

**A WORTHY FACTORS AFFECTING DIVIDENDS POLICY DECISIONS  
AN EMPIRICAL STUDY ON INDUSTRIAL CORPORATIONS LISTED IN AMMAN  
STOCK EXCHANGE**

**Dr. Mohammad Salim El Essa**  
Al- Balqa Applied University – Jordan

**Mr. Mohammad Mahmoud Hameedat**  
Al- Balqa Applied University – Jordan

**Dr. Jamal Ali Altaraireh**  
Petra Univirsity- Jordan

**Mr. Mousa Abdelhadi Nofal**  
Al- Balqa Applied University – Jordan

**Abstract**

Extant literatures showed that there is increasing research interest into factors influencing dividends policy decisions. This paper provides a review of the literature and examining some factors that affecting on dividends policy decisions. In order to reach the desired results, different regression models were developed which contain dependent and independent variables to determine the most important factors that affecting on dividends policy decisions in industrial corporations listed in Amman stock exchange. After using the appropriate statistical analysis, the study found a positive relationship between dividends and net cash flows, earning before interest and tax, earning per share, price to book value ratio, dividends yield, and firm size. Earnings per share has the highest effect on dividends, then dividends yield then price to book value ratio. The study also found a negative relationship between dividends and debt ratio. Final result indicated that large firms have a greater impact on dividends policy decisions than small firms.

**Keywords:** *Dividends Policy, net Cash Flows, Earning per Share, Dividends Yield, Firm Size.*

## *1. Introduction*

Dividends policy involves the decision to pay out earnings or to retain them for reinvestment in the company, an optimal dividends policy strikes balance between current dividends, future growth and maximization the firm's stock price. A number of factors influence dividends policy has been showed in the previous work such as investments opportunities, sources of funds, stockholder preferences for current or future income and others. The obvious question to be asked is what are the most important factors that affect on firms is dividends policy decisions?

To answer this question, firstly we attempted to reflect the literature in this area and examined the impact of net cash flows, earning before interest and tax, earning per share, price to book value ratio, dividends yield, firm size and debt ratio on the dividends policy decisions in industrial corporations listed in Amman stock exchange.

### *1.2 The Problem of The Study*

The problem of this study is to find out the impact of changes in net cash flows, earning before interest and tax, earning per share, price to book value ratio, dividends yield, firm size and debt ratio on dividends policy in industrial corporations listed in Amman stock exchange from the year 2005 to year 2011.

The elements of the problem can be formulated by asking the following questions:

- 1-Does net cash flows has an impact on dividends policy decisions for the industrial corporations listed in Amman stock exchange ?
- 2-Does earnings amount has an impact on dividends policy decisions for the industrial corporations listed in Amman stock exchange?
- 3-Is dividends policy decisions for the industrial corporations listed in Amman stock exchange affected by others factors like earning per share, price to book value ratio, dividends yield, firm size and debt ratio?
- 4-Dose firm's size (large or small) has an impact on dividends policy decisions for the industrial corporations listed in Amman stock exchange?

### *1.3 The Importance of The Study*

Different researches used earnings as a measure to determine dividends policy in firms and found an association between earnings and dividend changes, without consideration beyond given factors, so not many studies have proved the dividends policy decisions relation with net cash flows and others factors like (earning per share, price earnings ratio, price to book value ratio, dividends yield, firm size and debt ratio) .

The current study comes to show the impact of changes in many factors such as net cash flows, earning and others factors mentioned above on dividends policy decisions which applied in industrial corporations listed in Amman stock exchange during the years 2005-2011.

### *1.4 The Goals of The Study*

The goal of this study is to determine the main factors that affecting on dividends policy decisions, this goal can be detailed into following secondary goals which are:

- 1-To Give a theoretical background about dividends policy.
- 2-To Identify the impact of net cash flows on firm's dividends policy decisions.
- 3-To Identify the impact of earnings amount on firm's dividends policy decisions.
- 4-To Identify the impact of other factors like earning per share, price to book value ratio, dividends yield, firm size and debt ratio on firm's dividends policy decisions.
- 5-To Identify the impact of firm's size (large or small) on dividends policy decisions.

