

# THE ACCOUNTING NUMBERS AND INVESTMENT DECISIONS IN EMERGING MARKETS

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## Abstract

The main objective of this study is to determine the impact of dividend policy on stock price in Kuwait Firms. the study adopts the quantitative technique, gathering data from official listed Kuwaiti companies. All non-financial firms listed in Kuwait Stock Exchange from 1994 to 2003 This study will be based on a cross-sectional regression analysis of the relationship between stock price volatility and dividend policy after controlling for firm size, earning volatility, leverage and asset growth. Both dividend policy measures (dividend yield and payout ratio) have significant impact on the share price volatility. and examines the influence of dividend policy on stock price volatility and suggests the use of the following control variables in testing the significance of the relationship between dividend yield and price volatility: operating earnings; size of the firm; level of debt financing; payout ratio; and level of growth. These variables have a clear impact on stock returns but also impact on dividend yield. 'SPSS' statistical package to run statistical tests and answer study questions. Basic descriptive statistics (Mean, Standard Deviations) and frequency distribution were computed for each variable/question. Ordinary Least Squares (OLS) coefficient estimates are used in this study. F-tests are used to test for the relationship between stock price volatility and dividend policy. The results show that preference for dividends is larger amongst older investors, compared to younger investors. Old investors and investors without university education all have a preference for dividends because of transaction costs. On the other hand, young investors and investors with a university education have less interest in dividends based on transaction costs. The results also suggest that the watch for dividends as a safeguard measure is still "old-fashioned", even in light of the recent accounting scandals. The results also indicate that individual investors believe that dividend payments contain a signal about the profitability of the firm.

**Keywords:** Dividend Policy, Investment Decisions, Kuwait Market

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## 1 Introduction

Miller and Modigliani (1961) argued that in a perfect world, the value of a firm is solely determined by the profitability of its investment projects, and thus, the main decision that a firm faces is its investment decision. Dividends should only be paid out of excess/residual funds after financing all positive net present value investment projects (residual theory). Miller and Modigliani's irrelevance theorem does not hold well in the real world due to various market imperfections. Different theories based on these imperfections have since emerged to explain why companies pay dividends with four common explanations being the bird-in-hand, signalling, tax preference and agency explanations.

The finance literature finds that returns are predictable and dividends are not (Fama and French, 1988 and 1989). A number of studies investigate the relationship between dividends and corporate market value. In the US, Hand and Landsman (1999) estimate that dividends have a positive impact on stock prices.

In the UK, the Hand and Landsman (1999) result is anticipated by Rees (1997) who also estimates that dividends have a positive impact on corporate valuation (similar findings are provided by Gordon, 1959; Ogden, 1994; Kato and Loewenstein, 1995; Lee, 1995; and Ariff and Finn, 1986). Akbar and Stark (2003) find a negative relationship between net shareholder cash flows and market value. Akbar and Stark (2003a) confirm the negative relationship between net shareholder cash flows and market value but also find that this relationship masks a positive relationship between dividends and market value and a negative relationship between capital contributions and market value in the UK (similar findings are provided by Loughlin, 1989; and Easton and Sinclair, 1989).

Our understanding of dividend policy depends on the behavior of individual investors, from the early work of Miller and Modigliani (1961) and Gordon (1962) to the more recent behavioral finance theories. Many empirical papers have documented corporate dividend policy and payments, and have related the

policies in various ways to the theories based on the behavior of individual investors. While there appears to be a general agreement that investors like dividends, there has been no systematic study on why individual investors want dividends. Miller and Modigliani (1961) show that individuals can undo management's decisions on dividend policy in a perfect and complete capital market by either reinvesting dividends or selling off stock, making dividend policy irrelevant. In the United States until recently, as well as in most other countries, dividends have been taxed more heavily than capital gains. The irrelevance theorem in combination with the unfavorable taxation of dividends makes dividends a puzzle.

Since the seminal paper of Miller and Modigliani (1961), the literature on dividend policy has been strongly dominated by economic modeling approaches, both in developing hypotheses and in empirical investigations of dividend policy. Black (1976), his belief is still the current opinion: "Why do corporations pay dividends? Why do investors pay attention to dividends? I claim that the answers to these questions are not obvious at all. The harder we look at the dividend picture, the more it seems like a puzzle, with pieces that just don't fit together".

Kuwaiti nationals have been acquainted with share trading since the establishing of the first Kuwaiti share holding company, the Kuwait National Bank, which introduced its shares for public subscription in 1952. The initial stage of trading acquired a significant distinction, not only due to the fact that it represents the prime phase of the establishment of Kuwaiti share holding companies, and the emergence of the first local shares to be traded in Kuwait, but it also attained its importance because this time period set the precedent for the organization of the modern Kuwaiti economy. This period also saw the beginning of Kuwaiti capital inflow from abroad, either channeled to direct investments as well as imported goods and services.

The objective of this study is to determine the impact of dividend policy on stock price in Kuwait.; to shed more light on the dividend puzzle-the question of why individual investors want dividends?;- whether individual investors tend to consume a large part of their dividends?; and to examine whether the behavioral finance theory for cash dividends and stock dividends is applied in the KSE.

The importance of this study arises from the fact that investors are the primary party interested in financial accounting information. Investors are major recipients of the financial information.

