Effects of Financial Market Variables on Stock Prices: A Review of the Literature

Fatima Ruhani, Md. Aminul Islam, Tunku Salha Tunku Ahmad
University Malaysia Perlis, Perlis, Malaysia
Muhammad Ruhul Quddus
Saad Musa Industrial Group, Chittagong, Bangladesh

Stock market plays a pivotal role in firms’ expansion and turns economic growth. In the literature, because of the importance of stock markets to the real economy, the smooth and risk-free operation of the stock market has attracted significant attention. The finance literature contains a large number of studies that examine the stock price behaviour with some emphasis on the determinants of the relationship between the equity prices and the financial market activities. The present study reviews the previous works of the effect of financial market variables and stock price. Five selected financial market variables, market capitalization, earnings per share, price earnings multiples, dividend yield, and trading volume are reviewed in this study. In the past literature, there are the opinions of the positive significant relationship between market capitalization and stock price. To find the relationship between dividend yield and stock price, there are two broad schools of thoughts. Both of the relevance and irrelevance theory of Gordon and Modigliani have the strong evidence in the current literature that keeps on the dilemma and provides the scopes for future research. Price-earnings multiples are analyzed in the past literature by using different variables. Based on that, it is evidenced that price-earnings multiples have a negative significant effect on stock price. The reviewed studies state the cointegrating relationship between the stock price and the trading volume as the trading volume is a source of risk.

Keywords: market capitalization, dividend yield, Gordon model, Modigliani and Miller model, earnings per share, price earnings multiples, trading volume and stock price

Introduction

A well-developed financial system is an important pre-requisite for a developed economy. Stock markets enable firms to raise capital by issuing shares and also create an environment where those shares can be traded. Thus stock market plays a pivotal role in firms’ expansion and turns economic growth. In the literature, because of the importance of stock markets to the real economy, the smooth and risk-free operation of the stock market has attracted significant attention. In the empirical capital market research literature, there is a long history
about the determinants of stock performance. The literature suggests that different variables are potentially important in explaining the variations in stock performance in different economies at different times and aspects. Policymakers, however, want to learn about the behaviour of the stock market and, more importantly, discover how the behaviour of the stock market is moved in response to the change of different factors. Factors that play a significant role in affecting stock price behaviour are from different segments like economic variables, financial market variables, variables from behavioural finance, and so on.

**Financial Market Variables and Stock Price**

The finance literature contains a large number of studies that examine the stock price behavior with some emphasis on the determinants of the relationship between the equity prices and the financial market activities. Followings are the discussion on the related studies of the effect of financial market variables on stock market returns.

**Market Capitalization and Stock Price**

A market capitalization calculation is a critical part of any stock valuation process. Market capitalization (sometimes called market cap) is the total market value of all the companies’ outstanding shares. This represents the value the market has placed on the value of the company’s equity (Ali, 2013).

Lukács (2002) investigates the relationship between stock return and market capitalization. The analysis is based on the returns of 21 stocks listed on the Budapest Stock Exchange (BSE). First, these stocks are ranked according to their market capitalization, and then different moments of distribution as well as normalized moments such as skewness and kurtosis are calculated. Results are evaluated both by charts and rank correlation. A significant relationship is demonstrated between the distribution of returns and the market capitalization.