## 2. Literature Review

There is an extensive literature that investigated the Factors Influencing Dividend Policy Decisions. Locally, (Ababna, 2004) concluded that the most important factor affecting on dividends is firms earning. In another study, (Haddadin, 2006) found that the most statistically significant variable influencing the payout ratio is the EPS and earnings growth rate which have a positive relationships with dividends payout ratio and higher the firms earnings the higher would be its payment dividends, also ownership and institution holding had no significant effect on the payout. Also (Al-Malkawi, 2007) examined the determinants of the amount of dividends, the results suggested that the proportion of stocks held by insiders and state ownership significantly affect the amount of dividends paid. Size, age, and profitability of the firm seem to be determinant factors of corporate dividend policy in Jordan. Further more (Al-Malkawi, 2008) examined the determinants of corporate dividend decisions of publicly quoted companies in Jordan as a case study of an emerging market, the Results suggested that factors that affect dividend policy in developed stock markets seem to apply for this emerging market, for example factors such as size, profitability, and age increase the likelihood to pay dividends but financial leverage decreases the probability to pay dividends, profitability is found in literatures to impact dividends policy. Studies by (DeAngelo et al,1992) have found that a significant proportion of companies having losses over a five-year period tend to omit dividends entirely. In (Jensen and Zoun, 1992) also found evidence of a positive association between return on assets and dividend payouts. (Jensen and Johnson, 1995) suggested that dividend reduction is the result of a deterioration in both the profitability and the liquidity of a firm. (Meg and Nnadi, 2008) showed a significant correlation between taxes and dividend structure of the banks and also suggested that profit is a major variable in the formation of dividend policy of the organizations.

Firm size is also found in literature to impact dividend policy. A Study by (Smith and Watts, 1992) highlighted that the theoretical grounding for the influence of the size effect on dividend policy is not strong. (Moh'd et al,1995) also concluded that dividend payout related positively with firm size. (Ho, 2003) found empirical evidence of dividend policies being positively affected by size in Australia. (Aivazian et al, 2003) has concluded that both return on equity and profitability positively correlated with the dividend payout ratio, their study also concluded that corporations with high debt ratios often had lower dividend payments, and firm size also positively correlated with dividend payout. However, (King, 2010) found evidence of the retail minority shareholder base being an important determinant of corporate dividend policy, the results are robust when controlled for the factors of size, profitability, financial leverage, signalling, agency costs and franking credits

Related to the relation between debt and dividend, (Kania and Bacon, 2005) results suggested that the positive relationship observed between the debt to total assets ratio and the dividend payout ratio produced anomalous results, higher the firm's risk the lower is its payout ratio, Since a greater insider ownership results in a lower dividend. Also cash flows is found in literature to impact dividend policy, (Charitou and Vafeas, 1998) argued that the extent that dividend changes are determined by firm performance, both cash flows and aggregate accruals should be significantly associated with dividend changes while cash flows and accruals are important in explaining dividend changes, cash flows are significantly more important than accruals, also concluded the importance of incremental cash flows as predictors of dividend increases. Also (Charitou, 2000) concluded that both cash flows and change in earnings have information content in explaining dividend changes, the study also confirmed that dividend changes and cash flow variables are positively related to future earnings. Another study by (Adelegan, 2003) found a significant relationship between dividend changes and cash flows. In other hand some literature found that no impact of cash flows on dividends policy like (Khan, 2009) which indicated that no significant association between cash flows and dividend changes.

## 3. Background

Dividend Policy refers to the explicit or implicit decision of the Board of Directors regarding to the amount of residual earnings (past or present) that should be distributed to the shareholders of the corporation( Gibson, 2009). Some 50 years ago, the two economists Franco Modigliani and Merton Miller (M&M) wrote two very important scientific articles, one was about a firm's optimal capital structure (Modigliani and Miller, 1958). And the other was about a firm's optimal dividend policy (Miller and Modigliani, 1961). In 1958 M&M argued that the value of the

firms depends only on the income produced by its assets, not on how this income is split between dividends and returned earnings but in real world, investors might prefer one dividends policy over another, so dividends policy is relevant for their decisions (Miller and Modigliani, 1961).