They need to monitor its progress and require information that helps them gauge a firm's financial strength and its market value. Miller and Rock (1985) suggest that dividend announcements provide the missing pieces of information about the firm and allow the market to estimate the firm's current earnings.

## 2 Literature review

Given the possibility that dividends play separate role in models of corporate valuation and affect investment decisions, this proposed study will investigate the effect of dividends on firm market value in general and on investment decisions in particular in Kuwait Stock Market. The importance of this study arises from the fact that investors are the primary party interested in financial accounting information. Investors are major recipients of the financial information. They need to monitor its progress and require information that helps them gauge a firm's financial strength and its market value. Miller and Rock (1985) suggest that dividend announcements provide the missing pieces of information about the firm and allow the market to estimate the firm's current earnings.

The finance literature finds that returns are predictable and dividends are not (Fama and French, 1988 and 1989). A number of studies investigate the relationship between dividends and corporate market value. Baskin (1989) examines the influence of dividend policy on stock price volatility and suggests the use of the following control variables in testing the significance of the relationship between dividend yield and price volatility: operating earnings; size of the firm; level of debt financing; payout ratio; and level of growth. These variables have a clear impact on stock returns but also impact on dividend yield.

A number of theoretical mechanisms have been suggested that cause dividends yield and payout ratios to vary inversely with common stock volatility. It is argued that high dividend yield provides more near term cash flow. If dividend policy is stable high dividend stock will have a shorter duration. Gordon (1963) suggests that a firm with low payout and low dividend yield may tend to be valued more in terms of future investment opportunities. Consequently, its stock price may be more sensitive to changing estimates of rates of return over distant time periods. Thus expanding firms although may have lower payout ratio and dividend yield, exhibit price stability. This may be because dividend yields and payout ratio serves as proxies for the amount of projected growth opportunities. If forecasts of profits from growth opportunities are less reliable than forecasts of returns on assets in place, firms with low payout and low dividend yield may have greater price volatility.

Jensen and Meckling (1976) propose that dividend payments reduce costs and increase cash flow, that is payment of dividends motivates managers to disgorge cash rather than investing at below the cost of capital or wasting it on organizational inefficiencies (Rozeff, 1982; and Easterbrook, 1984). Some authors have stressed the importance of information content of dividend (Asquith and Mullin, 1983).

## **2.1 Stock price volatility and permanent components of earnings and dividends**

Several studies (e.g Fama and French (1988a)) find that both earnings yield and dividend yield can forecast stock returns, though the dividend yield has more explanatory power than the earnings yield. In contrast, Lee (1995) provides evidence indicating significant deviations of stock prices from fundamentals in the short term, but little evidence of that in the long run. Lee's results also indicate that the short-term excess volatility is mainly due to time-varying discount rates and partly due to non-fundamental factors.

While the finance literature seems to suggest that there are significant deviations of stock prices from fundamentals, it is noteworthy that most prior studies have emphases on econometric aspects of the tests, with less attention to measuring cash flows appropriately.

## **2.2 The effect of dividends on stock prices**

Stock prices react to different types of new information. In particular, positive information about future dividend growth could lead to higher prices and price ratios. Contradicting this possible theoretical relation, the available empirical evidence shows that the price ratios do not predict future dividend growth. Based on this evidence, the common conclusion is that prices do not react to news that changes expected future dividend growth (or these changes are not economically significant). Instead, price reacts only to new information that changes expected future returns or new information that has an immediate impact on current dividends with permanent effects.

The news that affects what the market thinks about future dividend growth indeed has an impact on stock prices. Moreover, dividends do not need to be predictable by the price ratios in order to make this impact likely. These results are not inconsistent, and they can be explained by the statistical characteristics of both returns and dividend growth. The reason is that there are slow-moving macroeconomic variables that forecast dividend growth. If these variables are included in the analysis, they allow the statistical detection of the changes in expected dividend growth that impact prices.

A high price-dividend ratio could tell us that the market believes dividends will rise substantially in the future. Price ratios, such as the price-dividend ratio or price-earnings ratio, are commonly used to infer what the market thinks about future growth opportunities. Yet previous empirical research shows that the price-dividend ratio does not predict future dividend growth. In theory, the price ratios only reflect what the market expects in terms of future dividends or returns, because these ratios already account for the effect of changes in current dividends. Surprisingly, most of the empirical literature shows that a high aggregate price-

dividend ratio today does not forecast higher dividends, and it can even predict negative future aggregate dividend growth, depending on the sample that is used. Empirically, the price ratios only predict future returns or capital gains. Because of these results, a common conclusion is that price ratios react only to new information that affects expected returns. Therefore, if this logic were used, aggregate dividends would be unpredictable, and only changes in expected returns would affect price ratios.

Diverging from the results in the previous literature, price ratios are immediately affected when the market updates the expectation of future dividend growth. But the price ratios will not necessarily predict future dividend growth. These apparently contradictory results are reconciled because the first result does not necessarily imply that prices predict future dividend growth. The market indeed updates stock prices when new information about future dividends arrives. If this were the only type of new information affecting stock prices, the price ratio could be used to predict future dividend growth. Yet expected returns vary much more than expected dividend growth and sometimes in a correlated way. Therefore, stock prices react a lot more when new information changes the market-required rates of return. New information about future dividend growth has a much more moderate effect on prices. Since these two types of news are received simultaneously, the link between causality – news about future dividends affects prices – and predictability – prices predict future dividends – may disappear.