Ologunde, Elumilade, and Asaolu (2006) examined the relationships between stock market capitalization rate and interest rate in Nigeria. They used the Ordinary Least Square (OLS) regression method and they found that the prevailing interest rate exerts a positive influence on stock market capitalization rate. Also, they found that government development stock rate exerts a negative influence on stock market capitalization rate and prevailing interest rate exerts a negative influence on the government development stock rate. Kurihara (2016) suggests that stock market capitalization rate is significantly influenced by the macroeconomic environment factors such as gross domestic product, exchange rates, interest rates, current account, and money supply. Oluwatoyin and Gbadebo (2009) examine the impact of share market capitalization on a company’s performance. They adopt the Ordinary Least Square (OLS) analytical technique. Using the company’s annual data for 20 years, they recommend that the confectionary company should implement policies that will encourage an increase in their profit after tax, dividends, and turnover as these variables have positive and statistically strong significance on the changes in the company’s performance and the value of its market capitalization. Khrawish, Siam, and Jaradat (2010) examine the effect of interest rates on the stock market capitalization rate in the Amman Stock Exchange (ASE) over the period 1999-2008. Based on the multiple linear regression model and a simple regression model, the time series analysis revealed that there is a significant and positive relationship between government prevailing interest rate (R) and stock market capitalization rate. Subeniotis, Papadopoulos, Tampakoudis, and Tampakoudi (2011) studied the relationship between the EU-12 stock market price indices and four crucial macroeconomic factors, using panel data
The examined variables are market capitalization, industrial production, the economic sentiment indicator and inflation, while the 12 countries are those who have adopted the euro. The empirical results reveal a strong effect of the first three factors, while inflation has a negative but not statistically significant coefficient. Further, the variables that affect the stock markets positively are market capitalization and the economic sentiment indicator. Ali (2013) investigates a group of micro and macro variables and he shows a significant positive short and long run and the bi-directional causal relationship between market capitalization and stock price. After that, Toraman and Başarır (2014) investigate the long run relationship between stock market capitalization rate and interest rate in Turkey over the period 1998-2012. The long-run relationship is tested by Johansen Co-integration tests. According to the results of the study, there is a long-run relationship between stock market capitalization rate and interest rates.

**Dividend Yield and Stock Price**

The dividend yield of a stock signifies how much a company pays a dividend on its stock price. It is calculated as a fraction of annual dividends paid by the company upon its stock price. Dividend yield is considered an important variable that is used by Allen and Rachim (1996), Nishat and Irfan (2003), Rashid and Rahman (2009), Nazir, Nawaz, and Gilani (2010), Suleman, Asghar, Shah, and Hamid (2011), Hussainey, Mgbame, and Chijoke-Mgbame (2011), moreover, it is significantly explaining the effect of dividend policy on stock market prices. All these researchers found a positive relation between dividend yield and stock price.

There are mainly two schools of thoughts available in the field of finance that presented two different opinions about the dividend policy. One school of thought followed the opinion of Miller and Modigliani (1961) and considered dividend policy irrelevant while the second school of thought followed the point of view of Gordon (1963) and considered dividend policy relevant. Since the half-century passed, the question remains i.e. whether dividend policy is relevant or not. This dilemma yet exists, which theory the companies should apply for making their dividend decisions.

**Irrelevance of Dividend Policy**

Miller and Modigliani (1961) proposed irrelevance theory suggesting that the wealth of the shareholders not be affected by dividend policy. It is argued in their theory that the value of the firm is subjected to the firm’s earning, which comes from the company’s investment policy. The literature proposed that dividend not affect the shareholders’ value in the world without taxes and market imperfections. They argued that dividend and capital gain are two main ways that can contribute profits of the firm to shareholders. When a firm chooses to distribute its profits as dividends to its shareholders, then the stock price will be reduced automatically by the amount of a dividend per share on the ex-dividend date. So, they proposed that in a perfect market, dividend policy does not affect the shareholder’s return. There are some voices of researchers supporting the irrelevance dividend hypothesis which will be reviewed as follows: Brennan (1971) supported the irrelevancy theory of Miller and Modigliani and concluded that any rejection of this theory must be based on the denying of the principle of symmetric market rationality and the assumption of independence of irrelevant information. He suggested that for rejection of the latter assumption, one of these following conditions must exist: Firstly, Investors do not behave rationally. Secondly, the stock price must be subordinate of past events and expected prospect. Black and Scholes (1974) created 25 portfolios of common stock in New York Stock Exchange for studying the impact of dividend policy on share price from 1936 to 1966. They used the capital asset pricing model for testing the association between dividend yield and expected return. Their findings showed no
significant association between dividend yield and expected return. They reported that there is no evidence that the difference in dividend policies will lead to different stock prices. Their findings were consistent with the dividend irrelevance hypothesis.