Dividends can be in the form of cash and additional shares of stock, but firms pay dividends using one of four dividends policies (Weston et al, 1996):

1-Residual dividends policy: a policy in which the dividends paid is set equal the actual earning minus the amount of retained earning necessary to finance the firm's optimal capital budget.

2- Stable predictable dividends: payment of specific dollar dividends each year.

3-Extra dividends: a supplemental dividend paid in year when the firms dose well and excess funds are available for distribution.

4-Low regular dividends plus extras: a policy of paying a low regular dividend plus a year-end extra in good years.

There are four dates must be considered in the Mechanics of Cash Dividend Payments as mentioned in (Weygandt et al, 2011):

1- Declaration Date:

this is the date on which the Board of Directors meet and declare the dividend.

2- Date of Record:

is the date on which the shareholders register is closed after the trading day and all those who are listed will receive the dividend.

3- Ex- dividend Date:

is the date that the value of the firm's common shares will reflect the dividends payment.

4- Date of Payment:

is the date the cheques for the dividend are mailed out to the shareholders.

#### 4. Study hypotheses

In order to achieve the study goals, the researchers developed the following hypotheses:

(1)Ho: There is no statistically significant relationship between wholesome of independent variables and firm's dividends policy decisions.

Ha: There is a statistically significant relationship between wholesome of independent variables and firm's dividends policy decisions.

(2)Ho: There is no statistically significant relationship between net cash flows and firm's dividends policy decisions, holding all else constant.

Ha: There is a statistically significant relationship between net cash flows and firm's dividends policy decisions, holding all else constant.

(3)Ho: There is no statistically significant relationship between earnings before interest and tax and firm's dividends policy decisions, holding all else constant.

Ha: There is a statistically significant relationship between earnings before interest and tax and firm's dividends policy decisions, holding all else constant.

(4)Ho: There is no statistically significant relationship between earning per share and firm's dividends policy decisions, holding all else constant.

Ha: There is a statistically significant relationship between earning per share and firm's dividends policy decisions, holding all else constant.

(5)Ho: There is no statistically significant relationship between price to book value ratio and firm's dividends policy decisions, holding all else constant.

Ha: There is a statistically significant relationship between price to book value ratio and firm's dividends policy decisions, holding all else constant.

(6)Ho: There is no statistically significant relationship between dividends yield and firm's dividends policy decisions, holding all else constant.

Ha: There is a statistically significant relationship between dividends yield and firm's dividends policy decisions, holding all else constant.

(7)Ho: There is no statistically significant relationship between, firm size and firm's dividends policy decisions, holding all else constant.

Ha: There is a statistically significant relationship between, firm size and firm's dividends policy decisions, holding all else constant.

(8)Ho: There is no statistically significant relationship between debt ratio and firm's dividends policy decisions, holding all else constant.

Ha: There is a statistically significant relationship between debt ratio and firm's dividends policy decisions, holding all else constant.

(9)Ho: Large firms don't have a greater impact on dividends policy decisions than small firms.

Ha: Large firms have a greater impact on dividends policy decisions than small firms.

## 5. Study Methodology

### 5.1 Research population and sample

The research population contains all industrial corporations listed in Amman stock exchange that equal 77 companies according to Amman stock exchange companies guide 2011, and we selected a statistical simple random sample equal 25 companies (33% of population) which represent all industrial sector firms, and we selected the period of the study from 2005 to 2011 (7 years), and based in the data of these selected sample, the study analyzed 1225 observations in order to conduct the target results.

### 5.2 Research method

The researchers used two different methods to accumulate data and information: the Descriptive method and the Analytical method. The second method depends on developing a regression model contain dependent and independent variables to determine the most important factors that affecting on dividends policy decisions.

