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Accounting information and stock price changes in Nepalese hydropower companies

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ABSTRACT

The study aimed to examine the relationship between accounting information (earnings per share, dividend per share and book value per share) on stock price changes (volatility) in Nepalese hydro power companies. It examined the impact of dividend per share, earnings per share and book value per share on stock price changes. Out of the 51 hydropower companies listed in Nepal Stock Exchange, Butwal Power Company Limited (BPC) and Chilime Hydro Power Company Limited (CHPC) were randomly selected for the study. The study period was covered 2073/2074 to 2078/2079 and data collected through the annual reports as well as data based on the Nepal Stock Exchange. Market value per share (MVPS) was taken as dependent variable and earnings per share (EPS), dividend per share (DPS) and book value per share (BVPS) as independent variables. Multiple regression analyses was used to identify the impact of accounting information on share price changes. A positive relation was found between EPS and MVPS in both companies. However DPS and BVPS showed mixed relationship (negative and positive) with MVPS of BPC and CHPC. The EPS of BPC found positive impact on MVPS. However DPS revealed negative impact on MVPS of both companies.

Keywords: Accounting information, share price, volatility, hydropower companies.

Introduction

The changes (volatility) of share price is the systemic risk faced by investors who possess ordinary shares investment (Guo, 2002). According to Nel & Krugler, (2001), share price changes refers to the degree, to which share prices vary over a certain length of time and measures the frequency and size of fluctuations in the price of a share. Moreover it is a benchmark for measuring risk which indicate changing pace in the stock's price over a determined period; the more considerable volatility implies that the possibility of gain or loss is higher in short term. Investors are by nature risk averse, and the volatility of their investments is important to them because it is a measure of the level of risk they are exposed to. Moreover, the price of volatile stock would differ considerably over time and it is very difficult to predict the future price of this stock (Hashemijoo & Ardekani, 2012).

Investors are considered one of the most important group of decision makers that use accounting information. Reliable accounting information has been considered to be an essential pre-requisite for stock market growth as investors require adequate information about the stock market to take informed investment decision (Oyerinde, 2006). Azrak et al. (2021), indicated that the significant impact of accounting information disclosure on stock price volatility. Accounting information such as earnings per share (EPS), book value per share (BVPS) and dividend per share (DPS) helps investors to determine the expected returns on their investment and variations if any from one accounting period to another (Wang & Chang, 2008). The financial key indicator like earnings per share (EPS) informs investors and potential investors about the earning capacity of an entity for a specific period (Adams & Media, 2014) and helps to predict which entity would render the best return on their investment (Moles, Parrino & Kidwell, 2011). Smart & Graham (2012) pointed out that an entity's growth rate is determined by performance indicators such as EPS which is disclosed in the financial statements. The study by Sharma (2011) highlighted that both dividends and earnings contained explanatory power with regard to share price changes. Likewise Menaje, (2012) also identified that the EPS had a significant impact on share prices. Chang et al. (2008) found the positive relationship between growth rate of the EPS and share prices. However the study of Haque & Faruquee (2013) indicated that EPS did not correlate with share prices. Iqbal et al. (2015) pointed out that EPS was a significant determinant of share price changes in the oil and gas, and cement industry, listed on the Karachi Share Exchange for the period 2008 to 2013. Auret & De Villiers (2000) identified both EPS and dividends per share as factors that influence share prices. De Villiers et al. (2003) suggested that EPS and cash flow per share can explain share price behavior and indicated that changes in EPS could better explain changes in share prices than cash flow per share.

Dividend policy has been a strong bone of contention in the area of finance (Al-Malkawi, 2007; Al-Najjar & Hussainey, 2009). Dividends are the proportion of total residual profits distributed as dividend to shareholders (Bali, 2003; Gill, Biger & Tibrewala, 2010) and which are usually distributed in the form of cash (cash dividends) or share (share/stock dividends). It indicates the retention policy of the company as investors would always prefer higher ratio to continue to retain investment in the company (Siyanbola & Adedeji, 2014). According to Khan (2012), dividend per share is important for investors as they consider dividends not only the source of income but also a way to assess company from investment point of view. Companies also realize that investors pay close attention to their dividend returns, and makes the volatility of stock prices as important to firms as it is to investors (Okafor & Mgbame, 2011). Profilet & Bacon (2013), and Shah & Noreen (2016) suggested that share price volatility is inversely related to both dividend yields and the dividend payout ratios. Different results were presented by Hussainey et al. (2011) who found that the dividend yield of the firms listed on the London Stock Exchange were positively related to share price volatility while the payout ratio was negatively related to stock price changes. Zainudin, et al. (2018) identified a significant negative relationship between dividend payout ratio of firms and stock price volatility. In the context of the Tehran Stock Exchange, Lashgari & Ahmadi (2014) reported a negative relationship between the dividend payout ratio and stock price volatility, whereas Gunarathne et al. (2016) reported a positive relationship in case of the Sri Lankan stock market. Jahfer & Mulafara (2016) found a positive relationship between dividend yield and share price volatility. The findings of Menike & Prabath, (2014) indicated that dividend per share was most useful in predicting share prices, followed by EPS and book value per share.

