Dividend Exposure and Risk Adjusted Stock Returns: Empirical Evidence from Emerging Economy

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Abstract

The core objective of financial management is to maximize the wealth of shareholders. The dividend relevance and irrelevance and its role in firm's value have always been a conflicting debate in the area of corporate finance while investors always look for securities of the highest expected return at a given level of risk. The objective of the current study is to empirically investigate the risk-adjusted performance of 12 portfolios of dividend exposure and no-dividend exposure according to size and market-to-book value. The data of companies listed in PSX was utilised from 2014 to 2022. The portfolio performance was analyzed with the Sharpe Ratio, Jensen alpha and Treynor ratio with the Python pandas library. The findings of the study reported that absolute risk is lower for dividend-paying stocks with CV(5.6%) than non-dividend-paying stocks with CV(6.45%), further, the relative risk measure have a significant value of β (0.9) for non-dividend-paying portfolios in comparison to blend portfolio β(0.7) and dividend-paying portfolio β(0.8) highlighting that lowest systematic risk for blend portfolio of stocks. The originality of the studies is to explore the volatility of portfolios in the perspective of the emerging economy of Pakistan. The findings are of great importance to investors, and fund managers, to efficiently allocate funds for optimal returns.

Keywords: dividend exposure, portfolio, investment decisions, firm performance, payout policy

JEL Classification: G11: portfolio choice O31: Firm performance, G35: payout policy.

Introduction:

The stock market plays a key role in the economic development of any country, the developed liquid and efficient stock market mobilises savings easily which ultimately results in economic growth (Zervos & Levine, 1999, Samarasinghe, 2023). Investors and wealth managers prioritize assets which yield the highest returns for a given level of risk.

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The allocation of funds to well diversified portfolio will enable the investors to enjoy superior returns with low idiosyncratic risk. In order to get higher returns from the market, numerous investment style strategies have existed like small firms vs big firms, growth vs value, momentum, dividend-paying stocks etc. (Fama & French, 1988, Carhart, 1997) depending on the investor appetite for risk and return.

The portfolio is defined as a pool of securities that is created by individual or institutional investors with a motive to earn returns on investment/profit. To optimal allocation of funds in stocks, diversification is key, for the investors it is all about *"Don't put all your eggs in one basket"* The objective of diversification is to optimally select assets for the construction of a portfolio aiming at a possible reduction in risk with maximum return. The conflict of relevance and irrelevance of dividend policy and its impact on the volatility of stock has been addressed by many researchers and contradictory opinions exist in the literature. The firm's growth ensures the future smooth flow of dividends to the investors (Lintner, 1956) while Miller & Modigliani (1961) presented the idea of Dividend Irrelevance. When the company earn profit there will be two options ahead of it that is either to pay to shareholders in the form of dividends or to retain the profits for investment in new projects. Dividend is referred to as rewards which is given to investors in response to their investments in the firm these rewards may be in the shape of cash or in stock according to the policy of the firm. On the other side, the non-distributed earnings can enable firms to opt for new investment projects and ultimately have an impact on the value of the firm. These dividends are important to investors because they may provide a measure of certainty concerning the company's financial well-being along with the stock prices which usually determine the value of the firm.so, there is a need to empirically investigate whether there is any difference in risk-adjusted return of dividend and non-dividend paying stocks of portfolio in emerging markets like Pakistan.

Fama & French (2001) argued that non-dividend firms paying small firms yield higher returns in contracts to big firms. This fact is also related to the argument that small firms reported higher returns in compensation for higher risk associated with them. The big firms are relatively in mature phases with higher profits and possessing lower opportunities for investment of these excess funds so, the prospects of higher distribution of earnings to their shareholders exist with them. In the context of an emerging economy, there is a need to empirically investigate whether any such relation exists in that the risk-adjusted return about the size of a firm yields different results in the context of dividend relevance and irrelevance framework. So, the second dimension of the study is to

explore whether the size of the firm and dividend relevance and irrelevance yield differences in risk-adjusted return of investment portfolios.

The firm reported a low PE ratio and low M/B ratio regarded as undervalued firm which may lead towards higher expected earnings in future similarly a firm with a high PE and High M/B ratio is regarded as overvalued which may move towards its book price if the markets are efficient. then such published measures would be exploited easily.The firms with higher reporting of ESG scores have more stable dividend policiy (Barros, Matos, Sarmento, & Vieira, 2023). As the current study, the firm value is determined based on book-to-market price instead of dividend yield, which served as an opportunity to investigate whether the value of the firm in the context of dividend exposure will yield a difference in risk-adjusted returns of growth stock portfolio and value portfolio.

