Dividend Policy Ratios and Firm Performance: Evidence from the Apparel Sector of USA

Received 30 December 2021
Revised 6 June 2022
Accepted 10 July 2022

Probodhika M. A. D.
Business school, University of Bedfordshire,
United Kingdom
d.aththatage@gmail.com

Ratnayake C. W.
University of Colombo, Sri Lanka
chaamindar1992@gmail.com

Abstract

The dividend policy ratio is an influential matter on the firm performance in the context of the apparel sector. The shareholders benefit as a return for investing in the organization. Consequently, there is an impact on firm performance from dividend policy decisions. The basic aim of this study is to critically evaluate the relationship between dividend policy ratios and firm performance in the apparel sector of the USA. The research is conducted to determine the factors of dividend policy ratio and firm performance in identifying the relationship between two variables. Based on the results of the secondary method of analysis the research mainly focuses on improving the research aim through practical implications. The annual reports of four companies in the apparel sector of the USA are utilized from 2015-2019 as a source of data collection firms. Return on equity (RoE) was used as a dependent variable while dividend per share (DPS) and earnings per share (EPS) were modelled as independent variables. The data analysis shows a positive relationship between dividend policy ratio and firm performance. DPS and RoE have a significant relationship while EPS and ROE have an insignificant relationship. The combination of dividend policy ratio and firm performance results in investors making better decisions and the results of the study revealed that measuring ratios are the best strategy to improve the performance of the firm and attract more investors..

Keywords: Dividend policy ratio, Return on equity, Earning per share, Firm performance.

SLJMS
Sri Lanka Journal of Management Studies
Vol. 4 – Issue I, 2022
pp, 1 – 24
ISSN (Online): 2792-1093
http://doi.org/10.4038/sljms.v4i1.85

Introduction

The apparel industry has a long-standing record as the world's largest and most bountiful market in the United States. The country created an attractive market for producers in developing countries and in developed countries. Among these countries, the United States maintains its domestic production at a viable level managing the high consumer demand (Lu, 2018). Along with the uncertainty and complexity of business today, investors primarily evaluate the firm performance in accessing the ability to adapt to growing challenges of the environment as it is the only tool that makes sure of the progression of the organization. Firm performance basically focuses on achieving the set of objectives of the company and the relevance to the users of the organization on the ability and the capability of an organization to exploit the available resources efficiently (Miller, Washburn, and Glick, 2013).

In simple terms, the dividend is a part of the profit distributed among the equity shareholders as a benefit to their investment. The study conducted by Khan, Lamrani, and Khalid (2019) has mentioned that when firms can obtain more profit it increases the dividend paid to shareholders and also it increases the stock price of the firms and also dividend paid to shareholders and stock price decreases along with the reduction in the profit of the firm. The top management and the board of directors of the company decide whether to pay out a dividend to shareholders or retain the profit for future investments when the company makes profits (Yee, 2017). The underlying research aims to review existing literature on factors of dividend policy and determinates of firm performance and to analyze secondary data on the relationship between dividend policy and firm performance.

In the global context, the issue of dividend policy has been a great concern both in developed and developing countries. The payments to shareholders are declared by dividend policy as it mentions the regulations and guidelines of the company (Al-Malkawi, Rafferty, and Pillai, 2010). Even though there are several theories in explaining the relevance of dividend policy there has not been a universal agreement on this. Basically, the shareholder returns on the risk and investment are determined through dividends with the factors such as firm size, financial limitations, and available investment opportunities affecting an organization. The financial status of the firm can be measured by investors in the way of dividends and it signals to the market about future performance (Ong et al, 2014).

Rationale

There are various researches that put forward different findings on the relationship between dividend policy and firm performance. They have shown that there exists a significant relationship between the two factors that affect positively, negatively, and neutral. The results of the dividend policy ratio on firm performance showed a positive and significant relationship measured by profitability (Velnampy, 2013). As per Ajanthan, (2013) investors had a negative effect on firm performance subsequent to the decline in dividend rate.

Consequently, remarkable importance is given to firm performance in business today. Assessing and measuring performance is considered a method of obtaining effective and efficient results for the organization (Adediran and Alade, 2013). As per Murekefu and Ovma, (2014) the

dividend policy of a company encourages investors in maximizing their wealth and brings benefits to the companies, investors, and community in ways of diminishing risk, covering legal requirements, increase in organization performance (Coskun and Sayilir, 2012). The use of these dividend policy ratios shows the fundamental basics of the company which have been strong enough and how potential the organization is to deliver the best to shareholders. In addition, high complexity, and ownership dispersion as a result of the agency costs can be reduced by paying more dividends (Priya and Nimalathasan, 2013).

This research focuses on the dividend policy ratios and firm performance in the apparel sector of the USA. As firm performance can be measured differently, NIKE, Oxford industries, GAP, and American eagle are four apparel sector companies of the USA selected within the time frame of 2015-2019. This focuses on various factors such as profitability, the past year's dividend payout patterns, investment opportunities, retained earnings, and the relevancy of managers to devote time in designing the dividend policy to enhance firm performance. Measures such as EPS, dividend payout ratio, and DPS can be used to evaluate the firm performance as there are limitations in finding the inadequacy of information subsequent to firm performance

Research Problem

Dividend policy persists as an unresolved problem in corporate finance notwithstanding the diverse studies (Murhadi, 2010). There are numerous studies conducted on dividend policy and firm performance especially in developing or emerging markets. But there is an inconsistency in the results of previous studies. This situation departs the issue unsettled. Listed companies on the Colombo stock exchange - Sri Lanka (Wijekoon, 2019), Manufacturing firms - Sri Lanka (Velnampy, Nimalthasan, and Kalaiarasi, 2014), Hotels and restaurants - Sri Lanka, Cement sector- Pakistan (Rahman, 2018), Cement Sector-Pakistan (Khan, Lamrani, Khalid, 2019), Cement sector- Nigeria are some examples. Hence more studies are needed to provide additional evidence in developed countries the reason for undertaking this particular area is that there is no sufficient research conducted in investigating the dividend policy ratios and firm performance of the apparel sector of the USA as the apparel market exhibits different dividend behaviours and few studies have been done. This study attempts to fill this gap by establishing the dividend policy ratios on firm performance in developed markets.