Although current stock prices may not predict future dividend growth, they can react to new information about future dividend growth. The price-dividend ratio changes whenever new information about expected returns and/or expected dividend arrives. But expected returns may vary much more and correlate with the changes in expected dividend growth. Therefore, the price-dividend ratio only summarizes these two different sets of information. If only information on price and dividends is used, it is impossible to decompose the variation in price-dividend ratio into the information that is associated with expected dividend growth and expected returns individually. But the introduction of other variables used together with the price-dividend ratio, such as the labor income-dividend ratio, could reveal the individual changes in expected dividend growth and expected returns.

Even when new information says that dividends will grow at a faster rate, the price-dividend ratio may not be considerably affected. This situation could occur in very reasonable scenarios. For example, dividends may fall more than labor income during a recession. Dividends will then rise more in the recovery. Therefore, the low dividend-labor income ratio in the recession will forecast high subsequent dividend growth. If this were the only effect, the price-dividend ratio would be higher in recessions.

However, in the depth of the recession, expected returns could also be higher. Therefore, the price–dividend ratio could even remain the same, if the change in expected returns compensated the variation in expected dividend growth.

In this simple situation, expected dividend growth and expected returns are perfectly correlated, and this correlation is motivated by business cycle fluctuations. However, even if expected dividend growth and expected return are less than perfectly correlated, the price–dividend ratio may not forecast dividend growth, because expected return varies extremely. In fact, even if the correlation is negative, the price–dividend ratio may still not be able to forecast future dividend growth, because of the high volatility and persistence of the expected returns news. However, conditioning on this larger information set that includes labor income, it is possible to show that a significant fraction of the price–dividend variation is explained by changes in expected dividend growth.

Most of the empirical literature on time–series predictability has focused on the variability of expected returns, because of the strong evidence that stock prices do not predict dividends. A large literature has confirmed the absence of dividend growth predictability and the economic importance of the variability in expected return. On the other hand, the statistical significance of the expected return predictability has also been questioned by recent work

### 3 Data and methodology

Miller and Modigliani (1961) have shown that individuals can undo management’s decisions on dividend policy by either reinvesting dividends or selling of stock. This finding in combination with the fact that in the United States, as well as in most other countries, dividends are taxed more highly than capital gains, has led to the dividend controversy. This study sheds light on the controversy about dividend theories by exploring a new avenue of research.

Dividends policy remains a source of controversy despite years of theoretical and empirical research. This proposed study will

investigate the effect of dividends on firm market value in general and on investment decisions in particular in Kuwait Stock Market. The importance of this study arises from the fact that investors are the primary party interested in financial accounting information. Investors are major recipients of the financial information. They need to monitor its progress and require information that helps them gauge a firm’s financial strength and its market value.

The objective of this study is to determine the impact of dividend policy on stock price in Kuwait.; to shed more light on the dividend puzzle-the question of why individual investors want dividends?;- whether individual investors tend to consume a large part of their dividends?; and to examine whether the behavioral finance theory for cash dividends and stock dividends is applied in the KSE.

#### 3.1 Model specification

This study will be based on Baskin’s (1989) cross-sectional regression analysis of the relationship between stock price volatility and dividend policy. The following model is adopted (Model 1):

$$PV_j = \alpha_1 + \alpha_2DY_j + \alpha_3POR_j\varepsilon_j \quad (1)$$

Where PV is price volatility;  
DY is dividend yield;  
POR is payout ratio.

The difficulty with the specification above is that the two dividend policy variables are likely to be related plus a number of other factors are likely to influence both dividend policy and price volatility.

In an attempt to limit these problems the regression is modified to include some control variables. Consistent with Baskin (1989) we will proceed to examine the cross-sectional regression analysis of the relationship between stock price volatility and dividend policy after controlling for firm size, earning volatility, leverage and asset growth as follows (Model 2):

$$PV_j = \alpha_1 + \alpha_2DY_j + \alpha_3POR_j + \alpha_4SZ_j + \alpha_5EV_j + \alpha_6DA_j + \alpha_7ASg_j + \varepsilon_j \quad (2)$$

Where PV is price volatility;  
DY is dividend yield;  
POR is payout ratio;  
SZ is firm size;  
EV is earning volatility;  
DA is long-term debt;  
ASg is growth in assets.

The models in this study are estimated using number of shares as a deflator. Constant terms and stochastic error terms are added into the models to

capture the effect of variables omitted from the models.

This study expect that the DY, POR, SZ, and ASg variables would be negatively related to PV

whilst EV and DA would be positively related to PV. That is, increases in dividend yield, payout ratio, size, and growth in assets of the firm will be associated with a decrease in the volatility of the firm's stock price. By contrast, firms with relatively higher earnings volatility or higher leverage will tend to display higher price volatility.

Also, we conducted a survey amongst individual investors in Kuwait Stock Exchange to test two of the study questions of what individual investors believe about dividend policy?; and whether individual investors tend to consume a large part of their dividends? A questionnaire is designed for this purpose.