Hakansson (1982) supported the irrelevance theory of Miller and Modigliani and claimed that dividends, whether informative or not, is irrelevant to firm’s value when investors have homogeneous belief and time additive utility and market is fully efficient. Uddin and Chowdhury (2005) selected 137 companies which were listed on the Dhaka Stock Exchange (DSE) and studied the relationship between share price and dividend payout. The results implied that dividend announcement does not provide value gain for investors and shareholders experience approximately 20% loss of value during 30 days before the announcement of dividend to 30 days following the announcement. He suggested that the current dividend yield can reimburse the diminished value to some extent. Generally, his findings supported the irrelevancy of dividend policy.

However, some empirical results of different researches were consistent with irrelevance dividend theory. There are many types of research challenging the dividend irrelevance hypothesis. Baker, Farrelly, and Edelman (1985) surveyed the 603 Chief Financial Officers (CFOs) of 562 companies which were listed on the New York Stock Exchange (NYSE). The results of their survey showed that respondents strongly agreed that stock prices would be affected by dividend policy. Baker and Powell (2012) surveyed 603 Chief Financial Officers of US companies which were listed on the NYSE. They reported that a majority of respondents (90 percent) agreed that dividend policy has an impact on the value of the firm and affects a firm’s cost of capital too.

Ali and Chowdhury (2010) examined stock price reactions of listed Private Commercial Banks (PCBs) in Bangladesh surrounding 44 days of the dividend announcement dates. They employed a standard event study methodology to analyze the stock price reaction for dividend announcement. Out of 25 listed sample banks in the observation period, market-adjusted stock price declines for 11 banks, rises for six banks, and no changes for eight banks, and statistical pooled t-test also reveals that stock price reaction to dividend announcement is not statistically significant. The findings state that, dividend announcement does not convey any information due to the strong contribution of the insider trading as well as some other influencing factors in the capital market.

Misbah et al. (2013) analyzed the stock price volatility by taking non-financial firms listed on Karachi Stock Exchange. The study is based on panel data that covers 35 firms from 2001 to 2011. The main variable is the dividend yield. The other explanatory variables taken by the study are: size, growth, earning per share, and earnings volatility. The research study has concluded that price volatility of stocks has a negative relationship with dividend yield and earnings per share. The research has identified a positive relationship between price volatility with size and growth in assets of firms. Also, the research has identified that there is no relationship between price volatility and earning volatility of firms in Pakistan.

Uddin and Uddin (2014) showed the dividend scenario of the listed commercial bank of Dhaka Stock Exchange (DSE) from the fiscal year 2000 to 2013. They investigated the effect of dividend announcement on stock prices based on the 28 DSE listed commercial banks. In this context declaring dividends during the fiscal year 2012-2013 has been considered as the observation period and event study methodology has been used. The result by using event study methodology indicates that there is no effect of dividend announcement on stock prices over the observation periods.
The Relevance of Dividend Policy Based on Uncertainty of Future Dividends

Gordon (1962) suggested a valuation model relating the market value of the stock with dividend policy. Gordon studied dividend policy and the market price of the shares and proposed that the dividend policy of firms affect the market value of stocks even in the perfect capital market. He stated that investors might prefer present dividend instead of future capital gains because the future situation is uncertain even if in the perfect capital market. Indeed, he explained that many investors might prefer dividend in hand in order to avoid risk related to future capital gain. He also proposed that there is a direct relationship between dividend policy and the market value of share even if the internal rate of return and the required rate of return will be the same. In Gordon’s (1962) constant growth model, the share price of the firm is subordinate of discounted flow of future dividends. Diamond (1967) selected 255 US-based firms as a sample and studied the association of firm’s value with dividends and retained earnings in 1961 and 1962. Diamond (1967) reported that there is only weak evidence that investors prefer dividends to future capital gain. His findings also showed a negative association between the growth of the company and preference of dividend.

George (2015) investigates the relevance of dividend payments on common stock prices of quoted equities at the Nairobi Securities Exchange (NSE) for the period 2008-2012. The result shows that dividends are relevant for the average stockholder since most investors prefer cash payments to otherwise reinvested dividends.