Research Objective & Significance

The current study has manyfold objectives. First, Pakistan is an emerging economy and has strategic significance in the region, its stock market i.e. PSX is the country's single platform to serve investors and finance seekers. The PSX has reported semi strong form of efficiency. Fund Managers and investors always look for securities which provide maximum returns through optimal portfolio creation. To investigate the implications of multiple investment strategies dividend relevance and irrelevance, growth, Value, Size and their impact on investment returns are formed and tested in developed economies are required to be tested in case of emerging economies like Pakistan for their relevance and applicability for construction of optimal portfolios to make investment decisions. The insights will help both investors and managers in order to enhance their understanding of the company's prospects. Managers can design a firm's policies in order to serve existing investors and further attract new investors.

Second, in Pakistan Dividend income withholding tax is levied by 10% which is not the same in developed markets. Further a firm has to pay 33% of tax (Income tax card, 2015) the dividends are subject to double taxation. The reason is for tax exemptions most investors rely on capital gains. In the year 2010, a tax was levied on capital gains on stocks. Therefore the impact of implementation of taxes on capital gains and double taxation on dividends do influence the dividend policy of the company is an area to be explored.

Third, the company policy and its financial position affect the dividend payment. No specific rules and regulations are applicable in Pakistan for the Dividend Payment. The reason may initiate agency cost

issues as the managers decide whether to pay dividends or invest in low-cost cost-capital projects which creates the agency problem as the managers of the company are more focused on the future sales growth of the organization. The issue arises due to weak corporate governance as in Pakistan financial markets are under great influence of agency problems and most of the firm have one primary owner who possesses the majority of the share as family-owned business ignores the minority or outsiders' interest and have a great impact on dividend policy of the firm. This factor influenced the smooth dividend payment behaviour.

The key aspects explored (1). To test the portfolio risk-adjusted returns about dividend exposure and no dividend exposure and style investing. (2). To compare the performance of portfolio risk-adjusted returns in the context of style investing & dividend relevance and irrelevance to ascertain which portfolio yields superior risk-adjusted returns. (3). To determine which factor i.e. size and value factor with, without and blend of dividend exposure has any impact on risk-adjusted returns of the portfolio.

Problem Statement

The dividend policy and stock returns have reported complex relationship as some studies have reported dividends exposures have positive affect on stock returns (Kim et al., 2016; Kim et al., 2018; Kvamvold & Lindset, 2016; Melching & Nguyen, 2021; Permadi et al., 2022; Yan & Zhang, 2011) and some have reported dividened irrelevance (Ally, 2022; Batchelor & Orakcioglu, 2003). The earlier studies have focused on dividend relevance and irrelevance in perspective of stock prices the current study empirically investigated the relation between dividend relevance, irrelevance and style investing on portfolio risk-adjusted performance to bridge the existing gap in perspective of emerging economy, which are attributed to higher volatility of returns and inefficient markets.

The study revolves around the dividend policy, style investing and its impact on the risk-adjusted return of portfolio performance measured with the Capital Asset Pricing Model (CAPM), Sharpe ratio, Jensen Alpha and Treynor's ratio. Moreover, this study shows that companies have to struggle to satisfy their shareholders by giving them an appropriate share of dividends. They are also required to maintain the financial position of their business because the collapse of one factor either profit or poor dividend policy can shake the foundations of the entire business resulting in inefficient moderation of corporate governance.

The remaining sections are organized as follows: In section 2 the relevant literature of dividend relevance and irrelevance and investing

style and stock returns are presented. In section 3 methodology of the study is presented. In section 4 the empirical results are reported and in section 5 the conclusion and future research prospects of the study are presented.

Literature Review

There is a complicated and multifaceted relationship between dividend-paying stocks and stock performance. The firm's payout policy refers to the company's option to distribute earnings among its shareholders or to retain them for further investment or reinvestment in new projects, it also includes other forms of distribution of earnings which include share repurchase, stock splits keeping in view of two basic objectives that is the maximization of the shareholder's wealth and sufficient financing source availability (Gitman, 2010). Studies have reported markets repond positively to the dividend announcements (Joakim, 2018; Marisetty & M, 2021). Though this topic is widely studied in the area of finance still it is point of attention to researchers as in the last few years firms have made huge announcements of their share repurchase (Shweser, 2022) so making it an important issue to be explored in context to impact on share prices.