### 3.2 Research questions

This study tries to answer the following questions:

- (i) Is there significant relationship between stock price volatility and dividend policy?
- (ii) Is the relationship between stock price volatility and dividend policy affected after controlling for firm size, earning volatility, leverage and asset growth?
- (iii) What *individual* investors believe about dividend policy?
- (iv) Whether individual investors tend to consume a large part of their dividends?

### 3.3 Sample and data

A Quantitative methodology is used for this study. An analysis of corporate valuation models for a given country may be based on two alternative sources of information: aggregate data from financial institutions, including stock markets, banks, and regulatory organs (e.g. analysis of funds flow), or data compiled from corporate balance sheets. Both methods have their advantages and disadvantages. For the former, a larger amount and a wider variety of information is available, but there are many inconsistencies between data from different sources, and even between data from the same source, but for different years. In the latter case, inconsistency problems tend to be less important, although the variety of data is also smaller. In this study, we decide to use the second method.

This study adopts the quantitative technique, gathering data from official listed Kuwaiti companies. All non-financial firms listed in Kuwait Stock Exchange from 1994 to 2003 will be taken for the purpose. The annual data of these firms will be taken from various financial statements, annual reports, and other publications of Kuwait Stock Exchange and some investment companies.

To increase the validity and reliability of the outcomes, we eliminated companies for each year of the sample for which there is no available data and the results reported in all analyses in this study are based on the sample without outliers. The criteria for identifying extreme values in this study is that the top

and bottom 1% of observations for each of the variables are considered as extreme values and, hence, deleted from the sample. The top and bottom 1% deletion criterion is a procedure which is used frequently in (for example, Akbar and Stark 2003, 2003a). After these steps, 31 firms remain included in the analysis.

Two of the potential problems in cross-sectional analysis are the problem of scale differences among firms included in the sample and heteroscedasticity. These problems arise due to the fact that a cross-section of firms includes a variety of both large and small firms. As a consequence, there is a possibility that error terms associated with very large firms may have greater variance than those associated with small firms, and if the magnitude of these differences is not related to the research question, then this can cause scale related coefficients bias.

A possible consequence of the presence of scale differences and heteroscedasticity is that one cannot determine with confidence whether the standard error of estimated coefficients is positively or negatively biased. This might lead to erroneously rejecting or otherwise of the null, while quite the opposite might be the true case. Thus, the main point of increasing validity and reliability of any research design should be how to mitigate these issues.

A number of techniques are available to potentially tackle the problem of heteroscedasticity. One way of minimising the problem is to deflate all the variables by some size or scale proxy. Deflation is generally regarded as the most effective tool for mitigating heteroscedasticity and scale differences. Both the dependent and the independent variables of a regression equation are deflated. The purpose of deflation is to control for induced size effects (heteroscedasticity in the error term). this study used number of shares as a deflator. Constant terms and stochastic error terms are added into the models to capture the effect of variables omitted from the models.

The questions of why individual investors want dividends; and whether they tend to consume a large part of their dividends? is investigated by submitting a questionnaire amongst 100 individual investors in Kuwait Stock Exchange.

While there is a substantial literature on survey and questionnaire design, most of the difficult issues do not arise in our work. There is no politically or socially desirable answer to bias respondents. They are accustomed to completing questionnaires that have the same general layout. Most of our work lay in designing questions that capture the essences of the research questions of this study, couched in plain, unambiguous language that the respondents will understand.

Questions 1-4 determine whether the respondents own, or have owned within the last three years, shares in companies and/or investment funds. Questions 5-24 investigate the various hypotheses and theories about

cash dividends we advanced in chapter 2. Questions 25-27 ask questions relating to stock dividends.

### **3.4 Research variables**

#### **3.4.1 Explanatory variables**

The explanatory variables to be used in this study include the following:

##### **3.4.1.1 Price volatility (PV)**

The dependent variable in the regression is derived extreme value estimate or estimating variance of the rate of return. In this case, for each year, the annual range of stock prices will be divided by the average of the high and low stock prices and then raised to the second power. These average measures of variance for all available years can be transformed to a standard deviation by using a square root transformation.

##### **3.4.1.2 Dividend yield (DY)**

The variable was calculated by summing all the annual cash dividends paid to common stock holders and then dividing this sum by the average market value of the stock in the year. The average for all available years was utilized.

##### **3.4.1.3 Earning volatility (EV)**

In order to develop this variable, the first step is to obtain an average of available years of the ratio of operating earnings (before taxes and interest) to total assets. The next step is to calculate an average of the squared deviation from the overall average. A square root transformation is then applied to the mean squared deviation to obtain estimates of standard deviation.

##### **3.4.1.4 Payout Ratio (POR)**

To begin, total cumulative individual company earnings and dividends were calculated for all years. Payout is the ratio of total dividends to total earnings. The use of this procedure controls the problem of extreme values in individual years attributable to low or possibly negative net income. The payout ratio is set to one in cases where a total dividend exceeds total cumulative profits.