Literature Review

There is no standard justification for companies regarding the concepts of dividend policy and firm performance which have been analysed for many decades (Agyei and Marfo-Yiadom, 2011). This chapter focuses on the dividend policy ratio and firm performance from previous studies done by various authors. The researcher specifies two sections in this chapter, the first the section set forth the theoretical considerations of firm performance and dividend policy and the second section discuss the key empirical evidence from previous studies to inform the general and specific objectives developed for this study, that is to identify key factors that influence the dividend policy ratios; evaluate key measures of firm performance; to critically evaluate the relationship between dividend policy ratio and firm performance of companies in the apparel industry of the USA.0

Theoretical Review

Dividend Policy

Significant theoretical literature, there are different policies in an organization that vary from company to company. Different patterns of dividend policy in developed and emerging markets consider dividend policy as a matter that should be dealt with and overcome in corporate finance (Panigrahi and Zainuddin, 2015). Dividend policy is an interesting issue at present that has noteworthy components of firm policies (Priya and Mohanasundari, 2016). There are several elements that affect the dividend policy of the firm where corporate governance is considered a significant element. Whereas it provides regulations and guidelines regarding shareholder dividend payments. The payout decision vs reinvesting decisions comes under the dividend policy and changes in dividend policy signal important information to the shareholders (Adediran and Alade, 2013). The table below mentions how the free cash flow is considered by organizations.

Table 1. Example of Dividend Policy

Company	Example	Source
NIKE	Nike's increasing positive free cash flow solidifies its future for dividend payments. As Nike generated increasing earnings and stable free cash flows between 2011 and 2015, it has consistently raised its dividend and maintained a dividend payout ratio of between 20 to 30 %.	(Weerakoon,2016)
Christian Dior	Another important check we do is to see if the free cash flow generated is sufficient to pay the dividend. Christian Dior's cash payout ratio last year was 17% which is quite low and suggests that the dividend was thoroughly covered by cash flow.	(Simply Wall St,2020)

Source: Authors' survey

Although, the stability of the future cash flow is indicated by the firm's dividend after-tax earnings, investment returns, future earnings, inflation, and interest which influence the firm's dividend decisions. When dividends are paid it signals to investors that organizations are earning higher profits (Rehman, 2016).

Firm Performance

Global attention has increased in a wide view on the impact of dividend policy on firm performance. Pirya and Nimalathasan, (2013) have noticed a significant impact of dividend policy on firm performance. Firms are positively affected by investments and growth opportunities. Domestic and international organizations which do not have growth opportunities have different corporate dividend policies and give information about the impact on firm performance. Research carried out on dividend policy with respect to firm performance states that "the dividend rate is directly proportional to the future firm performance". Brigham, (2012) suggests that firm performance is affected by dividend policy as a factor having the power of decision

making. Research has revealed that firm performance is affected by dividend policy as it is measured by profitability. From the results, a positive and significant relationship between return on equity and dividend policy has been revealed (Uwuigbe, Jafaru, and Ajayi, 2012). The table given below specifies how firm performance is impacted by dividend policy in organizations.

Table 2. Example of Firm Performance

Company name	Example	Source
Adidas	As a result of the strong operational and financial performance in 2017, the company's strong financial position, as well as Management's confidence in Adidas' short and long term growth aspirations, the Executive and Supervisory Boards, will recommend paying a dividend of € 2.60 per dividend entitled share to shareholders	(Adidas, n.d)
H&M	The board of directors' intention is for the H&M group to continue to provide shareholders with a good return while ensuring that, growth and investment in the business can proceed with a continued strong financial profile and freedom of action.	(H&M group, n.d)

Source: Authors' survey

Scholars Gordon and Walter say there is a close effect of dividend policy on a firm's value. The changes in dividend payout will affect the market value of the firm. Therefore, a maximum market price is given as a requirement for the optimum dividend payout. The effect of dividend policy on the firm is largely challenged although investors agree on key determinants of the dividend policy of a firm (Dada, Malomo, and Ojediran, 2015). Investigations on dividend policy and firm performance have no general consensus and the same empirical evidence is used in examining. Dividend payouts are more complex with inconclusiveness of empirical findings.

Key factors that Influence the Dividend Policy Ratios

Gusni and Kata, (2017) who have researched on determinants of dividend policy for financial listed firms in Indonesia have used a number of determinants of dividend policy such as profitability (ROI), firm size (size), corporate governance, leverage (DAR) to predict dividend policy. The study conducted by Roj, (2019) has used data from 2008-2016 on companies listed on the stock exchange of Poland and has examined the dividend policy determinants using variables such as profitability, investment opportunities, leverage, liquidity, and size.

However, Priya and Nimalathasa, (2013) in their study of dividend policy ratios and firm performance in selected restaurants in Sri Lanka have used EPS, DPS, dividend payout ratio, and price to book value as the independent variables of dividend policy ratio. These independent variables of the above-mentioned researchers have been analyzed using the regression model and descriptive analysis. However, this study restricts considering DPS and EPS as independent variable factors that influence the dividend policy ratio. The below table indicates some general examples that support the argument of DPS and EPS are factors that influence the dividend policy ratio. This research identifies DPS and EPS as key factors that influence dividend policy

ratios. Secondary data of DPS and EPS can be collected through annual reports of the company where a primary evaluation is not needed.

The main factor that affects the dividend policy is profitability. Profitability is an important factor in determining the dividend payment company. This thing occurs because companies are willing to pay a higher amount for the dividend if the company's profitability increases (Alzomaia and Al Khadiri, 2013). Ritha and Koestiyanto (2013) found results in their research that profitability does not significantly influence the payment of dividends.

Table 3. Example of Factors that Influence Dividend Policy

Company Name	Example	Source
NIKE	Over the past 10 years, Nike has not paid out more than half its earnings. Consequently, it maintained a high dividend coverage ratio, which indicates its dividend was sustainable over this period. The dividend payout ratio indicates the position of EPS that is paid out to investors in the form of cash dividends. The dividend coverage ratio indicates the number of times a company can pay dividends to shareholders with its EPS.	(Weerakoon, 2016)
Christian Dior	With a relatively unstable dividend, it's even more important to evaluate if earnings per share (EPS) are growing – it's not worth taking the risk on a dividend getting cut, unless you might be rewarded with larger dividends in future. Strong earnings per share (EPS) growth might encourage our interest in the company despite fluctuating dividends, which is why it's great to see Christian Dior has grown its earnings per share at 13% per annum over the	(Simply Wall St, 2020)

Source: Authors' survey

Key Determinants of Firm Performance

Lazar, (2016) has investigated determinants of a firm's corporate performance over twelve years with the availability of secondary data of Romanian listed companies. Return on assets (RoA) was used as a financial ratio of the dependent variable. The research conducted by Rahman, (2018) has used different financial ratios such as return on equity (RoE), RoA, and net profit to gauge the firm performance of 19 firms in the cement industry. In the research of Vu et al, (2019) different indicators of firm performance such as net income per employee, RoA, and RoA have been investigated from 700 listed companies in Vietnam. There is an example from present organizations that are mentioned in the table below.