In some countries in comparison to capital gains dividends are highly taxed. In 1956 Lintner identified that the size, form and timing of dividend payments have impacted stock returns. While Merton Miller and Franco (1961) reported that dividend policy irrelevance, their arguments were based on a 'homemade dividend' related to payout policy. However, Gordon and Lintner argued that the investors preferred the current dividend payments due to the factor of certain payments and placed less importance on the future capital gains this argument refers to a "bird in the hand" i.e dividend worth more than two in bush i.e. "capital gains". Black & Scholes (1973) also supported the irrelevance of dividends as no variation exists in the proceeds of low and high-yielding shares. In the context of the tax environment (John & Williams, 1985) reported that the relevance of dividend policy holds while the indirect relationship of dividends on stock returns was established (Baskin, 1989). The relationship between firm growth rate and dividend relevance was explored by (Barclay, Smith, & Watts, 1995) who concluded that the indirect relationship exists as the investor preferred to on dividend payments rather than future capital gains. The irrelevance of dividend policy was supported by the studies of (Allen & Rachim, 1996; Michael, 1995; Baker, Powell, & Veit, 2002; Myers & Bacon, 2004; Dong, Robinson, & Veld, 2005; Adesola & Okwong, 2009; Nazir, Nawaz, Anwar, & Ahmed, 2010; Harakeh, Lee, & Walker, 2019; Ally, 2022; Batchelor & Orakcioglu, 2003)).

The payout policies of firms have an impact on the reduction of agency cost (Jensen, 1986) in literature the dividend relevance was reported by (Travlo, Trigeorgis, & Vafeas, 2001;   Baker, Saadi, Dutta, & Gandhi, 2006; Amidu, 2007; Raballe & Hedensted, 2008; Denis & Osobov, 2008; Almagtome & Abbas, 2020; (Abdullah, Isiksal, & Rasu, 2023, Olaniyi & Shah, 2023).In the context of climate risk and stock returns the findings of the study of (Mazzarano, Guastella, Pareglio, & Xepapadeas, 2021) reported the relevance of dividends in the case of carbon emission firms. The Tax aversion theory narrates that investors have less preference for dividend income due to the imposition of high taxes. The dividend payout is used as a tool to attract investors in climate risk-exposed companies. In the phase of covid 19, dividend irrelevance was reported by a study by (Cejnek, Randl, & Zechner, 2021) evidencing the decline in near-term dividend futures is higher in comparison to the market. Further, in the context of the Netherlands, a small open economy the shifts in payout policies were explored by (Jong, Fliers, & Beusichem, 2019) who reported that nowadays dividends just become routine and investors are more concerned towards stock returns and dividend payments have still a significant impact on the value of the firm.

So, till today no clear empirical result is available to conclude the dividend relevance and irrelevance. There is one group of investors who preferred to receive dividends and put priority on dividend-paying stocks in creating portfolios as they perceived dividend payments to be less risky. MM argued that different dividend policy attracts different clientele and it has no impact on firm value if clients are satisfied as all clients are active in the market. The dividend policy and stock returns have reported complex relationship as some studies have reported dividends exposures have positive affect on stock returns (Kim et al., 2016; Kim et al., 2018; Kvamvold & Lindset, 2016; Melching & Nguyen, 2021; Permadi et al., 2022; Yan & Zhang, 2011) and some have reported dividened irrelevance (Ally, 2022; Batchelor & Orakcioglu, 2003). The earlier studies have focused on dividend relevance and irrelevance in perspective of stock prices the current study empirically investigated the relation between dividend relevance, irrelevance and style investing on portfolio risk-adjusted performance to bridge the existing gap in perspective of emerging economy, which are attributed to higher volatility of returns and inefficient markets.