The Relevance of Dividend Policy Based on Information Content of Dividend

Miller and Modigliani (1961) suggested that in an imperfect market, the dividend may affect the share price. So dividend announcements can be interpreted as a signal of the future profitability of the firm. Asquith and Mullins Jr. (1983) used a sample of 168 companies paying a dividend for the first time or paying a dividend after at least 10-year interruption and studied the relationship between market reaction and dividend announcement. They analyzed the daily abnormal stock returns for the 10-day period prior and the 10-day period following the dividend announcement. Their findings implied an approximate abnormal return of +3.7 percent for two days after the announcement. Furthermore, they used a cross-sectional regression and reported that the first dividends’ amount has a significant positive impact on the excess returns on the day of the dividend announcement. They concluded that the magnitude of changes in dividends could be also important.

Amihud and Murgia (1997) used 200 German firms as a sample and studied the stock price response to dividend announcement for the period of 1988 to 1992. They considered 255 cases of rising/increase in dividend and 51 cases of decline in the dividend. Their results reinforced this statement that dividend changes may be a signal of the prospect of firms. They presented the abnormal return of +0.965 percent for a dividend increase and the abnormal return of -1.73 percent for dividend decrease. Travlos, Trigeorgis, and Vafeas (2001) studied the stock price response to the announcement of a stock dividend and a dividend increase in the Cyprus Stock Exchange from 1985 to 1995. They considered 41 announcements of cash dividend and 39 events of dividend increase. Their results provided strong evidence for supporting the signalling hypothesis. They reported prominent excess returns for both cash dividend announcement and cash dividend increase.

Ahmad and Naz (2015) investigated the relative importance of dividend and retained earnings in share price determination to examine the implication of Bird-in-the-Hand theory on Pakistani firms. The analysis documents 77 firms from 11 different sectors listed on Karachi Stock Exchange from 2006 to 2013. Firms are categorized according to two business stages, growth firms and mature firms. Findings suggest that both dividend and retained earnings play a role in share price determination.
Impact of Dividend Policy on Firm’s Risk

Ben-Zion and Shalit (1975) studied the impact of size, leverage, and firm’s dividend records on the risk of the common stock. They selected the 1,000 largest US industrial corporations in 1970 as a sample and examined the relationship between alternative risk measures with size, leverage, and dividend records. The results of their research showed that the firm’s size, leverage, and dividend have a significant relationship with the firm’s risk measures and are important determinants of a firm’s risk. They reported that a firm’s risk has a significant negative relationship with both dividend yield and size, but leverage has a significant negative impact on the firm’s risk. Rozeff (1982) studied the determinants of dividend payout ratios. He suggested that beta, agency cost and growth determine the optimal dividend payout. He argued that higher beta coefficients are related to lower dividends payout showing that there is a negative association between a firm’s risk and dividend payout. He explained that since firms with high beta may have higher external financing cost, they are more likely to choose a lower dividend payout policy. Eades (1982) studied the relationship between dividend yield and the firm’s risk in the US stock market. He regressed the dividend yield against firm’s beta. The results of his study discovered a significant negative relationship between dividend yield and the firm’s beta showing that riskier firms may have a lower dividend paid.

Another study conducted by Ho (2002) relevant to the dividend policy in which he uses the panel data approach and fixed effect regression model. Results of his study show the positive relationship between dividend policy and size of Australian firm and liquidity of Japanese firms. He found the negative relation between dividend policy and risk in case of only Japanese firms. The overall industrial effect of Australia and Japan is found to be significant.