Table 4. Examples of Determinants of Firm Performance

Company name	Example	Source
Adidas	ROA shows the overall profitability of the company's investment in assets. For Adidas Company net income for 2007 year made 551 million and total assets for the	(Jayawardhana, 2016)

	same year was 8325 million. Thus ROA for Adidas Company in 2007 year was 0.07, or 7%, which is not very high. That means that from each dollar tied up in the business company earns 7 cents. Adidas Group earned a little less than 7 per cent on its asset base in 2008 and only 2.76 percent in 2009, which very low index for Adidas AG.	

Source: Authors' survey

As a percentage of shareholders equity return is given as income to shareholders called return on equity (RoE). As a result of shareholder investment, RoE measures the profitability of the corporation and compares two or more firms in an industry. Preferred shares are not included in the shareholder equity. Although there are wide measurements of performance in this study RoE is considered the dependent variable as a criterion for identifying the attractive returns from companies over a long period of time to evaluate the changes in a company's financial situation. The table below specifies how Adidas Company uses RoE as a measure of its performance.

Table 5. Example of the Impact of RoE as a Measure of Performance

Company name	Example	Source
Adidas	For Adidas Company return on equity for 2007 year is 0.18, or 18%. It means that owner receives back 18% from invested assets that is a good index. So for Adidas Group in 2008, 18.96% AG earned a return of about 19 percent on its 2008 shareholders' equity investment. Notice that the RoE is larger than the ROA. With the use of debt, the AG can purchase more assets than it could with equity alone.	(Jayawardhana, 2016)

Source: Authors' survey

The firm performance and effectiveness of managing organizational resources are indicated by numerous financial ratios. According to Kangarlouei et al, (2012) mentioned that the most frequently used financial ratios to determine the effectiveness of firm performance are the RoA and RoE. Based on the literature of Tayeh et. al., (2015) RoA and RoE are the widely used financial ratios that measure performance. RoE is the ratio of profitability indicating the profits of the company as a percentage of the shareholder's equity and RoA indicates how well firms perform from organizational resources (Loi and Khan, 2012). Although both ratios measure profitability, the underlying research uses RoE as an accounting-based financial ratio to determine the firm performance as they are different performance indicators.

Relationship between Dividend Policy and Firm Performance

Literature on dividend policy shows a positive influence on firm performance. Therefore, researchers recommend having a strong dividend policy in order to help companies in earning profits and investments. Many companies are concerned about the dividend policy because it has a direct relationship with profitability (Farrukh et al, 2017). It has been found that dividend policy affects firm performance, especially on profitability which is measured by return on equity and

showed a positive relationship between return on equity and dividend policy. These results conclude that profitability is influenced by the firm's dividend policies (Rahuman, 2018).

In contrast to the above findings, the financial statements of companies in the Pakistan stock exchange for the period of 2010-2015 are used to collect data in examining the influence of dividend policy on firm performance and result in a negative relationship between RoE and firm performance (Khan et al, 2016). Researchers conclude that positive changes in dividends are associated with positive future changes in EPS (Yegon, Cheruiyot, and Sang, 2014). Dividend payout as a dividend policy determining factor and return on equity in firm performance do not show significant correlations from the results of Velnampy, Nimalthasan, and Kalaiarasi, (2014).

The research conducted on the effect of dividend policy and firm's performance concluded a positive but insignificant relationship between firm performance and dividend policy in the industrial sector (Khan, Lamrani, and Khalid, 2019). A study conducted to check the relationship between dividend policy and EPS in the textile industry showed a negative impact between the dividend payout ratio and the earnings of the company (Ouma and Murekefu, 2012). This implies that shareholders are paid fewer dividends when companies have more profits to invent earnings in the company. The study of (Khan et al, (2016) concludes that there is no impact on equity from dividend policy. A positive and significant relationship between firm performance and dividend policy with respect to the dividend payout policy (Tahir et al, 2016).

Methodology

Methodology illustrates the method of analysis which includes operationalization, research hypothesis, research design, population, sample, data collection, data analysis and research limitations. The "research onion" developed by Saunders, Lewis and Thornhill, (2016) is used as the tool for the method of analysis that makes sense in analyzing the models. The research methodology focuses on the research process based on the theoretical concept of research onion following the layers step by step which ensures the regularity of the tools and techniques to organize the research design.

Operationalization of Research Variables

Table 6. Operationalization of Research Variables

Concept	Variable		Measurement	Source
Dependent variable (Firm performance	Return on equity	ROE	Net income/Shareholder's equity	Velnampy, Nimalthasan, and Kalaiarasi, 2014
Independent variable (Dividend policy)	Dividends per share	DPS	Earnings per share*Dividend payout ratio	Rahaman, 2018
	Earnings per share	EPS	Net income-Dividend on preferred stock/ Average outstanding shares	Velnampy, Nimalthasan, and Kalaiarasi, 2014

Source: Authors' estimation

Research Hypothesis

H1- There exists a significant relationship between DPS and RoE of companies in the apparel industry of the USA
H2- There exists a significant relationship between EPS and RoE of companies in the apparel industry of the USA
H3- There exists a significant relationship between dividend policy ratio and firm performance of companies in the apparel industry of the USA

Research Design

The research approach is the second layer from the outer side. Basically, there are two main approaches deductive and inductive (Saunders, Lewis, and Thornhill, 2016). The deductive approach is a way of testing existing theory and the inductive approach is a way of building theory. The deductive approach is used in the underlying research as a contemporary study since the researcher uses theory to develop testable hypotheses.

From these various strategies, this research pursues the case study as the research strategy. Case study report is an empirical inquiry that explores a contemporary phenomenon within its real-life context using multiple sources of evidence to obtain in-depth knowledge. The multiple case study was adopted as the overarching research strategy in dividend policy and firm performance of apparel sector companies in the USA. Whilst case study research allows in-depth exploration of the issue and a rich understanding of the context.

Research design is a general plan for how you will go about answering the research questions. In the process of research design, the other three layers are considered such as research strategies, research choices, and time horizon to turn the research question into a research project. The research design is classified as exploratory, descriptive, and explanatory. Basically, exploratory research deals with exploring a phenomenon. Descriptive research is the extension version of exploratory research which must have a clear picture of the data prior to the data collection. Explanatory research is established to research causal relationships between variables. Dividend policy as the independent variable and firm performance as the dependent variable in the primary study is done based on the existing theories to establish the relationship between dividend policy and firm performance with the use of explanatory research design.