Methodology

In Pakistan KSE 100 index has the largest representation of all sectors of stock and the performance of dividend-paying stock PSX Dividend 20 index is available which comprises the top 20 stocks of

dividend-paying companies. Variables of the study are growth and value firms that are selected by following the methodology of Fama French based on the book-to-market ratio a low book-to-market value ratio is defined as a growth firm and a high book-to-market as value another variable of the study is the size which is defined following studies of Fama French based on capitalization the return of the stocks are calculated as the percentage change in the price of stocks then a portfolio of the stocks are created of dividend exposure and non-dividend exposure stocks as there exist difference of opinion in literature to include the number of securities in construction of well-diversified portfolio the findings of the study of (Evans & Archer, 1968) concluded that the minimum number of securities to be included for the construction of optimal portfolio should be 10 while some reported it must be up to 40.

The cost and time involved in the diversification of portfolio and the cost increase with the inclusion of more securities as per the quotation from Andrew Carnegie 1985 *"The concerns which fail are those which have scattered their capital, which means they have scattered their brain also"* so keeping given cost and time saving the number of securities selected for portfolio constitution are upto 17 while allocating equal weight to them. The equally weighted portfolio of dividend exposure, non-dividend exposure, large capitalization and small capitalization stocks was created to empirically investigate their risk-adjusted performance.

The theoretical framework of this study is derived from the earlier work of (Conover, Jensen, & Simpson, 2016) and for the comparison of the risk-adjusted performance of a portfolio of size, M/B, and dividend exposure are compared by utilizing monthly returns w.e.f 2014 to 2022. The returns are calculated based on monthly percentage changes in prices and equally weighted portfolios are constructed. By following the portfolio construction methodology of Conover et.al (2016) portfolios were constructed in two stages i.e first KSE-100 index firms were categorized into Size and Book-Market using the Median of the data in the second phase they were further categorized on criteria of dividend exposure i.e Dividend exposure, a blend of dividend exposure and without dividend exposure. A total of 12 portfolios were constructed to empirically investigate the research questions. The KSE-100 index was used as the benchmark and the T-bills rate was used as the proxy of the risk-free rate. The data has been extracted from multiple sources i.e. from PSX and SBP websites. To calculate the risk-adjusted returns of the portfolio absolute and relative measures were calculated i.e. Sharpe ratio, Jensen alpha with CAPM and Treynor's ratio due to their reported validity of performance evaluation results.

The Sharpe ratio was introduced by (Sharpe, 1966) to evaluate mutual fund performance. It is expressed as the over-and-above return from the risk-free rate a portfolio can generate. As a general rule of thumb, the higher the ratio the better the portfolio performance is. It is calculated as:-

$$S_p = \frac{R_p - R_f}{\sigma_p}$$

……………………………………………………………………
……..(1)

Where

R_p = Portfolio return

R_f = Risk-free rate which is proxied one-month T-Bill rate

σ_p = volatility of portfolio return

Treynor's ratio measures the performance of a portfolio of returns against bench mark return unlike to sharpe ratio. This ratio can was calculated as

$$T_p = \frac{R_p - R_f}{\beta_p}$$

……………………………………………………………………
…..(2)

Where

R_p = return of the mutual funds

R_f = risk free rate

β_p = systematic risk measure of mutual funds

The Jensen's Alpha is derived by using the Capital Asset pricing model (CAPM). Due to reported efficiency in calculating expected returns in the presence of systematic risk of CAPM risk-adjusted expected returns of all portfolios by using the CAPM model. The beta is a measure to report sensitivity to capture systematic risk i.e. movement in market returns.

Under the CAPM Model, the expected return of any security is calculated as:-

$R_p = R_f + \beta_i (R_m - R_f)$…………………………………………………………
(3)

$\alpha = R_p - [R_f + \beta_i (R_m - R_f)]$………………………………………………(4)

Where

R_p = portfolio returns

R_f = risk-free rate of interest

β_i = sensitivity or systematic risk associated with portfolio

R_m = Expected return of Market

A positive alpha indicates that the fund has beaten the market and is performing well while a beta value greater than 1 indicates the presence of high systematic risk. In order to analyze the data multiple libraries of

Python were utilized for the calculation and evaluation of risk-adjusted performance.

Results & Discussions

Descriptive Statistics

The descriptive statistics of the 12 portfolios are presented in Table 1. From the dividend exposure portfolio category, it is evident the highest return reported by the dividend exposure portfolio The results indicate that the dividend payments are viewed by investors as a way to reduce risk (Bazzi & Clemens, 2013).while in case of size portfolio for both small and big the monthly return is high in case of stocks without dividend exposure while the standard deviation is also highest along with return this support the mean variance portfolio theory that higher the risk higher will be return and vice versa. In the case of the BE /ME portfolio, the results are also similar to the size portfolio the higher risk in the case of non-dividend exposure but the risk-return tradeoff is also present in BE/ME portfolio.

