-added over accounting financial measurements. Author used multiple regression model, for autocorrelation Durbin-Watson-test, VIF-test for multicollinearity, Housman's-test is used for random and fixed effect, for heteroscedasticity Breach–Pagan–Godfrey (BPG) test and shows that EPS and ROE outperforms so EVA hypothesis of better explanatory power will be rejected, stock return variation was not significant and performance measure EVA is not superior then traditional (Sura, Panchal et al. 2022). Either value-based or accounting-based measures have the highest information richness and are the best at explaining overall shareholder return. The results indicate that as contrast to value based measurements tool, accounting-based measuring tools provide a higher comparative information content, for complete shareholder return forecast, EVA and CVA do not increase informational value of traditional measurements, describing overall shareholder-return, the VAIC slightly enhances information content offered from traditional measurements and the outcome to shareholders is significantly influenced by EVA, ROA, ROCE, and ROE (Makhija and Trivedi 2020). Factor affecting EVA performance assessment model for banking, empirical findings show negative effect on capital management of banks' EVA whereas operational effectiveness, the level of advancement, credit-risk be all absolutely associated to it. Banks productivity is positively impacted by executive compensation (Zhang and Aboud 2019).

Association among the market value for the collection of the biggest banks and relative and additional information provided by the performance indicators, EVA and market value have no significant relationship. The model evaluated revealed that EVA contained considerable more information (Laing and Dunbar 2015). EPS is better link by the returns of stock market than EVAw or other performance measurement. Tests of additive information content indicate that the explanatory ability for understanding

stock market returns is greatly increased when EVAw and EPS are combined pair wise.(Maditinos, Šević et al. 2009).

Examine whether economic value-added (EVA) proponents are correct in their assertion, EPS can be excluded from the regression analysis because it has a negative factor loading value. NOPAT and operating cash-flow better EVA in the comparative information-content test; refuting the assumption EVA has higher descriptive influence than traditional-performance metrics. Incremental evidence content data test demonstrates for EVA contributes minimally, if at all, to change in a market value of selected firms (Kumar and Sharma 2011). High stock market turbulence can result in increased (ROE) and (EROE). The impact of labor productivity on profitability is adverse, not beneficial (EVA). Both state-owned and joint-stock banks are negatively impacted by high taxes, while joint-stock commercial banks are severely impacted by capital levels. The outcome (EVA and NIM) suggests that both publicly traded and privately owned commercial banks, perform better when labor productivity and cost efficiency are higher (Tan and Floros 2012). More significant connections among MVA and operating cash-flow. The study arose to the decision that it is essential to investigate the legitimacy of share-prices based on earnings/dividends because there was minimal correlation between MVA with DPS and MVA with EPS (De Wet 2005). The assertion to EVA be the better corporate financial-performance pointer than standard measures in non-financial enterprises and give empirical support. For predict ing market-value of companies, OCF and NOAPT perform well than EVA. The claim of the supremacy of EVA to traditional measures in relative of firm's market-value is not supported by the information incremental content-test, this shows EVA, does not significantly improve information contented as compared to more traditional performance- indicators as, NOPAT, RONW, OCF, and EPS (Kumar and Sharma 2011).

The corporation should base its decision-making regarding the selection of the strategy capital allocation, mergers and achievements, business divestitures, and goals-setting on the value-based assessment measurement system. It suits vital to consider the EVA impact of a decision while allocating resources. Administration accountants are fully informed about the business and how to add value (Rakshit 2006). Other EVA-related performance indicators REVA and MVA, which have positive coefficients and excellent explanatory power, may undermine this claim. The three hospitality sectors can all benefit from using REVA and MVA as performance indicators. Only in the hotel industry does ROA exhibit positive explanatory power(Lee and Kim 2009). According to relative evidence content tests, ROE, ROA are more closely linked to SR than the other performance metrics. Additionally, assessments of incremental info content reveal value-based measurements only slightly increase the information of accounting measures. The outcomes, however, show that accounting metrics typically outweigh value-based measures(Arabsalehi and Mahmoodi 2012). In terms of explaining variation in MVA, EVA metrics are better to conventional accounting-based performance indicators. This considerable difference proposes that a new data from EVA is relevant in nearly way to explaining the firm's Market Value Added (Kurmi and Rakshit 2017). Linked to the association among executive payment and EVA and MVA, the association among executive remuneration then the accounting performance methods of ROA and ROE is stronger. A greater correlation among executive remuneration and EVA than between executive compensation and MVA was also discovered by this investigation (De Wet 2012). EVA is the most appropriate metric to use for assessing shareholder value(Reddy, Rajesh et al. 2011). Compared to