Since the philosophy underlying this research is positivism its stance where quantitative data such as RoE, EPS, and DPS from the company's annual report to achieve the objectives of the research. Quantitative measures on dividend policy and firm performance for four selected companies in the apparel sector.

Population, Sample, and Sampling Design

The full set of cases in which a sample is taken is called the population. A research population is also known as a well-defined collection of individuals or objects known to have similar characteristics. Some research questions are possible to collect data from an entire population as it is of a manageable size. However, in this research, it is impossible to consider all

companies in the USA in the apparel sector. Hence the underlying study considers five apparel sector companies in the USA such as NIKE, Oxford industries, American eagle, and GAP from 2015-2019.

Sampling provides a valid alternative when it is impractical to survey the entire population due to budget constraints, and time constraints. Probability sampling or non-probability sampling are the two sampling techniques methods. These two methods are used since it is impracticable to collect data from the entire population. Probability sampling is most commonly associated with survey-based research strategy. In contrast, case study research uses the non-probability sample to provide a range of techniques such as quota sampling, purposive sampling, snowball sampling, and convenience sampling.

Out of different non-probability sampling techniques, purposive or judgemental sampling is used in the underlying research. This enables the use of researcher judgments to select informative cases that will enable them to meet the research objectives in identifying key factors that influence the dividend policy ratios, evaluate key measures of firm performance, and evaluate the relationship between Dividend policy ratio and firm performance of companies in the apparel industry of the USA. Four apparel sector companies were randomly selected for the period of five years from 2015-2019 based on the availability of data for the same duration. According to the data of these companies firm performance is taken as the dependent variable while dividend policy is taken as an independent variable.

Data collection

There are two methods of data collection primary and secondary. The underlying research paper uses secondary data to meet the research objectives in analyzing the published summaries that have been already collected for some other purposes. The annual reports from 2015-2019 are used for this purpose from selected apparel sector companies of the USA such as NIKE, Oxford industries, American Eagle and GAP. Annual reports include data that are necessary for the dependent and independent variable analysis.

Data Analysis

The relevant secondary data has been obtained from annual reports to obtain key measures used to identify independent and dependent variables as a collection of primary data was prevented due to time limitations. The annual report data of selected apparel sector companies; NIKE, Oxford industries, GAP, and American Eagle during the period of 2015-2019 are data are summarized using Microsoft Excel and analyzed using a regression model to derive the relationship and significance between the two variables. The regression model will be used to evaluate the relationship between dividend policy ratios (EPS and DPS) and firm performance (EPS) from variables used to test the hypothesis.

Research limitations

The undergoing research has identified a few limitations such as time constraints and cost constraints. Considering the revenue for the year 2019 USA apparel industry is considered the

largest apparel industry in the world (Oloruntoba, 2020). The underlying research has selected four companies randomly from the apparel market of the USA as NIKE, Oxford industries, GAP, and the American eagle. Due to the time constraint, the selected sample is small. Secondary data collection was used to analyze annual reports for five years from 2015-2019 considering the availability of data.

Further, the researcher used only RoE, DPS, and EPS but the use of more different variables would be great and valid for upcoming research. Some of the research articles used in the literature review have used the primary data collection method. However, the underlying research has used secondary data due to time constraints.

Findings and Discussion

The findings and discussion bring in the presentation of the findings and analysis of data. The findings of the study are followed by a discussion. Accordingly, this chapter analyzes data to discuss the research objectives. Data analysis was conducted using statistical tools based on the research hypothesis and a literature review used to discuss the objectives. However, for the most part, to identify the most influential factor of dividend policy ratio and impact on the apparel sector companies in the USA to improve the firm performance.

Factors of Dividend Policy

Baker and Powell, (2012) found that the major determinant of dividend policy was the expected level of earnings in the future. Most of the literature has used these variables as factors of dividend policy. Two financial ratios namely, EPS is the representative of future earnings and figures on making losses and DPS is the widely used measure in literature, and this measures the dividend payout level (Kharisma and Rachman, 2018).

The existing literature is reviewed to achieve the objective of evaluating the key factors that influence the dividend policy ratios. Accordingly, journal articles indicate that there are various measures that denote factors of dividend policy ratios. In line with different factors, the underlying research has selected DPS and EPS for the purpose of this research by carefully making the judgments as to the dependent variables. In the literature, this is supported by the research conducted by Rahman, (2018) and Priya and Nimalathasan, (2013). The majority of the journal articles have used the same measures which are utilized in the research. However, Innocent, Uchechukwu, and Ikechukwu, (2015) have mentioned the importance of DPS as a dividend policy ratio which can be used to evaluate investment decisions preferring to companies paying a dividend.

The underlying research has extracted data from annual reports. The area of dividend policy ratio can be covered from the carefully selected factors. The primary research conducted by Olufade, (2018) in investigating the impact of dividend policy on firm performance has examined the factors influencing the dividend policy and past literature has evaluated the dividend policy factors. The dividend policy factors have been identified using a primary source such as a questionnaire and concluded profitability, firm size, EPS, DPS, inflation as factors that affect the dividend policy. However, due to the time constraints, the underlying research has

focused on two factors of dividend policy which can be directly extracted from annual reports of the selected companies in the USA.

Determinants of Firm Performance

Based on the analysis of the findings from journal articles used for the purpose of this research shows that the majority of the journal articles have used profitability ratios which are mostly used indicators by investors, managers, and creditors to evaluate the performance (Kangarlouei et al, 2012). These articles emphasize that a major part of the articles used RoE as a key determinant of the firm's performance. For example, the research conducted by Rahman, (2018), Priya and Nimalathasan, (2013), Iqbal, (2018), and Tayeh et. al., (2015). The primary research conducted by (Olufad, 2018) has used RoE to measure firm performance. Therefore, the underlying research has used RoE as the determinant of firm performance.

The majority of researchers have frequently used RoE as a financial ratio to measure the profitability of the firm (Tayeh et. al., 2015). The literature explains that the study of Pirya and Nimalathasan, (2013) mentions RoE is used to identify the explanatory variables where existing theories are used. RoE is a profitability ratio that measures net income and shareholder's equity. The parameter of firm performance is followed by an increase in profit after tax. The judgment the researcher made in the underlying research is to utilize RoE as the key determinant of firm performance (Tayeh,Al-Jarrah and Tarhini, 2015). Therefore, RoE is considered a key determinant of firm performance which is supported by the literature.

