

# EXAMINING THE RELATIONSHIP BETWEEN CASH FLOW STATEMENT PATTERNS AND THE DIVIDEND POLICY: CASE OF LISTED ENTERPRISES IN VIETNAMESE STOCK EXCHANGE

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**Abstract:** *Dividend is one of the most concerned issues of shareholders because it is a reward for their investment. Dividend policy is at managers' discretion and there is no clear explanation for this. Based on the data of Vietnamese listed firms on Hochiminh Stock Exchange from the year 2012 to 2017, this study proves the relationship between cash flow statement patterns and the dividend policy for the first time, as well as the relationship between cash flow from operating activities and dividend policies. In addition to this, the difference in the apportionment of cash flow statement patterns and dividend policy in relation to industry sectors are also confirmed in this research. The research result is useful in both theoretical and practical aspects.*

**Keywords:** *dividend policy, cash flow statement patterns, cash flow statement pattern and dividend policy, operating cash flow and dividend policy*

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## Introduction

Public companies raise equity by issuing shares in the form of either common shares or preferred shares. In return, shareowners will receive dividends for their investment. “Dividends are a distribution of a company’s profits” (Deeptee and Roshan, 2009). Dividend is the reward from the company to shareholders for their investment and risk bearing, as a result, dividend is very important to shareholders. While the preferred shares yield fixed annual dividends, the common shares pay irregular dividends. Normally, dividend is allocated to shareholders in three forms: cash dividend, stock dividend or stock repurchase. The optimal dividend policy can help the company balance between current dividend, growth opportunity in the future and boost stock price (Issa, 2015). From the irrelevant model of Miller and Modigliani (1961), dividend policy has been an interesting topic for academic researchers in the last several decades (Panigrahi and Zainuddin, 2015). Miller and Modigliani’s model (1961) states that the dividend policy does not affect a firm’s value. This point of view is encouraged by Fama (1978), Hakansson (1982), Berlingeri (2006) and Naceur (2002), however, is discouraged by Gordon (1962), Ross (1977), Bhat and Pandey (1994), DeAngelo et al., (2006), Rahman (2015). Although there is huge amount of study about dividend policy, it is still a puzzle (Allen et al., 2000). Dividend policy is always one of the difficult decisions of the Board of Director. Despite a numerous research about managers’ attitude toward their choice of dividend policy, it is still unclear why manager chose one pattern of cash dividend over another (Baker et al., 2002). There are voluminous researches about the determinants of enterprises’ dividend policy, of which cash flow is one significant factor because cash flow can be used to determine the ability that a company can generate sufficient fund for dividend payment (Everingham, 2003, as cited in Jooste, 2006). The information about cash flow can be found in the enterprise’s cash flow statement (CFS). Introduced by the International Accounting Standard Board in 1992, CFS is an integral part of an enterprise’s financial statements, which indicates the cash inflows and outflows of one enterprise over a period of time. The cash flows on CFS are classified into 3 categories: operating activities, investing activities and financing activities. The combination of cash flow value from three activities makes eight CFS patterns (Gup and Samson, 1993). There are many publications about dividend policy and firm performance in general. However, not many studies focus on the relationship between CFS patterns and dividend policy in detail. Inspired by the research gap, this study is performed to improve the usefulness of financial statement in general and CFS in particular. The rest of the paper is organized as follows. Section 2 provides the relevant literature. Research problem, hypothesis, methodology and data collection are included in section 3. Section 4 reports the empirical result and the last section gives the conclusion.

## Literature Review

### Dividend, Dividend Policy

“Dividends are commonly defined as the distribution of earnings (past or present) in real assets among the shareholders of the firm in proportion to their ownership” (Sujata, 2009). Dividend is considered to be a way for firms to reward stockholders for their investment as well as risk bearing and also gives shareholders extra returns in addition to capital gains (Rahman, 2015). Shareholders may be paid dividends via three kinds of methods: cash dividend, property dividend and stock dividend. Cash dividend is considered the most common form and usually paid quarterly or biannually. Property dividend refers to when companies declare dividends that is payable by property other than cash (Ndung’u et al., 2014). With stock dividend, the company

has to issue new stocks to existing investors in a proportionate basis as an alternate for or a complement to cash dividend (Schneeman, 2010). This method reduces the value per share in spite of the firm's assets, profits and total value are unaffected. From the investor's point of view, dividends are beneficial since they represent a regular income stream (Sheflin and Statman, 1984). Meanwhile, from a managerial point, dividends can be regarded as a tool to mitigate agency problem by digesting extra free cash flow (Caelers, 2010; Jensen, 1986), or to signal to the market that good quality firm can afford to pay dividends (Bhattacharya, 1979).