##### **3.4.1.5 Size (SZ)**

The variable size was constructed in a form that reflects the order of magnitude in real terms. The variable was constructed by taking the average market value of common stocks. The value of real size (KD, million) was averaged over the period

##### **3.4.1.6 Long-term Debt (DA)**

The ratio of the sum of all the long-term debt (debt with maturity more than a year) to total assets is taken. An average is taken over all available years.

##### **3.4.1.7 Growth in Assets (ASg)**

The yearly growth rate was calculated by taking the ratio of the change in total assets in a year. Then the ratio was averaged over the years.

#### **3.4.2 Control variables**

Share price volatility should be related to the basic risks encountered in the firm's product markets. Market risk may also have impact on the firm's dividend policy. We therefore include a control variable to account for the variability in the firm's earnings stream. Given operating risk, there should be a direct link between stock price volatility and leverage. Under conditions of asymmetric information there is also likely to be a link between borrowing and dividend policy. A control variable was included to reflect corporate leverage. There are potential links between size and volatility. Small firms are likely to be less diversified in their activities and less subject to investor scrutiny. Institutions appear to concentrate their research activities and investment policies on larger listed companies. The market in the stocks of small listed firms could conceivably be less informed, more illiquid, and as a consequence subject to greater price volatility. Baskin (1989) suggests that firms with a more dispersed body of shareholders may be more disposed towards using dividend policy as a signaling device. The latter may also be a function of size and thus a size control was required.

Dividend payout policy could be inversely linked to growth and investment opportunities. The previously mentioned duration and rate of return effects assume timing differentials in the firm's underlying cash flows. A variable to reflect growth was also included. The suggestion is that any remaining link between dividend policy and stock price volatility, after controlling for the influence of growth, would be suggestive of either the arbitrage or information effect. It is also possible that systematic differences in market conditions, cost structures, regulatory restrictions etc., may lead to differences in dividend policy. These also have impact on price volatility.

#### **3.4.3 Statistical tests employed**

All data are directly entered into 'Microsoft Excel' and simplified as per the needs and specific requirements of this study. The final data are transferred from 'Microsoft Excel' to 'SPSS' statistical package to run statistical tests and answer study questions. Basic descriptive statistics (Mean,

Standard Deviations) and frequency distribution were computed for each variable/question.

Ordinary Least Squares (OLS) coefficient estimates are used in this study. F-tests are used to test for the relationship between stock price volatility and dividend policy and if dividend changes signal a change in firm's future earnings.

The estimated coefficients and their associated probability values under a two-tailed t-test will be calculated. Other than the use of standard t-tests, the R<sup>2</sup> and the adjusted R<sup>2</sup> are used in this study for the comparison of relationship between stock price volatility and dividend policy before/after controlling for firm size, earning volatility, leverage and asset growth. F-statistic for the increase in R<sup>2</sup> are then computed to test whether control variables have a statistically significant impact on the relationship between stock price volatility and dividend policy?

#### 4 The empirical results

Table 1 shows the pairwise correlations between the independent variables. In practice, one of the assumptions of the multiple regression models is that there is no exact linear relationship between any of the independent variables in the model. Explanatory variables are rarely uncorrelated with each other, and so multicollinearity is a matter of degree; consequently, pairwise correlations between the independent variables for each pooled sample are used to indicate its presence. The highest correlations for Kuwaiti firms emerge between dividend yield and stock price volatility (0.67) when number of shares is used as a deflator.

Table 2 presents some descriptive characteristics of deflated variables used in the regression models. In general, all the deflated variables show signs of skewness.

*The first hypothesis in this study is: "there is no a statistically significant relationship between dividend policy and stock price volatility".*

The results are reported in table 3 (Model 1). The coefficient on dividends is negative and significantly different from zero. The F-statistic (21.07) is significant at the 5% level (R<sup>2</sup>= 66.2%), suggesting that there is statistically significant and negative relationship between dividend policy and stock price volatility. That is, increases in dividends paid will be associated with a decrease in the volatility of the firm's stock price.

*The second hypothesis in this study is: "the relationship between stock price volatility and dividend policy will not be affected after controlling for firm size, earning volatility, leverage and asset growth".*

Ordinary least squares results, with probability values derived from standard errors are reported in table 3. The results are reported for the pooled sample alone.

First, the model is significant overall in all cross sections and for the pooled sample. Second, on the basis of individual coefficients estimates, as expected, the coefficients ( $\alpha_2, \alpha_3, \alpha_4$  and  $\alpha_7$ ) on dividend yield, payout ratio, size, and assets growth respectively, are all consistently negative and significant (at least at the 1% level), while the coefficients ( $\alpha_5$  and  $\alpha_6$ ) on earning volatility and long-term debt are consistently positive and significant (at least at the 1% level). This suggests that increases in dividend yield, payout ratio, size, and growth in assets of the firm will be associated with a decrease in the volatility of the firm's stock price. By contrast, firms with relatively higher earnings volatility or higher leverage will tend to display higher price volatility.

The addition of control variables (firm size, earning volatility, leverage and asset growth) in Model 2 adds to explanatory power. We compare the R<sup>2</sup> in hypothesis 2 (R<sup>2</sup>= 66.2%) with the R<sup>2</sup> of the model after the addition of control variables (R<sup>2</sup>= 71.8%). The F-statistic (26.97) is significant at the 1% level (R<sup>2</sup>= 71.1%), suggesting that The relationship between stock price volatility and dividend policy will not be affected after controlling for firm size, earning volatility, leverage and asset growth.