Impact of Dividend Policy on Share Price Volatility

Baskin (1989) used a different method and examined the association between dividend policy and stock price volatility rather than returns. He added some control variables for examining the association between share price volatility and dividend yield. These control variables are earning volatility, firm’s size, debt, and growth. These control variables do not only have a clear effect on stock price volatility but they also affect dividend yield. Nazir et al. (2010) used 73 firms listed in Karachi Stock Exchange (KSE) as a sample and studied the relationship between share price volatility and dividend policy for the period of 2003 to 2008. They applied the fixed effect and random effect models on panel data. They reported that share price volatility has a significant negative association with dividend yield and dividend payout. They also reported that size and leverage have a non-significant negative effect on share price volatility. Suleman et al. (2011) studied the association of dividend policy with share price volatility in Pakistan. They extracted data from Karachi Stock Exchange regarding five important sectors for the period of 2005 to 2009. They used multiple regressions model for their analysis. Contrary to Baskin’s (1989) results, their findings showed that share price volatility has a significant positive relationship with dividend yield. They also reported that share price volatility has a significant negative relationship with growth.

Hussainey et al. (2011) examined the relationship between share price volatility and dividend policy in the UK. They selected 123 English companies and the period of their study was from 1998 to 2007. They used multiple regression analyses for exploring the relationship of share price with dividend yield and dividend payout ratio. They added size, level of debt, earning volatility, and level of growth as control variables to their model. Consistent to Allen and Rachim (1996) Australia results, Hussainey et al. (2011) found a significant
negative relationship between share price volatility and payout ratio. They also found a negative relationship between share price volatility and dividend yield. Their findings discovered that the payout ratio is the predominant determinant of the share price volatility and size and debt have the strongest relationship with price volatility amongst control variables.

Hashemijoo, Ardekani, and Younesi (2012) studied the relationship between dividend policy and share price volatility with a focus on consumer product companies listed in the Malaysian stock market. For this purpose, a sample of 84 companies from 142 consumer product companies listed in the main market of Bursa Malaysia were selected and the relationship between share price volatility with two main measurements of dividend policy, dividend yield and payout, was examined by applying multiple regression for a period of six years from 2005 to 2010. The primarily regression model was expanded by adding control variables including size, earnings volatility, leverage, debt, and growth. The empirical results of the study showed a significant negative relationship between share price volatility with two main measurements of dividend policy which are dividend yield and dividend payout. Moreover, a significant negative relationship between share price volatility and size is found. Based on the findings of the study, dividend yield and size have the most impact on share price volatility amongst predictor variables.

**Earnings per Share and Stock Price Behavior**

The revenue earned by a company after meeting the cost of production, then interest, depreciation, and tax belong to the equity shareholders. These earnings divided by the number of outstanding equity shares is referred to as Earnings per Share (EPS) (Nichols & Wahlen, 2004; Bhatt & Sumangala, 2012). Basu (1977) in the earnings multiplier model (P/E) argued that earnings are the most important factor that determines the financial health and real value of a company. Investors make decisions depending on public information like earnings which are taken as indicators of a company’s financial health and prospects and thus determining the share price (Al-Malkawi, 2007).

It is suggested from empirical studies that earnings per share are one of the strongest factors affecting the share price (Sharma, 2011). The pioneers of the studies on determinants of share price were Collins (1957). Both of them in their independent studies identified earnings as one of the factors influencing share prices. They showed that there is a positive relationship between share price and both earnings and dividends. After that, Ball and Brown (1968) and Baskin (1989) argued that the earnings per share have a constructive relationship with market value. Kaundal and Sharma (1986) described the effect of earnings per share on the market value of shares by using a linear regression model. Malhotra (1987) concluded that the earnings per share had a constructive and significant wave on the market value of equity shares. His targeted population was the four sectors of industries general engineering, cotton textile, food products and paper convening a period of four years from 1982 to 1985. Baskin (1989) and Collins and Kothari (1989) linked to stock price with earning per share and all of them confirm the positive link. Ohlson (1995) discusses the role of earning, book value, and dividends in equity valuation. Collins, Pincus, and Xie (1999) discussed the effect of negative earning on equity valuation. Dechow, Hutton, and Sloan (1999) studies the effect of residual income and the equity valuation.