conventional instruments, EVA demonstrated a well association by stock return. According to this study's findings, for main and second board businesses, EVA generally had a greater link with stock return than traditional techniques. In conclusion, this research presented that EVA had more positive link through business success than conventional tools (Issham 2013). Companies adopting EVA did outperform those not using it in terms of stock price performance (Athanassakos 2007).

It is revealed that EVA has an information content that is more incremental and meaningful than traditional. EVA has greater correlation with stock returns and increases shareholder wealth than conventional financial performance measurements(Gupta and Sikarwar 2016). The EP portfolios show outcomes that have been around for a while. The highest gains are therefore seen in value stocks (Comp with the low price-to-earnings ratios) and the growth stocks (companies with high price-to-earnings ratios). There is no statistical difference between the ten BM portfolio results. The EVAM ratios show that the maximum return is produced by the portfolio with the lowest EVAM (lowest decile), while the highest EVAM portfolio produces the second highest return. The greatest EVAM ratio performs the best, according to the overall outcomes of the thirty portfolios. However, EP and BM's pairwise mean disparities(Leong, Pagani et al. 2009). Commonly used and accepted metrics for EVA users that are calculated by analysts are not always better than those for non-EVA users. The evidence suggests that EVA is relatively invalid, unreliable, and dubious (Palliam 2006). The higher cost of own capital precisely balances out the negative effects of high financial leverage (EVA leverage). In other words, for all scenarios with the same fixed costs, the overall leverage including EVA is the same (only if WACC remains constant). According to the underlying assumptions, the organization's sensitivity to variations in sales volume is influenced by its level of operational leverage and total cost of capital (De Wet and Hall 2004). EVA can assist management in deciding which for-profit programs should receive resources and which should not. It enables management to decide which programs should only receive resources if they have a positive EVA. The university may be able to use its assets more effectively for its non-profit divisions with the modified EVA or AVAR (Rompho 2009). GDP and EVA have a considerable impact on MVA. If size is disregarded, the relationship is greatly overestimated for the lowest quartile of MVA enterprises and significantly understated for the largest quartile of MVA firms. Our research indicates that the proportion influenced by managerial actions can be used to establish an incentive payout system when EVA is employed as a tool to evaluate managerial performance through market valuation (MVA) (Zaima, Turetsky et al. 2005).

There is a substitution effect between the two, and as a result of EVA-PA, CGOEs and the prefer accrual-based earnings management over real earnings management. Additionally, more thorough studies reveal that under EVA-PA, companies with a history of losses, greater separation among ownership and control, ownership and decision-making powers, and ownership, have a stronger incentive to manage profits. On the other hand, businesses operating in the protective industry and those that had a successful prior fiscal year have weaker earnings management motivations under EVA-PA. Real earnings and accrual earnings management have a negative influence on CGOEs' operating performances after an introduction of EVA_PA (He, Chen et al. 2020). The net impact of different KM projects was calculated using the EVA approach, which was proven to be valid and reliable. Top management and KM decision-makers could understand this because it was presented in a clear manner (Sharma, Hui et al. 2007). EVA, MVA have a

strong correlation by stock price performance, demonstrating the value of these metrics as performance indicators. Furthermore, we discovered an inverse relationship between performance in terms of EVA, MVA and CEO turnover, further reiterating the significance linked to these indicators. Finally, we discovered that businesses with greater business activity emphasis have MVA values that are much higher than those with less business activity concentration. Overall, the findings imply that EVA and MVA are useful performance indicators that provide data on the accuracy of strategic choices and act as indicators of strategic change (Lehn and Makhija 1996). The CFOs first believed that revenues, sales, EPS, and share value had a long-term focus. Second, although cash flow drives short-term behavior, using returns, stock price, and the success of development projects as significant performance criteria pushes CFOs to act long-term. Third, executives' increased time orientation is influenced by stock price, earnings, and EPS, three metrics. It is most likely because of this influence that they have garnered more attention in public discussions about executives' short attention spans than other, more "quiet" measurements that have an equal impact.