#### 5.2.1 Independent variables:

- 1- Net Cash Flows (NCF<sub>it</sub>): net Cash flows per share for the firm *i* at time *t* calculated by dividing net cash flows by outstanding shares.
- 2- Earnings before interest and taxation (EBIT<sub>it</sub>): natural log of earnings before interest and taxation for the firm *i* at time *t*.
- 3- Earnings per Share (EPS<sub>it</sub>): calculated by taking earnings before interest and taxation (EBIT) dividing by the number of outstanding shares at year-end for the firm *i* at time *t*.
- 4- Price to Book Value Ratio (PBV<sub>it</sub>): this is measured by taking the market value per share dividing by the book value per share for the firm *i* at time *t*.
- 5- Dividends Yield (DY<sub>it</sub>): this is measured by taking the annual cash dividends per common share dividing by the market price per common share for the firm *i* at time *t*.
- 6- Firm size (FZ<sub>it</sub>): natural log of book value of firm asset for firm *i* at time *t*.
- 7- Debt ratio (DEBT<sub>it</sub>): this is measured by taking the total debts dividing by the total assets for the firm *i* at time *t*.

#### 5.2.2 Dependent variable:

Dividends Per share (DIVPS): Firms annually dividends dividing by the number of outstanding shares at year-end for the firm *i* at time.

### 5.3 Research model

The empirical models used to test the research hypotheses which can be divided into several tests:

### 5.3.1 First hypothesis

To test the first hypothesis the following general multivariate regression model is used:

$$DIVPS_{it} = a + b1 NCF_{it} + b2 EBIT_{it} + b3 EPS_{it} + b4 PBV_{it} + b5 DY_{it} + b6 FZ_{it} + b7 DEBT_{it} + E_{it}$$

### 5.3.2 Hypotheses (2-8)

To test the hypotheses from 2-8 the study used simple regression models that take each one of Independent variables separately by using the following models:

- 1-  $DIVPS_{it} = a + b1 NCF_{it}$
- 2-  $DIVPS_{it} = a + b2 EBIT_{it}$
- 3-  $DIVPS_{it} = a + b3 EPS_{it}$
- 4-  $DIVPS_{it} = a + b4 PBV_{it}$
- 5-  $DIVPS_{it} = a + b5 DY_{it}$
- 6-  $DIVPS_{it} = a + b6 FZ_{it}$
- 7-  $DIVPS_{it} = a + b7 DEBT_{it}$

### 5.3.3 Ninth hypothesis

To test the hypothesis number 9 the study used simple regression models and divided study sample to two types according to firm size. Number 1 represent small size (the firm is small if the average of total assets less than the sample average which was 20114235JD), number 2 represent large size (the firm is large if the average of total assets more or equal 20114235JD)(Al- Khabash and Thunibat, 2009).

- 1-  $DIVPS_{it} = a + b1S FZ_{it}$
- 2-  $DIVPS_{it} = a + b2LFZ_{it}$

## 6. Quantitative tests and results discussions

After analyzing firms data by using SPSS program and making appropriate test, the following results was found:

### 6.1 Test of hypothesis (1)

Ho: There is no statistically significant relationship between wholesome of independent variables and firm's dividends policy decisions.

Ha: There is a statistically significant relationship between wholesome of independent variables and firm's dividends policy decisions.

Multiple regression was used to test our hypothesis and we found according to table (1) that calculated  $F= 30.814$  is greater than tabulated  $F=2.1$ , and according to our decision rule which is to accept Ho if calculated value is less than tabulated value and reject Ho if calculated value is greater than tabulated value, So the researchers rejected Ho and accepted Ha for the entire hypothesis, so there is a statistically significant positive relationship between wholesome of independent variables and firm's dividends policy decisions. Also by using stepwise regression it was found that earnings per share has the highest effect on dividends, then dividends yield then price to book value ratio. Also by looking to the  $R^2$  we can find the model is adequate and the current factors can interpret .701 from the changes related to dependent variable. The Following table (1 and 2) summarizes these results.

### 6.2 Test of hypotheses (2-8)

To test the hypotheses from 2-8 the study used simple regression models that take each one of Independent variables separately, the following table (3) summarizes regression results.