Zhao (2000) studies the relationship between stock prices and firm EPS using a regression model. He found that firm EPS has an important impact on stock prices, especially on long horizons, but the hypothesis that moves one-for-one with ex-ante is rejected. Harasty and Roulet (2000) work on 17 developed countries and show that stock prices are co-integrated with firm EPS. Tuli and Mittal (2001) indicated that earnings per share
EFFECTS OF FINANCIAL MARKET VARIABLES ON STOCK PRICES

were found to be important in determining the share price. In broader perspective Nieh and Lee (2002) use three-year rolling regressions to analyze the relationship between stock prices and firm EPS. They try to forecast stock prices on the standard and poor 500 indexes with the short term firm EPS, but find that the relationship is not stable over time. It gradually changes from a significantly negative to no relationship than to positive; although insignificant relationship. Malakar and Gupta (2002) exposed that Earnings per share is found to be a significant determinant of share value by considering share value of eight major cement companies in India for the period 1968 to 1988 and five variables, namely, dividend per share, retained earnings, earnings per share, the share price, and sales proceeds. Hsing (2014) uses a structural Vector Autoregressive (VAR) model for the simultaneous determination of firm fundamental and finds that there is an inverse relationship between stock prices and firm EPS. Al-Deehani (2005) examined the determinants of share price for companies listed on the Kuwait Stock Exchange. The empirical findings showed that the variables; earnings per share, cash dividends per share, return on equity, price to book value ratio and cash flow per share are all highly correlated with the share price.

Zarezadeh et al. (2011) showed in their study that there is a positive and significant relationship between Earnings per Share (EPS) and the stock price of the company. Sharma (2011) in his study concluded that earnings per share are the strongest determinant of the market value in a constructive track. Recently, Bhatt and Sumangala (2012) described the earning per share effect on the equity market value of share with the publication of basic contributions concerning the top 50 Indian companies. They found that EPS impacts the market value of an equity share in the Indian context. In contrary of previous research, Ali (2013) suggests that earnings per share have an insignificant relationship with a stock price both in the short run and long run. Also no causal relationship has been found between them. Having consistency with Ali (2013), Umar and Musa (2013) examine the relationship between stock prices and firm EPS from 2005 to 2009. A simple linear regression model was employed on a panel of 140 Nigerian firms from a total population of 216 firms’ operated in Nigerian Stock Exchange (NSE). It was discovered that an insignificant relationship exists between stock prices and firm EPS in Nigeria. Firm EPS has no predictive power on stock prices. It was suggested that firm EPS should not be relied upon for the prediction of the behaviour of stock prices in Nigeria.

Jatoi, Shabir, Hamad, Iqbal, and Muhammad (2014) investigate the effect of Earnings per Share (EPS) on the Market Value of Share (MVS) and their mutual relationship. The targeted population was the Pakistani cement industries that were listed in the Stock Exchange Commission of Pakistan (SECP). The 13 cement industries were selected for the analysis and secondary data were used for this purpose. The finding shows that EPS significantly impacts the Market Value of Share. Velnampy and Pratheepkanth (2017) take up the sample of EPS changes from Milanka companies in the Colombo Stock Exchange (CSE) firms in Sri Lanka from 2006 to 2010. In his study, more than 70% of Milanka companies have a positive relationship between earnings per share and share price movements. In this analysis, 44% of the share price of Milanka companies is determined by other factors without the EPS. Overall, this provides evidence that the Milanka companies consider the earnings per share of other companies, in order to keep the company image and customer satisfaction.

Price Earnings Multiples and Stock Market Return

The Price to Earnings (P/E) ratio is still the most widely used valuation tool in the stock markets. Analysts use it pricing new shares in initial public offerings. The P/E ratio is also used as a measure of relative value when comparing listed companies. The company is having a higher P/E ratio than a rival in the same area of
business which usually means bad value for the investor. Prospective P/E ratios build in average expectations about future growth prospects. A high P/E ratio typically indicates that the market as a whole expects significant future earnings growth (Gottwald, 2012).