In corporate finance, dividend policy is one of the most popular research topics (Baker et al., 2018). Dividend payment patterns are different between firms and these patterns are inconsistent over time (Booth and Zhou, 2017). Miller and Modigliani (1961) argue that under the perfect capital market assumptions, dividend policy is irrelevant. However, in the real world where market frictions exist, their argument becomes as a heated debate. Although there is a wide range of theorizing, extensive debate as well as empirical research, no consensus exists on the actual motivation for paying dividends (Baker et al., 2018). In fact, over the last few decades, many scholars made real efforts to reveal the secrets of dividend policy but they were still unable to provide an acceptable explanation for the dividend behavior. This paved the way for the introduction of the dividends puzzle concept (Black, 1976) because there was no convincing explanation for why many firms pay cash dividends to their stockholders. In order to explain why the company pays dividend, scholars have pursued two major methods: The first and most popularity is to develop and test numerous theories to explain this dividend puzzle. The second method is to survey managers about their views toward possible reasons underlying dividend decisions (Rahman, 2015). According to Baker et al. (2002) and Chiang et al. (2006), despite this various amount of research, we still do not have all the answers to the dividend puzzle and the only way to improve our understanding of corporate dividend policy is to investigate the views of managers when they make a dividend decision based on the merge of numerous theories, issues and elements.

### **Cash Flow Statement Patterns**

Cash flow statement (CFS) is a fundamental component of financial statements that describes cash, cash equivalent inflows and outflows of an entity in a specific period of time. Beside the role of providing information about firm's liquidity and solvency, CFS is also useful for forecasting firm's earning and ability to generate cash in the future (Jones et al., 1995; Krishnan and Largay, 2000; Sharma, 2001; Clinch et al., 2002; DeFond and Hung, 2003; Cheng and Hollie, 2008; Orpurt and Zang, 2009; Arthur et al., 2010, Farshadfar and Monem, 2011 and Takhtaei and Karimi, 2013). The cash flows in CFS are categorized and presented into three groups: operating activities, investing activities and financing activities. Based on the cash receipts and cash disbursements during the accounting period, the net cash flow of each activity can get either positive or negative value. The different value combination of net cash flow from operating activities, investing activities and financing activities generates 8 CFS patterns: CFS pattern number 1 (+,+,+), CFS pattern number 2 (+,-,-), CFS pattern number 3 (+,+,-), CFS pattern number 4 (+,-,+), CFS pattern number 5 (-,+,+), CFS pattern number 6 (-,-,+), CFS pattern number 7 (-,+,-), CFS pattern number 8 (-,-,-)

Each of CFS patterns has different combination of three cash flows, which is determined by an enterprise's financial characteristics. As a result, based on the CFS pattern, the expectation about enterprise's financial characteristics can be given (Gup and Samson, 1993). Among three

cash flows, operating cash flows have played an important role because they reflect the ability of cash generation from the enterprise's main business activity. Net operating cash flow is crucial for the dividend decision of managers. Many researchers use cash flow in building the model for determinants of corporate's dividend policy such as the research of Kato et al., (2002); Adelegan (2003); Afza and Mirza (2010); Abbasi and Ebrahimzadeh (2013); Zhou and Zhao (2014); Wasike and Ambrose (2015); Puspitaningtyas (2017), Alkhuzai and Asad (2018) and Lestari (2018).

### Fundamental Theories Explaining Dividend Policy

#### Signaling Theory

Since the research on job market (Spence, 1973), signaling theory has been used as the basis of other models, hypotheses, theories and ideas (Karasek and Bryant, 2012). Although the author develops his theory for the labor market, signaling theory can be applicable in any market without symmetrical information (Morris, 1987). There are 4 main components/stages in signaling theory as the below figure:

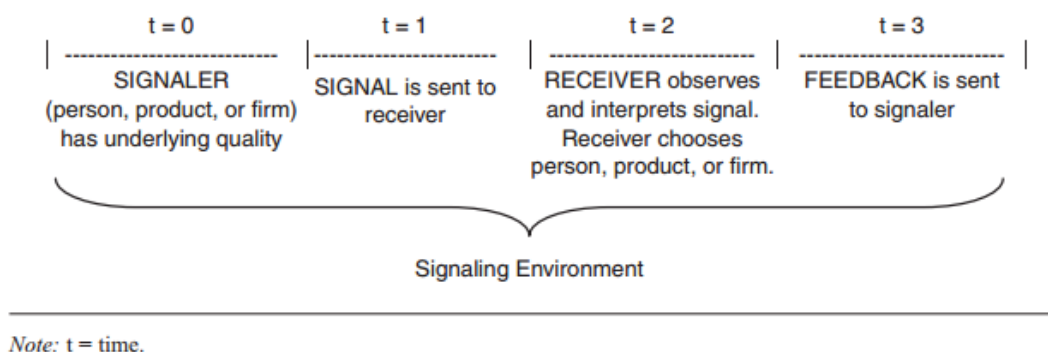


Figure 1: Signaling Timeline (Connelly et al., 2011)