According to table (3) we found that calculated  $t$  is greater than tabulated  $t$  related to hypotheses from 2-7, and According to our decision rule which is to accept Ho if calculated value is less than tabulated value and reject Ho if calculated value is greater than tabulated value, So the researchers rejected Ho and accepted Ha for the entire hypotheses, so there is a statistically significant positive relationship between dividends and net cash flows, earnings before interest and tax, earnings per share, price to book value ratio, dividends yield, and firm size. But we found that there is a negative relationship between dividend and debt ratio because calculated  $t = -.766$  is less than tabulated  $t = -1.9842$  related to hypothesis 8, so we accepted Ho and rejected Ha.

### 6.3 Test of hypothesis (9)

Ho: Large firms don't have a greater impact on dividends policy decisions than small firms.

Ha: Large firms have a greater impact on dividends policy decisions than small firms.

To test the hypothesis number 9 the study used simple regression models after dividing study sample to : large firms which equal (11) firms and small firms which equal (14) firms, the following table (4) summarizes regression results.

According to table (4) we found that calculated  $t = 3.984$  is greater than tabulated  $t = 1.98$ , and according to our decision rule which is to accept Ho if calculated value is less than tabulated value and reject Ho if calculated value is greater than tabulated value, so the researchers rejected Ho and accepted Ha for the entire hypothesis, it is mean that large firms have a greater impact on dividends policy than small firms.

## 7. Conclusion

This study aimed to determine the main factors that affecting dividends policy decisions. From the previous results obtained by the statistical analysis of the regression models, the researchers found the followings results and advantages which can enrich the interest of related stakeholders and improve their decisions in practice, the researchers identified the following:

1-The study has found a positive relationship between dividends and net cash flows, earning before interest and tax, earning per share, price to book value ratio, dividends yield, and firm size.

2-The study has found that earnings per share has the highest effect on dividends, then dividends yield then price to book value ratio.

3-The study has found a negative relationship between dividends and debt ratio.

4-The study has found that large firms have a greater impact on dividends policy than small firms.

The researchers recommended that current results may be consider a worthy model for others studies and to make similar studies analyse additional factors did not taken, and conduct extra researches consider all sectors in Amman Exchange together.

F- calculated	F- tabulated	F Sig	Result of H0	R	R square
30.814	2.10	.000	Reject	.837	.701

Table (1): Test of hypothesis Ho(1)

Model	F- calculated	F Sig	R	R square
EPS	63.936	.000	.628	.395
EPS+DY	74.635	.000	.779	.606
EPS+DY+PBV	65.84	.000	.82	.673

Table (2): Stepwise regression results

Hypo #	t- calculated	t- tabulated	t Sig	Result of H0	R	R square
2 (NCF)	7.14	1.9842	.000	Reject	.585	.342
3 (EBIT)	6.292	1.9842	.000	Reject	.536	.288
4 (EPS)	7.995	1.9842	.000	Reject	.628	.395
5 (PBV)	4.215	1.9842	.000	Reject	.392	.153
6 (DY)	5.558	1.9842	.000	Reject	.49	.24
7 (FZ)	6.474	1.9842	.000	Reject	.547	.30
8 (DEBT)	-.766	-1.9842	.446	Accept	.077	.006

Table (3): Test of hypotheses (2)-(8)

t- calculated	t- tabulated	t Sig	Result of H0	R	R square
3.984	1.9842	.000	Reject	.373	.139

Table (4): Test of hypothesis (9)