The outcomes are significantly influenced by the context (Chakhovich, Ikäheimo et al. 2010). SVA can describe Shareholder Return independently of various value-based criteria, i.e., as a company's SVA increases, SR increases. Finally, in response to the critiques leveled by academics in the field of finance, it is imperative to take a solid step by implementing creative criteria in addition to make appropriate decisions in its financing, operating, and investing sectors (Largani, Kaviani et al. 2012). Indications of the usage of this measure are provided by agency theory and organizational strategy. EVA is more frequently used by businesses with asset managers and less executive compensation. Additionally, companies that employ a defensive strategy—as shown by a smaller R&D to sales ratio have a propensity to deploy EVA. This is especially important because Stewart's contribution to performance measurement beyond the conventional earnings metric centers on the accounting modifications made in the calculation of EVA. Even though the EVA modifications may represent better economically based accounting statistics, prospector firms that find it difficult to anticipate future success with current earnings typically utilize other performance evaluation metrics. Finding the best incentives to managers may be more difficult than what EVA proponents suggest (Lovata and Costigan 2002).

The data do not offer support for public’s notion as VAIC corresponds with a firm share market value. The main causes of prior VAIC results being inconsistent are the abuse of ideas related to intellectual capital as well as the mixing up of capitalized and cash flow entities when calculating structural capital (Ståhle, Ståhle et al. 2011). According to the findings of the system testing, it was revealed that, in every fifty businesses like the sample under study, the majority of conducted analyses using regression models have issues like insignificant coefficients or R2 values that are significantly below the acceptable error level, or 5%, but some models even have both issues at once (Bakhsha, Afrazeh et al. 2017). EVA and CVA assessments for the five largest corporations are included in the empirical section. Both values show that companies in question do not generate value (Urbanczyk, Midoduchowska-Jaroszewicz et al. 2005). With the exception of structural capital efficiency and economic value- added, there are substantial correlations between the financial success of businesses and each of the independent factors (Salehi, Enayati et al. 2014). The findings imply that MVA is considerably influenced both by EVA as well as GDP. The results show that coefficients of the size of variables drop as a MVA quartiles fall while we

statistically adjust for size in the MVA-EVA relationship, indicating that size generates a systematic bias in the MVA-EVA relationship. If size is disregarded, the relationship is greatly overestimated for the lowest quartile of MVA enterprises and significantly underrated for the larger quartile of MVA companies (Zaima, Turetsky et al. 2005). In this essay, a model that may be used to illustrate the costs and advantages of risk assessment investments within the framework of value based management will be established. It is anticipated that initial risk management expenses will have to be made despite having no discernible financial benefit. Furthermore, till further investments in risk, it is predicted that it will rise more often than proportionally, so even less than proportionally (Faupel and Michels 2014).

It has been statistically demonstrated that ICP (MVAIC) has a major impact on the company's financial success. ICP (MVAIC) has a major impact on the company's future economic success (Ulum, Kharismawati et al. 2017). We discovered that CSV as determined by the Fernandez Model and MVA is positively and significantly influenced by both EVA and ROA. The findings confirm that EVA is more effective than ROA at describing changes in CSV-F (Alsoboa 2017). EVA did not have the strongest association to the generation of shareholder value. EVA has a lower link with the production of shareholder value than economic profit and other metrics. This study's main finding is that EVA does not track the formation of shareholder worth over time. Not only that, but many other factors have had a significantly stronger link with the development of shareholder value than EVA (Fernandez 2019). Returns can be explained using CVA. CVA is a financial metric that is unfamiliar to the majority of decision makers, hence it can only account for a 4.5% difference in stock returns. Despite the fact that investors utilize P/E ratio extensively, the results of another hypothesis did not demonstrate a strong link with stock returns. A 4.2% difference in stock revenues can be explained by the P/E ratio (Hejazi and MALEK 2007). Studies on the value based in Pakistan as a developing country is scarce, therefore literature provides range on Pakistan non-financial sector.