Secondary Data Results and Interpretation

The secondary data are explained to understand the significance and connection of the relationship between dependent (RoE) and independent (EPS, DPS) variables. To understand the relationship between variables the underlying research has used a regression model and correlation analysis.

The null hypothesis is rejected when the significance (sig.) of the results are less than 0.05 (sig. $\leq$0.05) and the hypothesis is accepted. Therefore, the significance should be less than 0.05. From the business point of view, it means there is a relationship between two variables. The level of significance will be determined based on the value of the correlation. The correlation coefficient (r) ranges between $-1 \leq r \geq +1$ which predicts the relationship between variables. A high positive correlation is between +0.8-+1, a highly negative correlation is -8 to -1, a moderate correlation is 0.5 to 0.8, and values less than 0.5 will have a low correlation.

Relationship between DPS and RoE

Table 7. Regression Analysis of DPS And RoE

Variable	Dividend per share
Correlation coefficient (r)	0.577
Significance (sig.)	0.0097
Remark	There is a moderate positive relationship. The relationship is

	insignificance (0.0097<0.05)

Source: Authors estimation

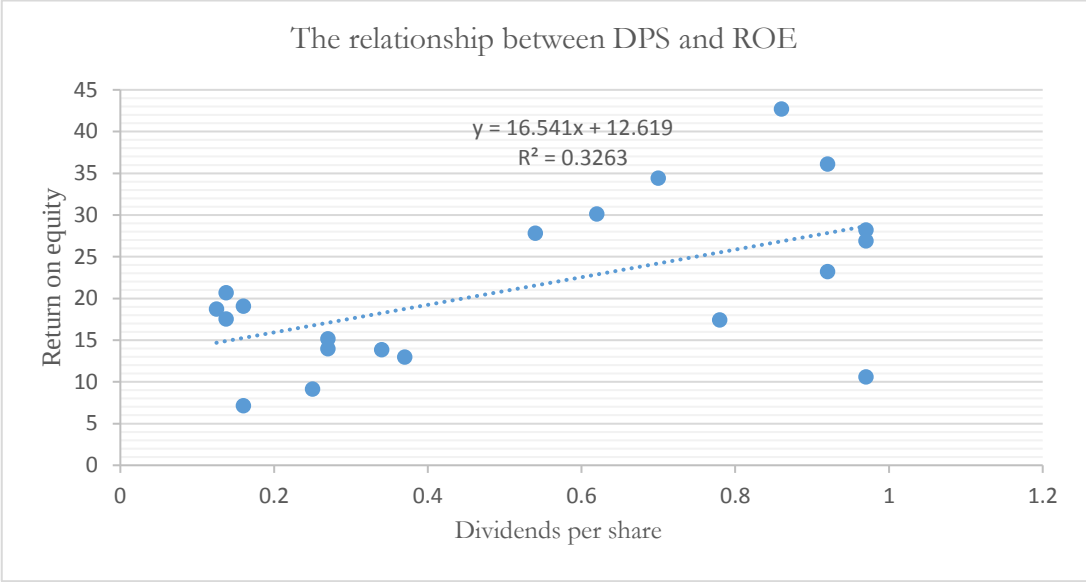

Figure 1. Linier Regression Model of DPS and RoE

The secondary data obtained for the above analysis are attached in annexure 1 and annexure 2. Based on that the regression analysis indicates a positive correlation coefficient of more than 0.5 indicating a moderate correlation between DPS and RoE. The significance value is lower than 0.05. This indicates that the null hypothesis is rejected and therefore the hypothesis is accepted. Therefore, there is a relationship between DPS and RoE. The alternative hypothesis (H1) is accepted and the (H10) null hypothesis is rejected.

Relationship between EPS and RoE

Table 8. Regression Analysis of EPS And RoE

Variable	Earnings per share
Correlation coefficient (r)	0.0006
Significance (sig.)	0.997
Remark	There is a low positive relationship. The relationship is insignificance (0.997>0.05)

Source: Authors estimation

The secondary data used for the above analysis are attached in annexure 3 and annexure 4. Based on that the regression analysis indicates a positive correlation coefficient of less than 0.5 indicating a low correlation between EPS and RoE. The significance value is higher than 0.05. This indicates that the null hypothesis is accepted and therefore the hypothesis is rejected. The alternative hypothesis (H2) is rejected and the (H20) null hypothesis is accepted.

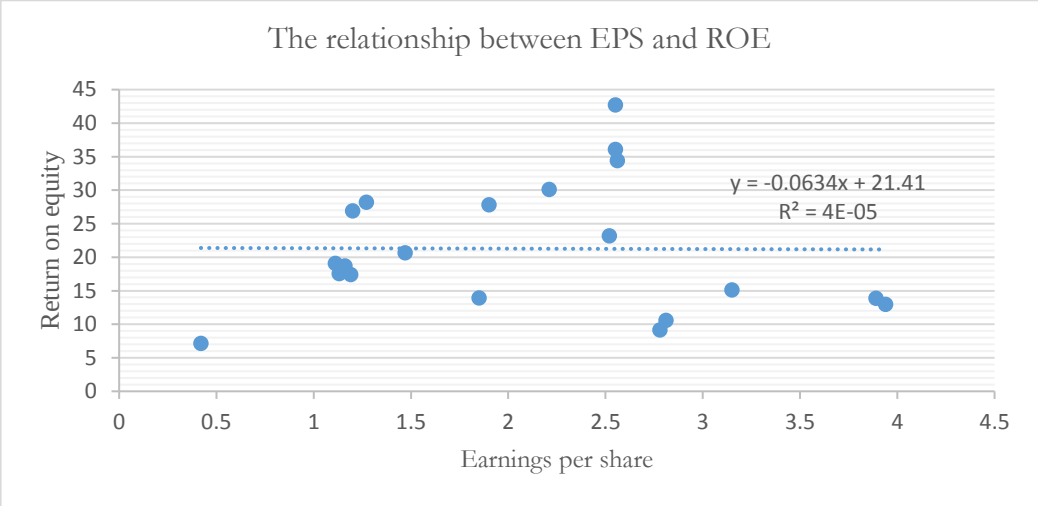

Figure 2. Linier Regression Model of EPS and RoE

Relationship between Dividend Policy Ratio and Firm Performance

Table 9. Regression Analysis of Dividend Policy and Firm Performance

Hypothesis	Correlation coefficient (r)	Significance (Sig.)	Summary
DPS and ROE	0.577	0.0097	Positive correlation. Significance relationship. Significance value 0.0097<0.05
EPS and ROE	0.0006	0.997	Positive correlation. Insignificance relationship. Insignificance value 0.997>0.05

Source: Authors estimation

Out of two hypotheses (H1 and H2), H1 is accepted indicating a positive significant relationship between the independent variable DPS and dependent variable RoE, and H2 is rejected whereas H20 is accepted indicating that there is an insignificant relationship between the independent variable EPS and dependent variable RoE. The relationship between accepted variables are significant (sig. < 0.05) and rejected variables are insignificant (sig.>0.05). The data analysis results predicted evidence that dividend policy (DPS) has a significant impact on firm performance (RoE) and that dividend policy (EPS) has an insignificant impact on firm performance (RoE). Therefore, hypothesis (H3) is accepted and the null hypothesis (H30) is rejected.