**Signaler:** In this study, signaler is managers who give information to external users. They are responsible for CFS preparing and issuing.

**Signal:** It is information that is sent to external users by signaler. The signal is assumed useful if it is observable and the more observable the signal is the more effective it is (Daily and Dalton, 2001; Zhang and Wiersema, 2009). In this study, CFS pattern is the signal that is received by external users.

**Receiver:** is external users who are eager to get enterprise's information. Receivers are external users of CFS in this study.

**Feedback:** the final element/stage in this process. After receiving the signal, the receivers choose the way to interpret information and send it back to signaler. The dividend policy expectation of external users after attaining CFS patterns is feedback in this empirical research. Miller and Modigliani (1961) assume that a firm's management and outside investors are equal and immediately obtain similar information regarding the development prospects and performance of a company. However, in fact, managers have more information and more accurate than investors, it is the information asymmetry between managers and outside investors (Frankel and Li, 2004). CFS patterns play as a signal for external users about the

enterprise's dividend policy because of the relationship between cash flow and dividend payment. Simon (1994), Charitou and Vafeas (1998), Bradley et al., (1998), Adelegan (2003), Almeida et al. (2004), Naceur (2004), Kowalewski et al., (2007), Papadopoulos and Charalambidis (2007), Adjaoud and Ben-Amar (2010), Guizani and Kouki (2012), Abbasi and Ebrahimzadeh (2013), Cheng et al., (2014), Parsian and Shams Koloukhi (2014), Issa (2015), Wasike (2015), Tijjani and Sani (2016) and Lestari (2018) indicate that the change in dividend policy is affected significantly by cash flow or free cash flow. Mirza and Afza (2010), Abbasi and Ebrahimzadeh (2013), Wasike and Ambrose (2015), Puspitaningtyas (2017), Alkhuzaie and Asad (2018) emphasize that cash flow from operating activities are positively correlated with cash dividend. It is understandable because the company with a great amount of money from operating cash flow is expected to pay cash dividend, whereas the investors do not expect the same thing when net cash flow from operating activities gets the negative value.

### **The Agency Theory and Agency Cost**

As established from the research of Ross (1973) and Jensen and Meckling (1976), agency theory is one of the earliest theories in management and economics (Panda and Leepsa, 2017). This theory refers to the principal – agent problem in which the principal is the owner/stockholder of the company and the agent is the manager. The manager has to execute the business activities to maximize the enterprise's value. However, the manager may pursue the interest of himself /herself instead of the owners because of the differences in managerial and shareholder priorities. This leads to the agency problem and the agency cost. The agency cost to observe the manager can be cut down by dividend payouts (DeAngelo et al., 2004; Rozett, 1982; Moh'd et al., 1995; La Porta et al., 2000 and Manos, 2003). Easterbrook (1984) explains that dividends can be useful to reduce free cash flow as well as force managers to access the capital market to raise capital. In this case, credit institutions will also be able to monitor management behavior to evaluate the ability to pay debt (Deeptee, 2009). This shows that dividend payments increase monitoring of external management and reduces the opportunity for managers to act on their own interests.

### **Bird in The Hand Theory**

Dividend policy has become one of the most interesting topics in the modern finance from the statement of Miller and Modigliani (1961) that enterprise's dividend policy does not influence on its value in the perfect capital market. This statement is opposite of the empirical research result of Gordon (1959) – the current dividends are seen as an important factor in determining the value of the company. Lintner (1962) and Gordon (1963) are two of the first scholars who defend the theory that an enterprise's share price and dividend policy is relevant. They discuss that investors prefer dividends to capital gains and future growth because capital gains and future growth cannot be assured and may be incorrectly estimated. In other words, investors value dividend payments received today more than highly uncertain earnings gained from dividend retention for the reinvestment in other projects, this theory known as “bird in hand theory”. However, there is quite a wide range of studies illustrating that in a perfectly informed, competitive financial market or even under uncertainty, this mode fails (Bhattacharya, 1979; Miller and Modigliani, 1961). In the study of Litzenberger and Ramaswamy (1979), they also argue that cash dividends bring about negative effects for investors. They say that due to tax reasons, investors prefer lower payout companies, in this case, decreasing cash dividend could increase their share prices (as cited in Kaźmierska-Jóźwiak, 2015).