The sum of the cumulative retained earnings and other entries under stockholder's equity is the book value of the equity of the entity (William, Gordon & Jeffery, 2004). Book value per share is one of the important variable which affect the market value of equity share as it is the value of own funds of a company per share and it expresses the worth of each share in a company. The book value is a reflection of the past earnings, dividend distribution policy of the company and investment decisions, hence, a high book value indicates that a company has huge reserves and is a potential bonus entity, while a low book value signifies a liberal distribution policy of bonus and dividends, or a poor track record of profitability (Pushpa & Sumangala, 2013). Khan et al. (2012) explained that book value per share has direct and positive association with the stock return in the Karachi Stock Exchange in Pakistan for the period 2005 to 2011. Further the study found that BVPS has more explanatory power than the earning yield and dividend yield. Dontoh, Radhakrishnan, & Ronen, (2004) documented that book values of equity are highly associated with stock prices volatility. Some of these studies show that the statistical association between stock prices and book equity is typically stronger than the association between stock returns and earnings.

The focus of this study was to examine the impact of information on share price in Nepalese hydropower companies. The existing empirical evidence so far is observed to be vacillating and largely polarized. The arguments have been between theories that suggest that accounting information has no effect on stock prices and those who think otherwise. Hence, the broad objective of this study is to examine accounting information and share price changes in Nepalese hydropower companies. More specifically, the objectives are:

1) To examine the relationship between earnings per share and the stock price changes.
2) To examine the relationship between dividends per share and the stock price changes.
3) To examine the relationship between book value per share and the stock price changes.
4) To identify the impact of earning per share, dividend per share and book value per on stock price changes.

Methodology and Results

Multiple regression analysis was used to describe these relationships and a correlation analysis was done amongst the variables. The dependent variable stock price changes (market value per share –MVPS) was regressed against the three main independent variables, earnings per share, dividend per share and book value per share. Butwal Power Company Limited (BPC) and Chilime Hydro Power Company Limited (CHPC) were randomly selected from 51 hydropower companies listed in Nepal Stock Exchange. The study period was covered 2073/2074 to 2078/2079 and data collected through the annual reports as well as data based on the Nepal Stock Exchange.

Table 1 Descriptive statistics

		MVPS	EPS	DPS	BVPS
BPC	Mean	491.1667	24.9067	22.2500	255.5417
	Std. Deviation	123.74072	11.00138	5.98122	29.56898
CHPC	Mean	650.6667	16.6533	20.8333	192.1717
	Std. Deviation	218.14002	6.88625	4.91596	35.60831
Combined	Mean	570.9167	20.7800	21.5417	223.8567
	Std. Deviation	188.48798	9.75429	5.27196	45.48591

Table 1 shows the mean value of MVPS, EPS, DPS and BVPS of sample companies. The mean value of MVPS is higher (650.6667 >570.9167) in CHPC than the combined mean. However the mean value of EPS, DPS and BVPS are higher in BPC than the combined mean. It indicates that the earning capacity, dividend distribution and book value of share are better in BPC than CHPC.

Table 2 Relationship statistics Butwal Power Company Limited (BPC)

	MVPS	EPS	DPS-BPC	BVPS
MVPS	1			
EPS	.520	1		
DPS	-.115	.712	1	
BVPS	-.058	.708	.972	1

Table 2 highlights the relationship between dependent and independent variables of BPC. The correlation coefficient .520 indicates moderate positive (.50 to .70) relationship between MVPS and EPS. However DPS (-.115) and BVPS (-.058) have negligible negative (-.00 to -.30) relationship with MVPS.

Table 3 Relationship statistics Chilime Hydro Power Company Limited (CHPC)

	MVPS	EPS	DPS	BVPS
MVPS	1			
EPS	.901	1		
DPS	.605	.798	1	
BVPS	.870	.979	.892	1

According to Table 3 the relationship between MVPS and DPS shows .901 (.90 to 1.00) very high positive relation. The correlation coefficient .870 indicates high positive (.70 to .90) relationship between MVPS and BVPS. Likewise the correlation coefficient .650 between MVPS and DPS indicates moderate positive (.50 to .70) relationship. It revealed that EPS, DPS and BVPS are associated with MVPS in CHPC.

Regression model:

$MVPS = \beta 0 + \beta 1\ EPS + \beta 2\ DPS + \beta 3 BVPS + \varepsilon$

Table 4 Regression coefficients statistics

Model		BPC	CHPC
Coefficients	(Constant)	215.372	-1162.557
	EPS	13.492	-32.268
	DPS	-32.525	-53.814
	BVPS	2.596	18.066
R Square		.768	.914

Dependent Variable: MVPS

Table 4 shows the regression coefficients and R Square. The independent variables EPS, DPS and BVPS explains MVPS of BPC by 76.8 percentage. Likewise the independent variables explains 91.4 percentage MVPS in CHPC. The EPS of BPC has positive impact on MVPS. However it shows negative impact on MVPS of CHPC. The BVPS of both companies shows positive impact on MVPS. However DPS has negative impact on MVPS of both companies.

Conclusion and discussion

This study investigated the relationship between accounting information variable and market value of stock price by using correlation and multiple regression analysis. This study selected two companies for the period 2073/2074 to 2078/2079. Multiple regression analysis revealed that a positive as well as negative impact of accounting variables earnings per share on the stock price changes and lies in the line of Iqbal et al. (2015) and contradicts with Haque & Faruquee (2013). Compared to the results of the developed market and developing market earnings per share showed less impact to the price in the NEPSE. DPS showed negative impact on stock price changes and lies in the line of Lashgari & Ahmadi (2014). However it contradicts with the findings of Menike & Prabath, (2014). The overall findings revealed that the higher the earnings per share, the higher the changes in a stock price. The study, contributes to current knowledge in accounting information and share price changes. In future, the findings of this research could be compared and used for further research by taking different accounting information like cash flow and operational profit on stock prices changes.

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