Discussion on Data Analysis

The test results show that out of the tested two variables DPS is having a significant moderate positive relationship with firm performance and EPS is having an insignificant positive

relationship. The above analysis shows a significant positive relationship between DPS and RoE. This implies that if DPS increases, return on equity will also increase. The DPS is the ratio of total dividend paid out divided by the number of outstanding ordinary shares issued. On the other hand, the present study indicates a correlation coefficient of 0.577 between DPS and RoE within apparel sector companies in the USA. Higher DPS illustrates a higher firm performance (Farrukh et al, 2017). Individuals use DPS in evaluating companies that pay higher dividends and invest in various stocks. RoE illustrates the profitability of the company when compared to other firms in the same industry (Ouma, 2012). In the underlying research, four companies in the apparel sector are considered which enables to compare each other's profitability. When individuals evaluate companies for their investments (DPS) the earning power of shareholders' investment (RoE) is indicated through these measures. The findings of Rahmman, (2018) show that there is a statistically insignificant and positive relationship between DPS and RoE, which implies an increase in RoE along with an increase in DPS.

Based on the analyzed data RoE increases when there is an increase in EPS. The study indicates a correlation coefficient of 0.405 between EPS and RoE within the apparel sector companies in the USA. The study of literature review shows that dividend policy has a higher impact on firm performance in developed countries. This impact is clearly indicated in the analysis as it is important to identify the test results that show that dividend policy followed by an increase in EPS has a high impact on the image of the companies in the USA and is followed by an increasing return on equity. Understanding the firm performance measures gives early awareness of strengths, weaknesses, and opportunities available in that area. This is supported by the research conducted by Priya and Nimalathasan, (2013) a significant positive relationship between dividend policy ratio and firm performance with the positive effect of dividend policy of firms that tend to increase the financial performance of the firm. Moreover, the study conducted by Rahman, (2018) shows similar results proving a significant positive relationship was found between EPS and return on equity (RoE) implying that if earnings per share is increased, return on equity will also increase. The findings of the research study show that there is a significant and positive relationship between RoE and EPS which supports the relevant theories of dividend policy.

Based on the literature review analysis the dividend policy measures are not significantly correlated with DPS and EPS as dividend policy, RoE as firm performance. The research conducted by Khan, Lamrani, and Khalid, (2019) in the industrial sector of Pakistan has used regression analysis to conclude that there is a great influence of the dividend policy on firm performance because when there is an increase or decrease in dividend payments it affects the increase or decrease in the stock price of the firm which means that dividend policy influences the performance of the firm (Enekwe, Nweze and Agu, 2015). Since some theories mention that dividend policy is irrelevant and therefore the study conducted by Ouma and Murekefu, (2012) shows that dividend policy is relevant and affects firm performance by analyzing listed firms in Kenya. Secondary data analysis of manufacturing firms in Pakistan has used regression analysis and descriptive analysis to mention that consistency in dividend policy affects the firm performance to increase the RoE (Hafeez et al, 2018).

According to the above findings from the literature, stated that across different findings from different industries such as manufacturing, food, hotel, construction, and cement in various countries such as Kenya, Pakistan, and Sri Lanka prove the findings of the present research in the apparel sector of the USA. Better management of dividend payments and earnings per share enables to have better future performances. The research findings are of a similar type of underlying research and confirm that dividend policy and firm performance have a positive relationship and this impact on the increase or decrease in dividend policy ratios and firm performance. According to the literature Farrukh et al, (2017), the regression model used in the study of investigating the influence of dividend policy on firm performance mentions that dividend policy is consistent with signalling theory and is positively linked with EPS.

Conclusion

The aim of this research is to critically evaluate the relationship between dividend policy ratios and firm performance in the apparel sector of the USA and it critically evaluates the correlation coefficient (positive, negative, or neutral) between dependent and independent variables. The objectives are set in a way to achieve the aim of the research. The research objectives have evaluated the key factors that influence the dividend policy ratios as DPS and EPS. Priya and Nimalathasa, (2013) and Rahaman, (2018) are two researchers in the literature review who have used the same variables in their studies. Furthermore, based on the blend of literature used in the current research the firm performance is measured by RoE. The studies conducted by Iqbal, (2018), Salman, (2019), and Tayeh et al., (2015) have used RoE as the measure of firm performance. RoE has shown different results in relation to independent variables DPS and EPS. And the underlying research critically evaluates the relationship between dividend policy and firm performance of companies in the apparel industry of the USA. Based on the results of the data analyzed DPS and EPS of dividend policy ratio were analyzed in relation to RoE of firm performance.

The regression analysis resulted in a positive significant relationship between dividend policy ratio determinant DPS and firm performance of RoE and a positive insignificance relationship between dividend policy ratio determinant EPS and firm performance of RoE. As per the study conducted by Rahuman, (2018), Khan, Lamrani, and Khalid, (2019) have concluded a positive relationship. Out of two hypotheses, one hypothesis is accepted rejecting the null hypothesis and one null hypothesis is accepted rejecting the hypothesis. The positive relationship explains that when the dividend policy ratio increases the firm performance will also increase and vice versa.

The study conducted by Brigham, (2012) suggests that the main decisive factor for a firm's performance is the firm's dividend policy. Therefore, the function of dividend policy ensures investors about their return. Dividend policy plays a key function in the apparel sector companies in the USA. However, the studies carried out regarding this matter show a comprehensive view across all the consequences to achieve higher firm performance. This is discussed in the study conducted by (Rahman, 2018). Determining the company's dividend policy is one of the most important decisions taken by the company's board of directors as discussed in the theoretical reviews. It is considered having a stable dividend policy is important for a corporation because shareholders and investors express dissatisfaction with surprises in expected

dividend returns. A policy mentions when and how much cash can be returned to investors who are attracted to the equity. Consequently, it will affect a fall in stock prices and more attention to dividend policy is foremost. In general dividend policy shows the stability of the organization. This dividend is distributed among the equity shareholders and the dividend paid to shareholders as a return on their investment will attract future investments to the firm.