## References

- Ababna M.(2004). Factors Affecting the Dividend of Jordanian Industrial Shareholding Companies, unpublished thesis, Al – Albayt University, Jordan.
- Al-khabash A. and Al-Thunibat A.(2009). Earnings Management Practices From The Perspective Of External And Internal Auditors: Evidence from Jordan, *Managerial auditing journal*, vol.24, no.1, pp.58-80.
- Al-Malkawi H.(2008). Factors Influencing Corporate Dividend Decision: Evidence from Jordanian Panel Data, *International Journal of Business*, vol. 13, no. 2, pp.177-195.
- Al-Malkawi H.(2007). Determinants of Corporate Dividend Policy In Jordan: An Application of the Tobit Model, *Journal of Economic & Administrative Sciences*, vol. 23, no. 2, pp. 44-71.
- Aivazian V., Laurence B. and Sean C.(2003). Do Emerging Market Firms Follow Different Dividend Policies From U.S. Firms?, *Journal of Financial Research*, vol. 26, no.3, pp. 371-387.
- Charitou A.(2000). The Impact of losses and cash flows on dividends: Empirical evidence for Japan, *Journal of Accounting, Finance and Business Studies*, vol. 36, no. 2,pp. 198–225.
- Charitou A. and Vafeas N.(1998). The Association between Operating Cash Flows and Dividend Changes: An Empirical Investigation, *Journal of Business Finance and Accounting*, vol. 25, no. 1 and 2, pp. 225–249.
- DeAngelo H. , DeAngelo L. and Skinner D.(1992). Dividends and Losses, *Journal of Finance*, vol.47, no.5, pp. 1837-1864.
- Haddadin L.(2006). The Determinants of the Dividends policy Evidence From the Jordanian Insurance Industry, unpublished thesis, University of Jordan.
- Ho H.(2003). Dividend Policies in Australia and Japan, *International Advances in Economic Research*, vol. 9, no.2, pp. 91-100.
- Gibson C. (2009). *Financial Reporting & Analysis: Using Financial Accounting Information*, International Student Edition, 11th, South- western, Cengage Learning, Mason, USA.
- Jensen G., Solbery D. and Zoun, T.(1992). Simultaneous Determination of Insider Ownership, Debt and Dividend Policies, *Journal of Financial and Quantitative Analysis*, vol.27, no.2, pp. 247-263.
- Jensen G. and Johnson J.(1995). The Dynamics of Corporate Dividend Reductions, *Financial Management*, vol. 24, no. 4, pp.31-51.
- Jing L. , Doron N. and Jacob K.(2007). Is Cash Flow King in Valuations?, *Financial Analysts Journal*, vol. 63, no. 2, pp. 56-65.
- Kania L. and Bacon W.(2005). What Factors Motivate The Corporate Dividends Decision?, *ASBBS E-Journal*, vol.1, No.1., pp.97-107.
- Khan Y.(2009). Cash Flows as Determinants of Dividends Policy in Mature Firms: Evidence from TSE 250 and Aim Listed Firms, Working Paper Series, London south Bank University, available at [ssrn-id1365367](https://ssrn.com/abstract=1365367).
- King L. (2010). Retail Minority Shareholders and Corporate Reputation as Determinant of Dividend Policy in Australia, *Pacific-Basin Finance Journal*, vol.18 , no.4, pp. 351-368.
- Meg A. and Matthias N.(2008). The Effect of Taxes on Dividend Policy of Banks in Nigeria, *International Research Journal of Finance and Economics*, vol. 19, no.3, pp. 48-55.
- Miller M. and Modigliani F.(1961). Dividend Policy, Growth and the Valuation of Shares, *Journal of Business*, vol.34, no.4, pp. 411-33.
- Modigliani F. and Miller M. (1958). The Cost of Capital, Corporation Finance and the Theory of Investment, *American Economic Review*, vol. 48, no.3, pp.261–297.
- Moh'd A., Larry G., and James N.(1995). An Investigation of the Dynamic Relationship Between Agency Theory and Dividend Policy, *The Financial Review*, vol. 30, no. 2, pp.367-385.
- Adelegan O.(2003). An Empirical Analysis of the Relationship between Cash Flow and Dividend Changes in Nigeria, *African Development Review*, vol. 15, no. 1, pp. 35-49.
- Smith J. and Watts R.(1992). The Investment Opportunity Set and Corporate Financing : Dividend and Compensation Policies, *Journal of Financial Economics*, vol. 32, no.3, pp. 263-292.
- Weston J., Scott B. and Eugene F.(1996). *Essentials of Managerial Finance* , 11 edition, Dryden Press publishers.
- Weygandt J.J. ,Kimmel P.D. and Kieso D.E.(2011). *Accounting Principles*,10th Edition, John Wiley & Sons, inc.