### Prior Researches About Dividend Policy and Cash Flow

Dividend policy is one of the most controversial issues in the corporate finance literature, although it has been analyzed for many years, however, there is no widely accepted explanation for firms' observed dividend behaviors (Agyei and Marfo-Yiadom (2011)). It is often believed that the affects enterprise's dividend payout as cash flow is considered as the "life blood" of the company and the heart of company's life (Rujoub, 1995). From the fundamental research about dividend policy of Lintner (1956), other authors had used cash flow to forecast dividend like Fama (1968). Throughout the years, scholars had improved the relationship between cash flow and dividend policy at different levels. Their research findings are highlighted in the following table.

**Table 1: Significant Research Findings About Cash Flow and Dividend Policy**

Author (year)	Sample	The findings
Simons (1994)	Data are taken from Compustat Database. The study look at cross-section between 1983 and 1984, between 1984 and 1985	Change in cash flow from operating influences the change in dividend. However the increase/decrease in cash flow from operating leads to the contrary change in dividend
Charitou and Vafeas (1998)	5,997 firm-year observations for the year from 1981 to 1991 (Compustat Database)	Their research proves that cash flow is useful in determining dividend policy. In detail, operating cash flow is crucial in making decision about dividend policy when its value is low and its role will decrease when the company's investment project needs cash
Bradley et al. (1998)	Sample of 75 equities from REIT (real estate investment trust) industry over the 1985 – 1992 period	There is a positive relationship between payout and expected cash flow uncertainty. The higher the level of uncertainty, the lower the payout ratio.
Adelegan (2003)	882 firm-year observations on a sample of 63 quoted firms in Nigeria over the period from 1984 to 1997	With given earnings, operating cash flow has a positive relation to dividend changes and cash flow is a better forecaster of dividend changes for small-sized firms
Almeida et al. (2004)	29,954 firm-years of all manufacturing companies over the 1971-2000 period (Compustat Database)	Enterprises with financial constraints will keep more cash to finance for investment opportunities in the future, as a result, the payout ratio will decrease
Ben Naceur (2006)	48 firms listed on the Tunisian Stock Exchange over the 1996-2002 period	The companies with more steady earnings can afford larger free cash flow and pay more dividends
Kowalewski et al. (2007)	110 listed companies in Poland during 1998-2004	Using free cash flow to pay dividend may reduce the agency conflict
Papadopoulos and Charalambidis (2007)	72 companies listed on Athens Stock Exchange over 1996 - 2002 period (banks and financial institutions are excluded)	Among six factors: size, capital structure, financial leverage, profitability, liquidity and cash flow, cash flow is the most valuable determinant of dividend. Besides, cash flow has a positive relationship with the earning proportion for regular and total dividend
Adjaoud and Ben-Amar (2010)	714 firm-years listed on the Toronto Stock Exchange over the period 2002-2005	There is a positive correlation between free cash flow and dividend payouts
Azfa and Mirza (2010)	100 companies of all major sectors listed on Karachi Stock Exchange, from 2005 to 2007 (must be profitable and miss dividend payment less than 1 year)	Operating cash flow is one of the critical factors in concluding cash dividend in Pakistan. In addition, cash flow sensitivity has adverse relation to dividend payout and significantly adverse relation to dividend intensity