References

Adediran, S.A. & Alade, S.O., (2013). Dividend policy and corporate performance in Nigeria. *American Journal of Social and Management Sciences*, *4*(2),71-77.

Adidas (n.d). *Group profile*. Adidas. https://www.adidas-group.com/en/about/profile/

Agyei, S. K., & Marfo-Yiadom, E. (2011). Dividend policy and bank performance in Ghana. *International Journal of Economics and Finance*, *3*(4), 202-207.

Ajanthan, A. (2013). The relationship between dividend payout and firm profitability: A study of listed hotels and restaurant companies in Sri Lanka. *International Journal of Scientific and Research Publications*, *3*(6), 1-6.

Al-Malkawi, H. A. N., Rafferty, M., & Pillai, R. (2010). Dividend policy: A review of theories and empirical evidence. *International Bulletin of Business Administration*, *9*(1), 171-200.

Alzomaia, T., & Al-Khadhiri, A. (2013). Determination of dividend policy: The evidence from Saudi Arabia. *International of Business and Social Science*, *4*(1), 181- 192.

Baker, H. K., & Powell, G. E. (2012). Dividend policy in Indonesia: survey evidence from executives. *Journal of Asia Business Studies*, *6*(1), 79-92.

Brigham, E. & Houston, J. (2012) *Fundamentals of financial management* (7th ed.). South-Western Cengage, Boston.

Coskun, M. & Sayilir, Ö. (2012). Relationship between corporate governance and financial performance of Turkish companies. *International Journal of Business and Social Science*, *3*(14), 59-64

Dada, F. B., Malomo, E. & Ojediran, S., (2015). Critical evaluation of the determinants of dividend policy of banking sector in Nigeria. *International Journal of Economics, Commerce and Management*, *3*(2), 1-11.

Enekwe, C. I., Nweze, A. U., & Agu, C. I. (2015). The effect of dividend payout on performance evaluation: Evidence of quoted cement companies in Nigeria. *European Journal of Accounting, Auditing and Finance Research*, *3*(11), 40-59.

Farrukh, K., Irshad, S., Shams Khakwani, M., Ishaque, S., & Ansari, N. Y. (2017). Impact of dividend policy on shareholders wealth and firm performance in Pakistan. *Cogent Business & Management*, *4*(1), 1408208.

Gusni, T., & Kata, K. (2017). The determinants of dividend policy: A study of financial industry in Indonesia. *Journal of Finance and Banking*, *21*, 562-574

H&M Group (n.d). Dividend. https://hmgroup.com/investors/dividend/.

Hafeez, M., Yuan, C., Shahzad, K., Aziz, B., Iqbal, K. & Raza, S., (2019). An empirical evaluation of financial development-carbon footprint nexus in One Belt and Road region. *Environmental Science and Pollution Research*, *26*(24),25026-25036.

Innocent, C., Uchechukwu, A., & Ikechukwu, C. (2015). The effect of dividend payout on performance evaluation: Evidence of quoted cement companies in Nigeria. *European Journal of Accounting, Auditing and Finance Research*, *3*(11), 2053–4094.

Iqbal, U., & Usman, M. (2018). Impact of financial leverage on firm performance. *SEISENSE Journal of Management*, *1*(2), 70-78.

Jayawardhana, A. (2016). Financial performance analysis of Adida AG. *European Journal of Business and Management*, 8(11), 74-82

Kangarlouei, S. J., Motavassel, M., Azizi, A., & Farahani, M. S. (2012). The investigation of the relationship between dividend policies, cash-flow uncertainty, contributed capital mix and investment opportunities: the case of emerging markets (Tehran Stock Exchange). *International Journal of Business and Social Science*, *3*(2).172-180

Khan, K., Lamrani, H. C., & Khalid, S. (2019). The impact of dividend policy on firm performance: A case study of the industrial sector. *Risk Governance*, *9*(3), 23-31.

Kharisma, A., & Rachman, W. A. (2018). Factors That influence on dividend policy between Indonesia and China banking. *Jurnal Ilmiah Ekonomi Bisnis*, *22*(3), 255-264

Lazăr, S. (2016). Determinants of firm performance: evidence from Romanian listed companies. *Review of Economic and Business Studies*, *9*(1), 53-69.

Loi, T. H., & Khan, A. A. (2012). *Determinants of firm growth: evidence from Belgian companies* [Master's dissertation]. Universiteit Gent. http://www.ethesis.net/Determinants/Determinants%20of%20firm%20growth%20Evidence%20from%20Belgian%20companies.pdf

Lu, S. (2018). What will happen to the US textile and apparel industry if the NAFTA goes?. *Margin: The Journal of Applied Economic Research*, *12*(2), 113-137.

Miller, C. C., Washburn, N. T., & Glick, W. H. (2013). Perspective—The myth of firm performance. *Organization Science*, *24*(3), 948-964.

Murekefu, T.M. & Ovma, O.P (2014). The relationship between dividend payout and firm performance: A study of listed companies in Kenya. *European Scientific Journal*, *8*(9),199-215

Murhadi, W. R. (2010). Study on dividend policy: antecedent and its impact on share price. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1686109

Oloruntoba, A. (2020). *Revenue of the apparel market worldwide by country in 2019*. Statista. https://www.statista.com/forecasts/758683/revenue-of-the-apparel-market-worldwide-by-country.

Olufade, S. (2018). *Impact of dividend policy on firm performance in the food and beverage industry: Comparison between Nigeria and Finland* [Bachelor's dissertation]. https://urn.fi/URN:NBN:fi:amk-201805147893.

Ong, A. S. K., Lim, A. S., Lim, M. Y., Ow, Y. P. Y., & Tan, L. L. (2014). *The impact of dividend policy on shareholders' wealth: evidence on Malaysia's listed food producer sector* [Doctoral dissertation]. Universiti Tunku Abdul Rahman.

Ouma, O. P. (2012). The relationship between dividend payout and firm performance: a study of listed companies in Kenya. *European Scientific Journal*, *8*(9). 199-215

Ouma, O., & Murekefu, T. (2012). The relationship between dividend payout and firm performance: a study of listed companies in Kenya. *European Scientific Journal*, *8*(9), 199-215

Panigrahi, S., & Zainuddin, Y. (2015). Dividend policy decisions: Theoretical views and relevant issues. *Reports on Economics and Finance*, *1*(1), 43-58.