Table-1 Descriptive Statistics

	Dividend Exposure		
	Yes	Blend	No
Mean	0.0051	0.0043	0.0040
Std. Dev	0.0562	0.0566	0.0645
Min	-0.2152	-0.1381	-0.1846
Max	0.1514	0.1932	0.2107
Skewness	-0.1260	0.5554	0.3641
Kurtosis	1.5472	0.7505	0.8407
Size Portfolios			
Small			
Mean	0.0068	0.0079	0.0113
Std. Dev	0.0737	0.0688	0.0815
Min	-0.2888	-0.1887	-0.1631
Max	0.2263	0.2290	0.3104
Skewness	-0.2066	0.5609	0.8058
Kurtosis	1.9659	1.3309	1.2193
Big			
Mean	0.0018	0.0115	0.0124
Std. Dev	0.0543	0.0696	0.0873
Min	-0.2193	-0.2582	-0.1779
Max	0.1307	0.2616	0.3427
Skewness	-0.2192	0.1108	0.8425
Kurtosis	2.0316	2.4874	1.5510

BE / ME Portfolios			
Growth			
Mean	0.0023	0.0072	0.0102
Std. Dev	0.0576	0.0597	0.0742
Min	-0.2171	-0.1797	-0.1795
Max	0.1412	0.1503	0.2346
Skewness	-0.566	-0.0318	0.3431
Kurtosis	1.622	0.4244	0.4486
Value			
Mean	0.0006	0.0085	0.0012
Std. Dev	0.0592	0.0648	0.0594
Min	-0.2379	-0.2075	-0.1496
Max	0.1708	0.1795	0.1901
Skewness	-0.2483	0.0603	0.3446
Kurtosis	1.9738	0.7986	0.5213

One of the assumptions of the CAPM is that the distribution of returns should be normal. The figure-II represents the distribution of returns of 12 portfolios which indicates that the portfolio returns are normally distributed and the CAPM can be used to measure expected return of portfolios and the systematic risk measure beta.

Dividend-paying stocks

Dividend exposure blend

Without Dividend Exposure

Growth Dividend Exposure stocks

Growth Mix Dividend Exposure stocks

Growth No Dividend Exposure stocks

Value Dividend Exposure stocks

Value Mix Dividend Exposure stocks

Value No Dividend Exposure stocks

Small Cap Dividend Exposure stocks

Small Cap Mix Dividend Exposure stocks

Small No Dividend Exposure stocks

Big Cap Dividend Exposure stocks

Large Cap Mix Dividend Exposure stocks

Large No Dividend Exposure stocks

In order to compare performance of selected portfolios absolute risk analysis as well as risk-adjusted return analysis was performed and their results were compared accordingly. The results of absolute return analysis and risk-adjusted performance of portfolios are presented in Table 2.

Table 2 Performance Analysis Using Sharpe, Treynor, CV & SD

Portfolio	Risk-Adjusted Measure		Absolute Risk Measure	
	Sharpe Ratio	Treynor Ratio	Coefficient of Variation (CV)	**SD**
Dividend Exposure				
Yes	-0.1641	-0.003	11.10	5.62%
Blend	-0.2057	-0.0045	13.16	5.66%
No	-0.1964	-.0041	16.12	6.45%

Size Portfolio				
Small Cap				
DE	-0.0415	-0.0008	10.84	7.37%
Blend	0.0071	0.0001	8.71	6.88%
Without DE	0.1488	0.0034	7.21	8.15%
Big Cap				
DE	-0.3780	-0.0074	30.17	5.43%
Blend	0.1834	0.0037	6.05	6.96%
Without DE	0.1825	0.0041	7.04	8.73%
BE / ME Portfolio				
Growth				
DE	-0.3284	-0.0071	25.04	5.76%
Blend	0.1076	0.0002	8.29	5.97%
Without DE	0.1154	0.0031	7.27	7.42%
Value				
DE	-0.4145	-0.0082	98.96	5.92%
Blend	0.0416	0.0010	7.62	6.48%
Without DE	0.2014	0.0048	49.50	5.94%

The table-2 results indicates that the dividend exposure portfolios CV is highest in all cases i.e. size and BE / ME portfolios. Sharpe ratio which measured the excess return per unit of SD is also negative in the case of a dividend exposure portfolio. Further, the Treynor ratio which measures the excess return per unit of systematic risk is also negative in the case of all dividend exposure portfolios. Jensen's alpha derived from the CAPM model, the value of beta their test results are presented in table-3 to 5 for the Dividend Exposure portfolio, Size portfolios, and BE/ME portfolios respectively.