Data and methodology

Sample and data

In the study, the model of 97 nonfinancial listed companies in Pakistan between 2016 and 2021 were used. Data is taken from data stream, Pakistan stock exchange and the financial reports of a firms. In beginning 1550 companies from non-financial sector was chosen. The criteria for selection of the sample are relevant variables reported companies and top in market capitalization are selected. The final sample consists of 97 non-financial listed companies of Pakistan.

Variable Description

Variables in the study will be PAT, ROA, SVA CVA, EPS, MVA, and ROE whereas dependent variable identified in literature is stock return of the company. The research is carried out to check which measures explain stock return in term of relative and informational content. The present study is similar to (Kumar and Sharma 2011, Sura, Panchal et al. 2022, Makhija and Trivedi 2020, Zhang and Aboud 2019, Arabsalehi and Mahmoodi 2012) The computations of variables i.e SVA, MVA, CVA, ROE, ROA, EPS and PAT and the stock returns are as follows:

Cash value added

CVA = Cash basis NOPAT – (COC cost of capital * Cash basis invested capital)
Cash basis NOPAT = (NOPAT + Dep & Amortization + Changes in others long-term liability).
Cash basis invested capital = (total asset (eliminating land) minus other current liabilities plus accumulated minus depreciation).

WACC gives Company the lowest-return rate which it can satisfy investors on their investments.
The following method is used to compute the WACC:

WACC = We Ke + Wp Kp + Wd Kd

The Cost of equity is calculated as follows.

Ke = Rf + βi (Rm – Rf)

Where Ke, cost of the equity, Rf is risk-free rate, Rm is market rate of the return and βi is the sensitivity of a stock.

Stock return

The return on investment in stocks over a specific time period is stock return.

SRit = (Pit – Pi(t-1) +Dit)/(Pit(t-1))

Market value added MVA

MVA approach calculates the change between the market value of a firm and the capital that bondholders and investors have individually provided. It is, in another word, the market value of the business's debt and equity minus any capital privileges that have been brought. It is predicated on:

MVA = Market Capitalization - Net Worth

Shareholder value added (SVA)

SVA = $\frac{\text{Change in NOPAT}}{K*(1+K)^{(t-1)}}$ - Present _Value of Incremental_ Investment

Knowing about changes in NOPAT, WACC in this case K, and time-horizon t is necessary to compute SVA for the first term of the formula.

Return on Asset Calculation of ROA is as follows:

ROAit = $\frac{\text{PAT}it}{Total\ Assets\ \text{it}}$

Earnings per Share

EPS can be calculated as follows.

$$EPS = \frac{Profit\ after\ tax - preference\ divedend}{Number\ of\ outstanding\ shares}$$

Return on Equity (ROE)

ROE determines the effectiveness of the company

$$ROE = \frac{PAT - Preference\ dividend}{Equity\ Share\ capital}$$

Hypotheses of the study

Hypothesis of the study are as under.

H1. There is relation among these measures SVA, MVA, CVA, ROE, ROA, EPS, PAT and the stock returns.

H2. Relative information and incremental content of accounting measure.

H3. Incremental information is greater than their relative information of traditional measures.

H4. Value based is superior to other measures.

Statistical model specifications

Methodology based on the articles i.e. (Pintea, Pop et al. 2020; Sura, Panchal et al. 2022; Makhija and Trivedi 2020; Zhang and Aboud 2019; Maditinos, Šević et al. 2009; Kumar and Sharma 2011). Regression model used are OLS for cross - sectional time series data. current study is comparison between different performance measures i.e SVA, MVA, CVA, ROE, ROA, EPS and PAT. and their relative and incremental content. To find explanatory power univariate regression model are used and are as follows. We will use the test for random effect and for fixed effect as Hausman's test and (BPG) Breusch Pagan Godfrey test for the heteroskedasticity is used to evaluate data i.e., panel data.