Basu (1977) in the earnings multiplier model (P/E) argued that earnings are the most important factor that determines the financial health and real value of a company. Investors make decisions depending on public information like earnings which are taken as indicators of a company’s financial health and prospects and thus determining the share price (Al-Malkawi, 2007). Knowledge of the impact of earnings on share prices is highly appreciable as it would help in determining price volatility and in the prediction of price movement to enable firms to enhance their market value and investors to maximize their wealth (Zarezadeh et al., 2011).

The empirical results of the research of Zarezadeh et al. (2011) indicate that there is a negative and significant relationship between Dividends per Share (DPS) and Price to Earnings ratio (P/E). Ndinyo (2011) studied the effect of P/E ratio on the performance of common stocks at the NSE. Results showed that high P/E portfolios seem to have earned higher rates of return as compared to the average stock. Low P/E portfolios earned less return than the average stock.

Recently, Ali (2013) studied the relationship of price-earnings multiples and stock prices. He found a significant negative relationship in the short run, but in the long run, it is negative, insignificant. Unidirectional causality has been found between price-earnings multiples and stock price. P/E increases when investors are willing to pay more per unit of earnings while the earnings remain stable. P/E also grows when both the stock price and the earnings per share increase, however, the increase of stock price must be sharper than the increase in the earnings per share. Another scenario of increasing P/E takes place, when stock price remains stable despite there is a decrease in the earnings per share. The price-earnings ratio does not change when there is a balance between the growth of the stock price and the earnings per share. On the contrary, P/E declines when the willingness of investors to pay the price per unit falls as well as when the price paid per stock by investors’ increases in a slower pace than the earnings per shares (Ali, 2013). This research assumes that price-earnings multiples have a negative influence over stock market return.

Trading Volume and Stock Market Return

The concept of the volume impact is built on the fact that prices need volume to move, thus, the high volatility of stock prices may be produced as a consequence of volume volatility and trading activities (Sabri, 2009). Various studies reported that there are significant relationships between volume and stock price movement and volatility, because trading volume is a source of risk because of the flow of information. Blume, Mackinlay, and Terker (1989) stated that a portion of the losses on S & P stocks in October, 1987 was related to the magnitude of the trading volume. However, the positive volatility-volume relation is documented by Jones, Gautam, and Lipson (1994). Basci, Ozyildirim, and Aydogan (1996) reported that stock price levels and trading volume in Turkish stock markets are co-integrated. Saatcioglu and Starks (1998) found that volume leads to stock prices changes in four out of the six emerging markets.

Chan, Hameed, and Tong (2000) found that trading volume for foreign stocks is strongly associated with NYSE opening price volatility. Säfvenblad (2000) found that Swedish index returns exhibit high autocorrelation when trading volume is low. Hsin, Guo, Tseng, and Luo (2003) examined the empirical evidence on the impact of speculative trading on return volatilities in Taiwan stock markets and found speculative trading activities through day trades, which increases the intraday price volatility. Song, Tan, and
Yunfeng (2005) examined the roles of the number of trades, size of trades, and share volume in the volatility-volume relation in the Shanghai Stock Exchange and confirmed that mainly the number of trades drives the volatility volume relation. Henry and McKenzie (2006) examined the relationship between volume and volatility allowing for the impact of short sales in Hong-Kong market and found that the asymmetric bidirectional relationship exists between volatility and volume. Griffin, Nardari and Stulz (2007) investigated the dynamic relation between market-wide trading activity and returns in 46 markets and reported the strong positive relationship between turnover and past returns. Sabri (2009) examined the price-volume movements in the Arab Stock Markets, in order to determine the impact of changes in trade volume on the volatility of stock prices as expressed by the unified stock price index. The research covers a sample of eight out of the 15 Arab Stock Markets included in the Arab Monetary Fund database, using monthly data from 1994 to 2006. The study found that there is an increase in both trading volume and stock price volatility, which may be considered as a recent phenomenon in the majority of the Arab Stock Markets. The study also found that the volume-stock price movements are significantly integrated for all selected markets, while the highest correlation coefficient between volume and stock price movement was found in Saudi Stock Market, Amman Stock Market, Muscat Stock Market, and Kuwait Stock Market respectively. Finally, the correlation between volume and prices movement is higher in the stock markets of the oil Arab states compared to the non-oil Arab states.