Table 3 Dividend Exposure Portfolio Risk-adjusted Returns			
Portfolio	Alpha (α)	Beta (β)	Adjusted-R^2
Dividend Exposure			
Yes	-0.001 (-0.427) [0.670]	0.8086*** (19.707) [0.000]	78.5%
Blend	-0.0019 (-0.593) [0.554]	0.7559*** (14.364) [0.000]	66%

No	-0.0019	0.9214***	76%
	(-0.607)	(18.214)	
	[0.545]	[0.000]	

Note: ( ) represents value of t-statistics, * indicates that H_o rejected at 5% level of significance, p*<0.10, p**<0.05, p***<0.001, [ ] indicates *p*-value

The results presented in above table indicates that the beta is significant in all cases while the alpha is negative in all portfolios.

Table-4 Size Portfolio Risk adjusted Returns

Size Portfolio	Alpha (α)	Beta (β)	Adjusted-R^2
Small Cap			
DE	0.0011**	1.0341***	74.4%
	(0.317)	(17.586)	
	[0.752]	[0.000]	
Blend	0.0020	0.9545***	72%
	(0.565)	(16.420)	
	[0.574]	[0.000]	
Without DE	0.0056	1.0421***	61%
	(1.118)	(12.814)	
	[0.266]	[0.000]	
Big Cap			
DE	-0.0043*	0.0797***	82.4%
	(-1.979)	(22.338)	
	[0.050]	[0.000]	
Blend	0.0057*	0.9946***	76.2%
	(1.712)	(18.454)	
	[0.090]	[0.000]	
Without DE	0.0069	1.1318***	63%
	(1.317)	(13.348)	
	[0.191]	[0.000]	

Note: ( ) represents the value of t-statistics, * indicates that H_o rejected at a 5% level of significance, p*<0.10, p**<0.05, p***<0.001, [ ] indicates *p*-value

The highest systematic risk is presented by a portfolio of the big cap without dividend exposure with reported $\beta = 1.1318$ and it is also significant followed by a small cap portfolio without dividend exposure i.e. significant $\beta = 1.0421$ and a small cap portfolio with dividend exposure with $\beta = 1.0341$ respectively. The findings indicate that the dividend exposure stocks have lower systematic risk in comparison to non dividend paying stock and support the findings of the study of (Bhatta & Duwal, 2021; Saraci, 2023; Tufail, 2021)
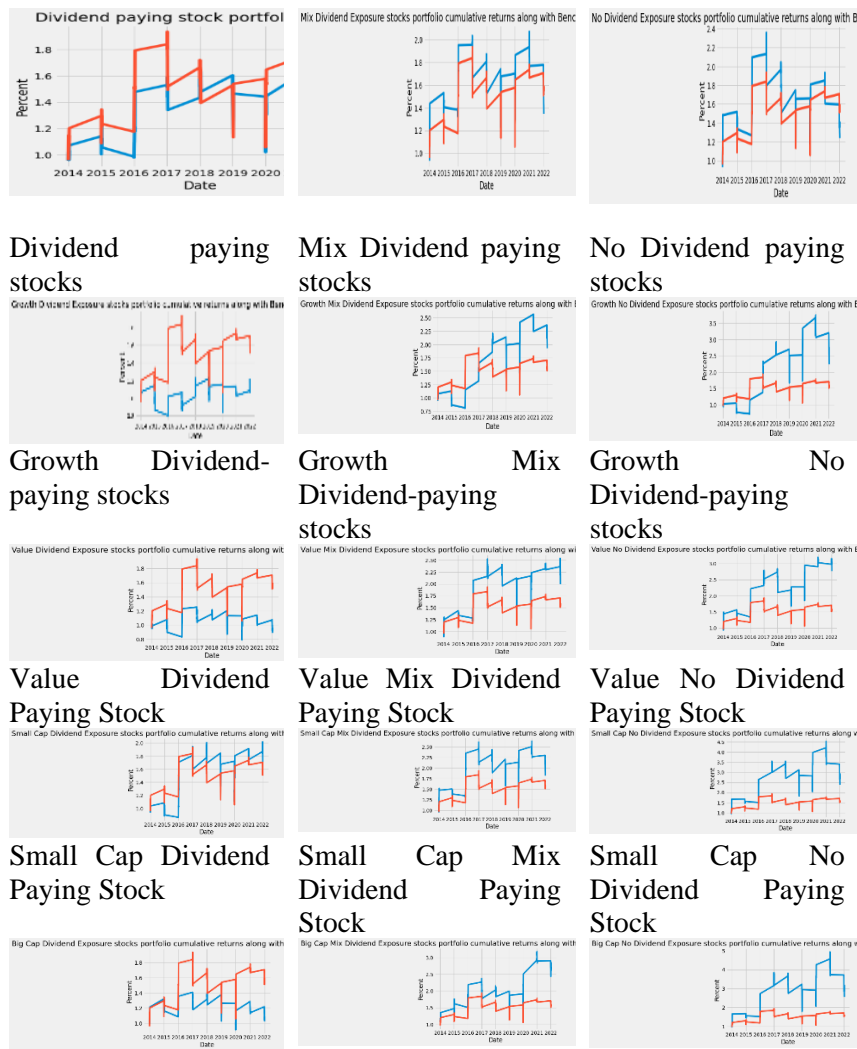
Table-5 BE / ME Portfolio Risk-adjusted Returns