$SRit = \alpha 0 + \beta PAT_{it} + \varepsilon it$..... 1
$SRit = \alpha 0 + \beta EPS_{it} + \varepsilon it$..... 2
$SRit = \alpha 0 + \beta ROA_{it} + \varepsilon it$.....3
$SRit = \alpha 0 + \beta ROE_{it} + \varepsilon it$..... 4
$SRit = \alpha 0 + \beta SVA_{it} + \varepsilon it$..... 5
$SRit = \alpha 0 + \beta MVA_{it} + \varepsilon it$..... 6
$SR_{it} = \alpha 0 + \beta CVA_{it} + \varepsilon_{it}$..... 7

Where SR_{it} is firm (i) stocks return in period (t). α_0 is constant(alpha). β is slope (beta).

EPS_{it} earning per share i firm and t time period. ROE_{it} return on equity i firm and t time period. MVA_{it} market value added i firm and t time period. ROA_{it} return on assets i firm and t time period. PAT_{it} profit

after tax i firm and t time period. CVA*it* cash value added i firm and t time period. SVA*it* shareholder value added i firm and t time period. εit is an error term of company i in time t.

The incremental content of stock returns as a dependent and the independent variable are SVA, MVA, CVA, ROE, ROA, EPS and PAT regression analysis is used.

$$SR_{it} = \alpha 0 + \beta 1PAT_{it} + \beta 2EPS_{it} + \beta 3ROA_{it} + \beta 4ROE_{it} + \_\varepsilon it \ldots\ldots\ldots\ldots\ldots\ldots 8$$

$$SR_{it} = \alpha 0 + \beta 1PAT_{it} + \beta 2EPS_{it} + \beta 3ROA_{it} + \beta 4ROE_{it} + \beta 2SVA_{it} + \_\varepsilon it \ldots\ldots\ldots 9$$

$$SR_{it} = \alpha 0 + \beta 1PAT_{it} + \beta 2EPS_{it} + \beta 3ROA_{it} + \beta 4ROE_{it} + \beta 2MVA_{it} + \_\varepsilon it \ldots\ldots\ldots 10$$

$$SR_{it} = \alpha 0 + \beta 1PAT_{it} + \beta 2EPS_{it} + \beta 3ROA_{it} + \beta 4ROE_{it} + \beta 2CVA_{it} + \_\varepsilon it \ldots\ldots\ldots 11$$

Results and analysis

For tests of random effect and for fixed effect as Hausman's test and (BPG) Breusch Pagan Godfrey test for the heteroscedasticity is used to evaluate data i.e. panel data. Different models are run in the software to check the required information. The outcomes of univariate and multi- variate models are as follows.

Descriptive statistics and correlation matrix

We have checked results of stationarity, fixed-effect, random-effect, and heteroscedasticity in panel data for the years 2016 and 2021. Descriptive data and the association amongst dependent variable i.e. stock returns and seven representative independent variables are shown in Part 1 of Table 1. The table makes clear that every research variable has a positive mean taken into account in study. Additionally, the majority of the Pakistan non-financial firms in this study were able to generate better returns than their cost of capital, as seen by the average stock- returns of all the firms being 45.01 and the mean value of PAT being 200.25.

Table 1

Part 1	descriptive statistics							
	SR	PAT	ROE	ROA	CVA	SVA	MVA	EPS
Mean	45.01	200.25	2.43	3.01	99.07	78.03	280.87	12.20
Std. Dev.	165.03	1140.22.	9.20	9.98	836.30	349.65	1490.0	59.90
Minimum	-99.00	-11302.20	-37.00	-226.5	-9675.01	-7658.44	-10010.43	-99.94
Maximum	11621.62	32901.00	572.36	65.01	35456.00	29325.31	37123.50	91.24.

Descriptive statistics

Shows that the majority sample of Pakistani companies, with a mean score of 1490.0, are increasing shareholder wealth. This table shows that MVA has the highest mean value. The table also demonstrates that the sample variables with the largest standard deviation values are MVA (1490.0), PAT (1140.22), CVA (836.30), SVA (349.65), ROA (9.98), ROE (9.20) and stock returns (165.03). The lowest standard deviations can be seen in ROA and ROE.