Other than the use of standard t-tests, the R<sup>2</sup> and the adjusted R<sup>2</sup> are used in this study for the comparison of relationship between stock price volatility and dividend policy before /after controlling for firm size, earning volatility, leverage and asset growth. F-statistic for the increase in R<sup>2</sup> are then computed to test whether control variables have a statistically significant impact on the relationship between stock price volatility and dividend policy?<sup>3</sup>

#### 4.1 Results on why investors want cash dividends and/or stock dividends

The questions of why individual investors want dividends; and whether they tend to consume a large part of their dividends? is investigated by submitting a questionnaire amongst 100 individual investors in Kuwait Stock Exchange.

We are not aware of any published study that asked for individual investors' opinions. However, researchers have used surveys to find out why

<sup>3</sup>The general F statistic for the increase in

$$R^2 = \frac{(R_c^2 - R_r^2)/v_1}{(1 - R_c^2)/v_2}$$

where,  $R_c^2$  = the value of the R<sup>2</sup> for the complete model,

$R_r^2$  = the value of the R<sup>2</sup> for the reduced model,  $v_1$  = number of variables added to the reduced model, and  $v_2$  = n-1- (number of X's in the complete model). See Kvanli, Guynes and Pavur (1996), p. 660.

companies pay dividends, including for example, Baker et al. (1985).

The results indicate that (30.2%) of the investors both own (or used to own) stocks and investment funds. (55.8%) of the investors owns or used to own only stocks or investment funds (14%). The majority of the investors are males (92%); below age 60 (88%), and have no university education (66.1%).

In question 7, we ask whether investors like their stocks to pay dividends. The mean for the whole sample is 5.11 with a t-value of 18.26. The median is 5. The percentage above the neutral score of 4 (72.1%) is much larger than the percentage below the neutral score of 4 (10.8%). This justifies that investors do not believe in the irrelevance theorem of Miller and Modigliani (1961) and that they want dividends. We also noticed that older investors (with an age above 60) prefer dividends compared to younger investors (those with an age below 60).

We tested the theories discussed in the literature review section with a questionnaire submitted to individual investors in Kuwait stock exchange. We tested whether investors want dividends for reasons of transaction costs. The mean score for this question is 6.01 with a t-statistic of 3.17. The median is 4.6 and is significantly different from the neutral score of 4. Old investors and investors without university education all have a preference for dividends because of transaction costs. However, young investors and investors with a university education have less interest in dividends based on transaction costs.

The results suggest the opposite. Investors perceive dividend paying stocks to be more risky: The mean score is 4.43 with a t-value of 2.81. Apparently, investors perceive high dividend yield stocks to be more risky than low dividend yield stocks.

The theory that dividends are a safeguard against accounting manipulations is clearly rejected in question 13. In question 12 the mean of 2.81 and the median of 4 for the whole sample are insignificant. The results suggest that the watch for dividends as a safeguard measure is still “old-fashioned”, even in light of the recent accounting scandals. Older investors more strongly believe in this notion than younger investors.

The results on the free cash flow theory of Jensen (1986) are remarkable. This theory is clearly rejected for the whole sample (the results show mean scores that are well below). The agency theory of Easterbrook (1984) is even more clearly rejected. Both question 19 and question 20 show very low means and medians. For example, the median score for both questions is never above 1.89.

The results of the free cash flow theory and the Easterbrook theory taken together show that private investors have a lot of trust in the management of the companies. This model is based on the idea that Kuwait hardly has labor conflicts, because employers and employees aim for consensus. In contrast to the agency theories, we see a very strong confirmation of

the signaling theory of Bhattacharya (1979) and Miller and Rock (1985). All means and medians are significant, indicating that individual investors believe that dividend payments contain a signal about the profitability of the firm.

Even though both dividends and share buy-backs are ways of paying money back to shareholders, investors do not see share buy-backs as equivalent to dividends. Question 23 shows that investors do not want companies to substitute dividends for share buy-backs. The question how they would value a company decision to stop paying dividends and instead buying back shares, with a score of 1 representing “extremely negative” and a score of 7 representing extremely positive leads to a mean score of 3.96 with a t-value of -3.24. All investors perceive a share buy-back to be a signal that the stock is undervalued.

More specifically, when we asked why investors hold stocks in investment funds in addition to individual companies or why they hold stocks in investment funds without having stocks in individual companies, the assumption behind both questions is that investment funds pay more reliable dividends. We find that dividends are valued more by older, and less-educated investors. These results are in line with the answers to the question on the transaction costs. They give further rise to the idea that a part of our respondents want dividends because of transaction costs.

We also questioned whether investors want dividends, because they prefer to consume from dividends rather than from capital gains. We ask for the percentage of dividends and regular salary respectively that the investors use for consumption purposes. The results indicate that investors consume more out of their regular salary than out of dividends. We find that older investors consume more out of their regular salary than young investors. An interesting finding is that older investors consume more out of dividends than younger and high-income investors. This is also consistent with the finding that these two categories of investors have a preference for dividends because of the transaction costs.