Portfolio	Alpha (α)	Beta (β)	Adjusted-R^2
Growth			
DE	-0.0039 (-1.250) [0.214]	0.7704*** (15.00) [0.000]	68%
Blend	0.0017 (0.459) [0.647]	0.7606*** (12.768) [0.000]	60%
Without DE	0.0041 (0.747) [0.457]	0.8011*** (9.012) [0.000]	44%
Value			
DE	-0.0054** (-2.155) [0.033]	0.8641*** (21.252) [0.000]	81%
Blend	0.0025 (0.661) [0.510]	0.8566*** (14.115) [0.000]	65.2%
Without DE	0.0049 (1.247) [0.215]	0.7231*** (11.235) [0.000]	54%

Note: ( ) represents the value of t-statistics, * indicates that H_o rejected at 5% level of significance, p*<0.10, p**<0.05, p***<0.001, [ ] indicates *p*-value

In the case of BE / ME portfolios with Dividend exposure to no dividend exposure, the systematic risk is below the market in all portfolios. The Jensen alpha was negative in the case of both growth and value portfolios with dividend exposure only for all other portfolios it was reported positive.

To compare the performance of the portfolio with the benchmark the cumulative returns of all 12 constructed portfolio performances in comparison to benchmark is presented in figure-III

Dividend paying stocks

Mix Dividend paying stocks

No Dividend paying stocks

Growth Dividend-paying stocks

Growth Mix Dividend-paying stocks

Growth No Dividend-paying stocks

Value Dividend Paying Stock

Value Mix Dividend Paying Stock

Value No Dividend Paying Stock

Small Cap Dividend Paying Stock

Small Cap Mix Dividend Paying Stock

Small Cap No Dividend Paying Stock

Big Cap Dividend Paying Stock	Big Cap Dividend Stock	Mix Paying	Big Cap No Dividend Paying Stock

Figure III Portfolio Performance vs Benchmark

The results presented above indicate that the superiority of returns was reported in the case of all portfolios from blend to non-dividend exposure stocks.   While dividend exposure portfolios' cumulative returns underperform the benchmark portfolio.

Conclusion

The objective of the current study is to analyze the risk-adjusted returns of dividend exposure and no dividend exposure stocks while considering the style investing of Size and ME/BE. The empirical investigation of results conducted in phenomena of the emerging economy stock market i.e. PSX highlighted three findings. The risk-adjusted returns are higher in the case of without dividend exposure portfolio. The portfolio performance in comparison to the benchmark portfolio is also highest in the case of a non-dividend paying portfolio.

The results of the study were obtained under certain limitations of the study that the sector analysis was not considered in a random selection of stocks to construct portfolios. The data utilized under specific periods from one specific market to empirically analyze the portfolio returns. Moreover, the transaction cost and taxation were not considered while constructing a portfolio. The future study may be initiated by taking into account the firm and sector-specific characteristics, dividend reinvestment options, firms' other payout policies and with increased data set.

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