We present results of the pair-wise association between the sample variables taken into consideration in We have seen a strong positive correlation between all sample variables. A significant correlation exists between stock return and EPS (0.466). Additionally, ROA, SVA, MVA, CVA and PAT are seen with smaller correlation, whereas ROE (0.469) has the strongest association with stock returns. One important finding from the table is that traditional performance indicators such as EPS and ROE perform better among other financial performance indicators i.e PAT, ROA, MVA, SVA and CVA. We discovered through correlation research that traditional financial performance measurements have a stronger correlation with the stock returns.

Table 2

Variable	Coefficient		Std. Error	t-Statistic	Prob.
PAT	0.000274		4.33E-05	6.336725	0.0326
EPS	8.132754		1.34048	6.067046	0.0433
ROA	9.989031		2.11266	4.728177	0.0316
ROE	12.77828		3.243868	3.939211	0.0599
MVA	-9.1E-07		2.16E-07	-4.23148	0.0171
CVA	-9.8E-13		1.34E-13	-7.28358	0.0428
SVA	-6.5E-11		7.4E-12	-8.71622	0.0248
C	3964.167		443.0621	8.947205	0
R-squared	0.878918	Mean dependent var			4352.076
Adjusted R-squared	0.833864	S.D. dependent var			4114.027
S.E. of regression	2123.772	Sum squared resid			1.94E+08
F-statistic	19.50811	Durbin-Watson stat			1.981935
Prob(F-statistic)	0				

Table 2; A multivariate model shows the relation of four traditional measures and three value based i.e EPS, ROA, ROE, PAT, CVA, MVA, SVA with stock return and shows the combined effect of all the variables and results are significant.

Relative information content test using regression statistics.

The results for each independent variable are shown in Table 3 using the R^2, adj-R^2, F- stat, p-value and Durbin-Watson values.

Table 3

Regression model	R^2	Adjusted R^2	F-statistics	P-value	Durbin-Watson
PAT	0.837	0.804	25.24	0	1.669
EPS	0.83	0.795	23.96	0	1.581
ROA	0.816	0.778	21.74	0	1.578
ROE	0.815	0.778	21.75	0	1.511
SVA	0.856	0.826	29.14	0	1.531
MVA	0.814	0.779	21.8	0	1.663
CVA	0.82	0.794	23.76	0	1.678

Regression analysis for relative information content of the independent variables.

The evaluation is made by performing simple regressions for each measure. The table related the R^2 of distinct regressions, one for each performance measures. The R^2 of various regressions, one for each performance metric, were compared in the table. We discover that these models of differ significantly from one another. All equations are found to be significant using F-statistics. Likewise, all of these explanatory factors' coefficient values are significant at 0.05 level. We discover that SVA with an R^2 of 85.6 %, PAT, with an R^2 of 83.7%, EPS, with an R^2 of 83%, CVA, with an R^2 of 82.0%, ROA, with an R^2 of 81.6%, ROE, with an R^2 of 81.5 % and MVA, with an R^2 of 81.6% SVA has the best capacity to explain shareholder returns of Pakistani non-financial companies. Next, R^2 (83.7%) is noticeably higher for PAT. Traditional performance indicators is not predominate over value-based performance measures, which is a key conclusion that can be derived from the table when analyzing the disparities in shareholders' returns of Pakistani non-financial companies. Empirical findings of the research. Therefore, the study's empirical findings support the premise that, in terms of relative information content, SVA perform better than traditional performance measures whereas by comparing other variables ROA, ROE and MVA they have almost equal value of R^2. The outcomes of various worldwide research are similar with our hypothesis.(Sura, Panchal et al. 2022), (Kumar and Sharma 2011), (Zhang and Aboud 2019), (Worthington and West 2001, Burkert and Lueg 2013, Chiwamit, Modell et al. 2017). We come to the conclusion that traditional performance indicators, including EPS and ROE, are quite good at describing the fluctuations in stock returns of non-financial companies in Pakistan.

Incremental information content test using regression statistics

Four regression models (models7 (1), 8, 9 and 10) with test variables were utilized to define the incremental information of EVA. Only earnings-based metrics were employed in the regression model equation. Only regression model 8, 9 and 10 contained the modern measure SVA, MVA and CVA. Regression models 8, 9 and 10 are statistically significant at 5% level, according to F-statistics.