Mutalib (2011) investigated the dynamics of the relationship between trading volume and returns of the Nigerian capital market. The study employed Granger causality tests to examine dynamic (causal) return-volume relation using daily stock data of 27 equities listed on the floor of Nigerian Stock Exchange for the period January 2009 to December 2010. The empirical results indicated, in general, a mild causal relation between stock returns and trading volumes for individual assets but on the overall, weak evidence of a dynamic (causal) relation running from trading volume to market return was found. Aggarwal and Mougoue (2011) report an insignificant contemporaneous correlation between return volatility and trading volume. Pathirawasam (2011) conducted a study to examine the relationship between trading volume and stock returns. The sample of the study consisted of 266 stocks traded at the Colombo Stock Exchange (CSE) from February 2000 to December 2008. The study revealed that stock returns are positively related to the contemporary change in trading volume. Tripathy (2011) conducted a study to investigate the dynamic relationship between stock return and trading volume of Indian stock market by using Bivariate Regression model, Vector Auto Correction Model (VECM), VAR and Johansen’s Cointegration test. The study showed that there is bi-directional causality between trading volume and stock return volatility.

Choi, Jiang, Kang, and Yoon (2012) give evidence of a strong relationship (contemporaneous as well as dynamic) between return and volume. Attari, Rafiq, and Awan (2012) carried out a study to measure the relationship between trading volume and returns; and a change in trading volume and returns of stocks in Pakistan. The study applied various techniques such as Unit root tests and Generalized Autoregressive Conditional Heteroskedasticity (GARCH) on the data to determine the relationship between the variables above. The GARCH results indicated a significant positive relationship between trading volume and returns, indicating that rising market goes with rising volume and vice versa. Gworo (2013) examined the price-volume movements in the NSE and implied a weak correlation between the variables. Gebka (2012) investigated the dynamic relationship between index returns, return volatility, and trading volume for eight Asian markets and the US. The study revealed that trading volume, especially on the Asian markets, depended on shocks in domestic and foreign returns as well as on volatility, especially those shocks originating in the US.
Celik (2013) tested the relationship between trading volume and return in Istanbul Stock Exchange (ISE) by using intraday ISE-30 index data and trading volume as a proxy for information arrival for the period between 04.02.2005 to 30.04.2010. The results indicated a positive relationship between information arrival and volatility. Achieng (2013) carried out a similar study and the results indicated that major variations of stock prices and trading volume were explained by other factors as opposed to the relationship between the two variables. Kamuti (2013) found that there was a significant positive relationship between price and volume. Ali (2013) found that trading volume has an insignificant positive relationship with the stock price but in the long run, it is a significant positive. Furthermore, unidirectional causality has been found between trading volume and stock price. Gebka and Wohar (2013) analyzed the causality between past trading volume and index returns in the Pacific Basin countries. Their OLS results indicate no causal link between trading volume and returns.

Heryan (2014) also found an insignificant relationship between trading volume and stock prices volatility. Heryán (2014) examines whether the prices volatility of selected world financial companies’ shares differs within both samples, below its average trading volume and the above. The study estimated GARCH-M models from daily data from 13 selected financial companies within after crisis period from 2010 to 2013. It was not founded any strong significant relationship between trading volume and stock prices volatility.

**Conclusion and Discussion**

The factors that influence share prices could either be internal factors, such as earnings, dividend, book value or external factors such as interest rate, government regulations, foreign exchange rate. Several such factors have been identified by previous empirical research. The pioneering works on share price determinants identified dividend, net profit, operating earnings, and book value as the factors influencing share prices. Following these works, there have been various attempts to identify the determinants of share prices for different markets. To present a bunch of factors is identified that play the significant role in stock price. To ensure the sound operation and continued growth of the capital market of a country, more studies are needed in this regards to finding the key determinants of stock price and the role played by them.

**References**


EFFECTS OF FINANCIAL MARKET VARIABLES ON STOCK PRICES