We also find that most investors are not willing to sell their stocks in a company if the company would decide not to pay a dividend anymore.

When we asked whether respondents consider stock dividends to be more like stock splits or like cash dividends, we find that there is only a slight recognition that a stock dividend is more like a stock split than like a cash dividend. This either because investors do not understand stock dividends or that there is a psychological explanation. It is especially remarkable that investors with university education do not understand the nature of stock dividends. The results also indicate that when only considering transaction costs, on average, investors prefer stock dividends compared to cash dividends. This result suggests that most investors reinvest their dividends.



**Table 1.** Correlations between independent variables

	DY <sub>i</sub>	POR <sub>i</sub>	SZ <sub>i</sub>	EV <sub>i</sub>	DA <sub>i</sub>	ASg <sub>i</sub>	PV <sub>i</sub>
DY <sub>i</sub>	1.00						
POR <sub>i</sub>	0.52	1.00					
SZ <sub>i</sub>	0.34	0.57	1.00				
EV <sub>i</sub>	0.21	0.03	0.20	1.00			
DA <sub>i</sub>	0.56	0.29	0.08	0.12	1.00		
ASg <sub>i</sub>	0.12	0.18	0.41	0.21	0.11	1.00	
PV <sub>i</sub>	-0.67	-0.63	-0.39	0.03	0.54	-0.22	1.00

**Table 2.** Sample descriptive statistics for all deflated variables for the Kuwait pooled. Sample - using number of shares as a deflator

	DY <sub>i</sub>	POR <sub>i</sub>	SZ <sub>i</sub>	EV <sub>i</sub>	DA <sub>i</sub>	ASg <sub>i</sub>	PV <sub>i</sub>
Maximum	10.43	4.39	7.68	2.11	2.63	4.70	6.17
Minimum	3.90	0.05	0.03	0.00	-5.11	0.01	-4.9
Mean	0.27	0.07	0.10	0.10	-0.19	0.45	0.17
Median	0.30	0.02	0.05	0.04	0.00	0.16	0.20
Skewness	-1.33	0.82	0.19	0.61	-1.10	0.96	-0.41
Kurtosis	1.91	4.41	3.34	2.12	1.71	2.42	1.82
Standard Deviation	1.45	0.38	0.56	0.27	0.41	1.48	0.98

**Table 3.** OLS Estimations - Cross-Sectional Regression of The Relationship Between Stock Price Volatility and Dividend Policy After Controlling For Firm Size, Earning Volatility, Leverage and Asset Growth

**Model 1:**  $PV_j = \alpha_1 + \alpha_2 DY_j + \alpha_3 POR_j + \varepsilon_j$

**Model 2:**  $PV_j = \alpha_1 + \alpha_2 DY_j + \alpha_3 POR_j + \alpha_4 SZ_j + \alpha_5 EV_j + \alpha_6 DA_j + \alpha_7 ASg_j + \varepsilon_j$

Where PV is price volatility;  
 DY is dividend yield;  
 POR is payout ratio;  
 SZ is firm size;  
 EV is earning volatility;  
 DA is long-term debt;  
 ASg is growth in assets

Coefficients	Model 1	Model 2
$\alpha_1$	-633.48	-987.76
(P value)	(0.00)	(0.00)
$\alpha_2$	-1.64	-1.85
(P value)	(0.00)	(0.00)
$\alpha_3$	-1.99	-2.25
(P value)	(0.00)	(0.00)
$\alpha_4$	*	-4.82
(P value)		(0.00)
$\alpha_5$	*	5.98
(P value)		(0.00)
$\alpha_6$	*	2.78
(P value)		(0.00)
$\alpha_7$	*	-3.61
(P value)		(0.01)
R2 (%)	66.2%	71.8%
Adj R2 (%)	65.9%	71.7%
F-Statistic*	21.07a	26.97 a
F-Statistic**		87.56 a

Note: *a* indicates statistical significance increase in the explanatory power ( $R^2$ ) at the 0.01 level; reported F-statistics\*\* represent the increase in the explanatory power ( $R^2$ ) after controlling for firm size, earning volatility, leverage and asset growth AS IN Model 2.

## 5 Summary, conclusions, limitations, and recommendations implications for future research

### 5.1 Summary

Dividends policy remains a source of controversy despite years of theoretical and empirical research. This proposed study will investigate the effect of dividends on firm market value in general and on investment decisions in particular in Kuwait Stock Market. The importance of this study arises from the fact that investors are the primary party interested in financial accounting information. Investors are major recipients of the financial information. They need to monitor its progress and require information that helps them gauge a firm's financial strength and its market value.

The objective of this study is to determine the impact of dividend policy on stock price in Kuwait.; to shed more light on the dividend puzzle-the question of why individual investors want dividends?; whether individual investors tend to consume a large part of their dividends?; and to examine whether the behavioral finance theory for cash dividends and stock dividends is applied in the KSE.

This study tries to indicate (i) if there is a significant relationship between stock price volatility and dividend policy?; (ii) if the relationship between stock price volatility and dividend policy is affected after controlling for firm size, earning volatility, leverage and asset growth?; (iii) what *individual* investors believe about dividend policy?; and (iv) whether individual investors tend to consume a large part of their dividends?