Table 4 shows that when sample traditional accounting metrics were combined, model 7(1) showed an R^2 of 92.1% and a statistically significant p-value (0.000). As a result, according to our third hypothesis (H3), sample accounting-based variables have increased ability to explain changes in stock returns and company performance. Value based measures do not add any information content to the stock returns of

the firm in Pakistan non-financial companies, according to the statistic for regression model 8's R^2 is 87.4%. (Which includes EVA along with standard metrics). The value of R^2 and adjusted R^2 in model 7(1), 8, 9and 10 indicates that value based management don't show any incremental. The performance of Pakistani companies' stock returns can be explained using value based and other performance indicators, it can be inferred.

Table 4

Independent Variables	Model 7(1)	MODEL 8	MODEL 9	MODEL 10
R2	0.921	0.874	0.871	0.875
Adjusted R2	0.9	0.834	0.831	0.836
F-stat	41.54	22.6	21.83	22.63
Durbin-Watson stat	1.917	1.74	1.73	1.72

For the incremental information content of many traditional performance measures, multiple regression statistics

However, value based performance does not explain variation in stock return performance, value based is not a superior performance metric than traditional measures. which is opposed by (Stewart 1991,Sura, Panchal et al. 2022, Kumar and Sharma 2011,Zhang and Aboud 2019, Worthington and West 2001, Burkert and Lueg 2013, Chiwamit, Modell et al. 2017).

Summary and Conclusion

As start of reaearch article, we test that the relationship between dependent variable as SR stock returns and independent variables as EPS, ROA, ROE, MVA,CVA and SVA of registered companies of Pakistan using dataset of 97 non financial concerns for the period 2016–2021. The current research investigated an information content of seven performance measures such as ROA, EPS, ROE, MVA,CVA and SVA in explaining the stock returns of sample companies. In relative information content share holdervalue added perform better then other indicators whereas EPS and ROE have strong relation with stock return. In incremental information traditional performance measures out perform then value based measures, we reject the hypothesis of better explanatory power than accounting based performance measures. Further, results revealed that Value based such as SVA , MVA and CVA is not superior to accounting-based measures of the Pakistan non financial companies. The results of the study don't support the claim advocates by various studies as Stewart (1991, ,Sura, Panchal et al. 2022, Kumar and Sharma 2011,Zhang and Aboud 2019, Worthington and West 2001, Burkert and Lueg 2013, Chiwamit, Modell et al. 2017). The argument for (EVA) Economic value-added over conventional financial performance assessments as the superior financial performance metric and shows that EPS and ROE outperforms so EVA hypothesis of better explanatory power will be rejected, stock return variation was not significant and performance measure EVA is not superior then traditional (Sura, Panchal et al. 2022). Value-based or accounting-based measures have the highest information richness and are the best at explaining overall shareholder return.

The results indicates that in contrast to value based measurements, measures based on accounting provide a higher comparative information substance for complete shareholder return forecast, CVA and EVA do not increase the informational value of metrics derived from accounting, a description of the total shareholder-return, the (VAIC) value added intellectual-coefficient slightly enhances informational substance offered based on accounting measurements and revenue to shareholders is significantly influenced by ROA, ROCE, ROE and EVA (Makhija and Trivedi 2020). Linked to the association among executive payment and EVA and MVA, the association among executive remuneration then the accounting performance methods of ROA and ROE is stronger. A greater correlation among executive remuneration and EVA than between executive compensation and MVA was also discovered by this investigation (De Wet 2012).

Researcher can take other traditional and modern value based variables for furthur studies. Researcher can also target different sectors i.e financial sector, manufacturing sector , industrial or any other for furthur research. Furthur researcher can increase the data i.e number of companies , number of obseervation etc. Researchers can also take company data and compares the outcomes of the data and can check the effect of these variables with other countries.

Companies not reporting the required variables can not be used for research purpose, So due to unavailability of data researcher can fase many issues. Service sectors, banking institutions and other industries can be examined with these measures.

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