Priya, K., & Nimalathasan, B. (2013). Dividend policy ratios and firm performance: a case study of Selected Hotels & Restaurants in Sri Lanka. *Global Journal of Commerce and Management Perspective*, *2*(6), 16-22.

Priya, P. V., & Mohanasundari, M. (2016). Dividend policy and its impact on firm value: A review of theories and empirical evidence. *Journal of Management Sciences and Technology*, *3*(3), 59-69.

Rahman, A. (2018). Effect of dividend policy on firm's performance: a case study of cement sector of Pakistan. *SEISENSE Journal of Management*, *1*(5), 6-15.

Ritha, H., & Koestiyanto, E. (2013). Faktor-Faktor yang Mempengaruhi Dividend Payout Ratio (DPR). *Jurnal Aktual Akuntansi Keuangan Bisnis Terapan*, *1*(2), 105-118.

Rój, J. (2019). The Determinants of Corporate Dividend Policy in Poland. *Ekonomika*, *98*(1), 96-110.

Salman, A. (2019). Determinants of dividend policy. *Investment Management and Financial Innovations*, *16*(1), 167-177.

Saunders, M., Bristow, A., Lewis, P., & Thornhill, A. (2015). Research methods for business students (Chapter 4). *Understanding research philosophy and approaches to theory development* (pp. 122-161). Pearson Education.

Simply Wall St (2019 November 4) *Are you can income investor? Don't miss out on Christian Dior SE*. Yahoo Finance. https://finance.yahoo.com/news/income-investor-dont-miss-christian-112356172.html

Tahir, S. H., Sohail, S., Qayyam, I., & Mumtaz, K. (2016). Effect of corporate governance index on dividend policy: An investigation of textile industry of Pakistan. *Journal of Economic and Social Development*, *3*(1), pp. 139-146.

Tayeh, M., Al-Jarrah, I. M., & Tarhini, A. (2015). Accounting vs. market-based measures of firm performance related to information technology investments. *International Review of Social Sciences and Humanities*, *9*(1), 129-145.

Tayeh, M., Al-Jarrah, I. M., & Tarhini, A. (2015). Accounting vs. market-based measures of firm performance related to information technology investments. *International Review of Social Sciences and Humanities*, *9*(1), 129-145.

Uwuigbe, U., Jafaru, J., & Ajayi, A. (2012). Dividend policy and firm performance: A study of listed firms in Nigeria. *Accounting And Management Information Systems*, *11*(3), 442-454.

Velnampy, T. (2013). Corporate governance and firm performance: A study of Sri Lankan manufacturing companies. *Journal of Economics and Sustainable Development*, *4*(3), 228-235.

Velnampy, T., Nimalthasan, M.P., & Kalaiarasi, M.K. (2014). Dividend policy and firm performance: Evidence from the manufacturing companies listed on the Colombo stock exchange. *Global Journal of Management and Business Research*, *14*(6), 63-67.

Weerakoon, R. K. (2016). Human resource management in sports: A critical review of its importance and pertaining issues. *Physical Culture and Sport*, *69*(1), 15-21.

Wijekoon, M., & Senevirathne, L. (2019). Impact of dividend policy on firm performance evidence from listed companies in Colombo stock exchange. *Global Scientific Journals*, *7*(10), 225-239.

Yegon, C., Cheruiyot, J., Sang, J., Cheruiyot, P.K., Kirui, J. & Rotich, J., (2014). Effects of dividend policy on firm's financial performance: Econometric analysis of listed manufacturing firms in Kenya. *Research Journal of Finance and Accounting*, *5*(12), 136-144.

Annexure 1. DPS and ROE Data for Regression Analysis

Company Name	Year	DPS	ROE (%)
NIKE	2015	0.54	27.8
	2016	0.62	30.1
	2017	0.7	34.4
	2018	0.78	17.4
	2019	0.86	42.7
Oxford industries	2015	0.25	9.14
	2016	0.27	13.95
	2017	0.27	15.14
	2018	0.34	13.86

	2019	0.37	12.96
American Eagle	2015	0.16	7.13
	2016	0.16	19.08
	2017	0.125	18.71
	2018	0.1375	17.54
	2019	0.1375	20.67
GAP	2015	0.92	36.1
	2016	0.92	23.2
	2017	0.97	26.9
	2018	0.97	28.2
	2019	0.97	10.58

Annexure 2. Summary of DPS and ROE Data for Regression Analysis

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.576717213
R Square	0.332602744
Adjusted R Square	0.293344082
Standard Error	8.236265764
Observations	19

ANOVA

Reg	*df*	*SS*	*MS*	*F*	*Significance F*
Regression	1	574.7130202	574.713	8.472086	0.009739442
Residual	17	1153.213253	67.8361		
Total	18	1727.926274			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	12.31668391	3.512385925	3.50664	0.002705	4.90619737	19.7271704	4.90619737	19.7271704
0.54	16.48972867	5.665240397	2.91068	0.009739	4.53711623	28.4423411	4.53711623	28.4423411

Annexure 3. EPS and ROE Data for Regression Analysis

Company Name	Year	EPS	ROE (%)
NIKE	2015	1.9	27.8
	2016	2.21	30.1
	2017	2.56	34.4
	2018	1.19	17.4
	2019	2.55	42.7
Oxford industries	2015	2.78	9.14
	2016	1.85	13.95
	2017	3.15	15.14
	2018	3.89	13.86
	2019	3.94	12.96
American Eagle	2015	0.42	7.13
	2016	1.11	19.08
	2017	1.16	18.71
	2018	1.13	17.54
	2019	1.47	20.67
GAP	2015	2.55	36.1
	2016	2.52	23.2
	2017	1.2	26.9
	2018	1.27	28.2
	2019	2.81	10.58

Annexure 4. Summary of EPS and ROE Data for Regression Analysis

Regression Statistics	
Multiple R	0.000689968
R Square	4.76056E-07
Adjusted R Square	-0.058823025
Standard Error	10.08179912
Observations	19

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.00082259	0.000823	8.09E-06	0.997763288
Residual	17	1727.925451	101.6427		
Total	18	1727.926274			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.92054146	5.49990159	3.803803	0.001419	9.316763404	32.52431951	9.316763404	32.52431951
1.9	0.006783509	2.384519186	0.002845	0.997763	-5.024112215	5.037679234	-5.024112215	5.037679234