This study will be based on Baskin's (1989) cross-sectional regression analysis of the relationship between stock price volatility and dividend policy after controlling for firm size, earning volatility, leverage and asset growth. Baskin (1989) examines the influence of dividend policy on stock price volatility and suggests the use of the following control variables in testing the significance of the relationship between dividend yield and price volatility: operating earnings; size of the firm; level of debt financing; payout ratio; and level of growth. These variables have a clear impact on stock returns but also impact on dividend yield.

The questions of why individual investors want dividends; and whether they tend to consume a large part of their dividends? is investigated by submitting a questionnaire amongst 100 individual investors in Kuwait Stock Exchange.

### 5.2 Conclusions

The coefficient on dividends is negative and significantly different from zero at the 5% level when testing the relationship between dividend policy and stock price volatility. The results of testing the

hypothesis show that there is statistically significant and negative relationship between dividend policy and stock price volatility. That is, increases in dividends paid will be associated with a decrease in the volatility of the firm's stock price. This result could be interpreted as companies with volatile earnings are expected to pay lower dividends and to be regarded as more risky.

The relationship between stock price volatility and dividend policy is not affected after controlling for firm size, earning volatility, leverage and asset growth. The addition of control variables (firm size, earning volatility, leverage and asset growth) adds to explanatory power. We compare the  $R^2$  in hypothesis 2 ( $R^2= 66.2\%$ ) with the  $R^2$  of the model after the addition of control variables ( $R^2= 71.8\%$ ).

The empirical estimation is based on a cross-sectional regression analysis of the relationship between stock price volatility and dividend policy after controlling for firm size, earning volatility, leverage and asset growth. Both dividend policy measures (dividend yield and payout ratio) have significant impact on the share price volatility. The relationship is not reduced much even after controlling for the above mentioned factors. This suggests that dividend policy affects stock price volatility and it provides evidence supporting the arbitrage realization effect, duration effect and information effect in Kuwait.

The results show that preference for dividends is larger amongst older investors, compared to younger investors. Old investors and investors without university education all have a preference for dividends because of transaction costs. On the other hand, young investors and investors with a university education have less interest in dividends based on transaction costs. Apparently, investors perceive high dividend yield stocks to be more risky than low dividend yield stocks. The results also suggest that the watch for dividends as a safeguard measure is still "old-fashioned", even in light of the recent accounting scandals.

The results also indicate that individual investors believe that dividend payments contain a signal about the profitability of the firm. Even though both dividends and share buy-backs are ways of paying money back to shareholders, investors do not see share buy-backs as equivalent to dividends.

More specifically, when we asked why investors hold stocks in investment funds in addition to individual companies or why they hold stocks in investment funds without having stocks in individual companies. The assumption behind both questions is that investment funds pay more reliable dividends. If the answers of both questions are taken together, we find that dividends are valued more by older, and less-educated investors.

We also questioned whether investors want dividends, because they prefer to consume from dividends rather than from capital gains. An

interesting finding is that older investors consume more out of dividends than younger and high-income investors. This is also consistent with the finding that these two categories of investors have a preference for dividends because of the transaction costs.

The rejection of the behavioral finance explanation for dividends is confirmed where we find that most investors are not willing to sell their stocks in a company if the company would decide not to pay a dividend anymore.

When we asked whether respondents consider stock dividends to be more like stock splits or like cash dividends, concluded that there is only a slight recognition that a stock dividend is more like a stock split than like a cash dividend.

### 5.3 Limitations

The first limitation is the models used in this study. Due to limited theoretical development based upon empirical data, it is difficult to formulate a valuation model that can be defended unequivocally.

The second limitation is the claim that financial statements are less relevant in assessing the fundamental value of high technology, service-oriented firms, which are by nature knowledge-intensive. These conclusions are based on past studies that examine the association between accounting numbers and stock prices. These studies indicate that, in general the association between accounting information and stock prices has been declining over time. These findings have been interpreted to be a result of a decline in the value relevance of accounting numbers, maybe due to an existence of omitted 'other information' variables not yet included in current valuation models.

The third limitation is the unavailability of some accounting data in Kuwait which could result in model mis-specification problems. Nonetheless, although the study has clear limitations, it is hoped that it makes useful contribution to the market-based accounting literature.

### 5.4 Recommendations

This study can help government officials and regulation developers in the region identify the best policies and regulations that are required. The Kuwaiti Stock Exchange trades with respect to a wide variety of different industries in different sectors. The economy of the region is also gradually focusing on industries other than oil; and, as such, the overall marketplace is still growing and developing with respect to this new change.

Additional analysis based on splitting the sample can provide insights into the relationship between stock price volatility and dividend policy using disaggregated data by industry to investigate to what extent the results vary across industries.

### 5.5 Implications for future research

It is worthwhile, in future research papers, the use of questionnaire and interview methodologies that could provide more valuable insights and a better understanding of the investors' responses. The combination of quantitative and qualitative approaches could complement each other in searching for relationship between stock price volatility and dividend policy.

Future research in the area might also look at the relationship between stock price volatility and dividend policy using panel data. A panel data set can be useful because it allows the researcher to sort out econometric effects that cannot be distinguished with the use of either cross-section or time series data alone (for example, time effects, firm specific effects, industry effects, etc).

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