Guizani and Kouki (2012)	44 companies with data for the years 1998 through 2007, in a total of 440 observations on a regulated market or on the unlisted market from the Tunisian Securities Market Commission	Free cash flow affects Tunisian firms' dividend policy, in detail firms with significant free cash flow can pay higher dividend
Abbasi and Ebrahimzadeh (2013)	100 firms from stock Tehran exchange during 2002-2008	There is a significant relation between dividend policy and cash flow
Cheng et al. (2014)	Chinese listed companies from 2003 to 2011	Cross-listed companies pay higher dividends than non-cross-listed companies when they have higher free cash flow
Parsian and Shams Koloukhi (2014)	102 companies listed on Tehran Stock Exchange, from 2005 to 2010	Free cash flow has significantly linear connection with dividend payout
A Sakir et al. (2014)	Manufacturing companies listed on Indonesia Stock Exchange from 2008 to 2010	Using multiple linear regression with these following factors: managerial ownership, debt policy, profitability, firm size, and free cash flow, the authors prove that only free cash flow has a significant and positive influence on dividend policy.
Issa (2015)	284 listed firms in Kuala Lumpur Stock Exchange of Bursa Malaysia in seven sectors, from 2002 to 2011	Free cash flow has a significant and positive connection with dividend payout ratio in all selected sectors (Consumer Product, Industrial Products, Construction, Finance, Technology, Properties and Communication sectors)
Wasike (2015)	All listed companies at Nairobi Securities Exchange (NSE) for the period 2004-2014	There is a positive relationship between dividend policy and cash flow, profitability, and tax
Tijjani and Sani (2016)	Oil and gas companies in Nigeria, from 2003 to 2014	Free cash flow has positive influence on dividend policy. However, this influence is unsubstantial.
Puspitaningtyas (2017)	Manufacturing companies in consumer goods industry sector listed on Indonesia Stock Exchange from 2014 to 2016	Operating cash flow has affected significantly on dividend policy while net income does not
Alkhuzaie and Asad (2018)	150 companies were operating in the non-financial sector of Pakistan stock exchange	Operating cash flow is a determinant of sustainable dividend pay-out
Lestari (2018)	32 manufacture companies listed on Indonesia Stock Exchange from 2011 to 2015	Operating cash flow, free cash flow, firm size, earning, and lagged dividend have significant effects on dividend policy

### Research Problem, Research Hypothesis, Research Method and Data Collection Research Problem and Hypothesis

From the beginning of modern commercial corporation, dividend policy has employed managers (Al-Malkawi et al., 2010). It is surprisingly that dividend policy has become one of the most controversial issue in finance since the middle of 20<sup>st</sup> century with the vast amount of publications. The researchers have tried to reveal the factors influence to corporate dividend policy to satisfy the investors in the financial market. Although a significant number of studies explored the factors that have impacted on dividend policy in different economies but no significant research has been found regarding the relationship between dividend policies and CFS patterns. In addition, the dividend policy is not the same between countries, especially between emerging markets and developed markets (Issa, 2015). Like many countries in the world, the regulation for dividend policy in Vietnam is general. According to Vietnamese

Enterprise Law in the year 2014, the joint-stock company can pay dividend if it has fulfilled tax liability and other financial obligations as prescribed by law and its funds have been established and developed. The dividend can be paid in cash, the company's shares, or other assets that are belong to the manager's discretion. The motivation of this study is to contribute to fill the gap in the literature by exploring the relation between CFS patterns and dividend policies of Vietnamese listed firms. The research also hopes to build the confidence for investors to predict about the dividend policy of Vietnamese listed firms. To examine the relationship between the dividend policies, the CFS patterns and the industries of Vietnamese listed firms, these following issues will be considered in this study:

- Analyze the cash flow statement patterns and the link between the cash flow statement patterns and the industry sectors of Vietnamese listed firms.
- Analyze the dividend policies and the link between the dividend policies and the industry sectors of Vietnamese listed firms.
- Investigate the relation between the dividend policies and the cash flow from operating activities of Vietnamese listed firms
- Investigate the relation between the dividend policies and the cash flow statement patterns of Vietnamese listed firms

With the above issues, the research hypotheses are set as followed:

Hypothesis 1: The cash flow statement patterns of Vietnamese listed firms are different

Hypothesis 2: There is a relationship between the cash flow statement patterns and the industry sectors of Vietnamese listed firms

Hypothesis 3: The dividend policies of Vietnamese listed firms are different

Hypothesis 4: There is a relationship between the dividend policies and the industry sectors of Vietnamese listed firms

Hypothesis 5: There is a relationship between the dividend policies and the cash flow from operating activities of Vietnamese listed firms

Hypothesis 6: There is a relationship between the dividend policies and the cash flow statement patterns of Vietnamese listed firms

### Research Method

To answer the research questions, the paper uses statistics testing methods based on the research sample. The one sample Chi-Square test is used for hypothesis 1 and hypothesis 3 with the reference value determined by the following formula:

$$\chi^2 = \sum_{i=1}^K \frac{(O_i - E_i)^2}{E_i} \quad (1.01)$$

- $O_i$ : the frequency of group  $i$  in the reality.
- $K$ : the number of group (in this study,  $k=5$  with the dividend policy and  $k=8$  with cash flow pattern)
- $E_i$ : expected number of observation ( $E_i=p_i*n$ , in which  $p_i$ : the theory percentage of group  $i$  (in this study, the percentage of all groups are the same)
- $\chi_{\alpha,(k-1)}^2$ : The Chi-Square distribution value. If  $\chi^2 < \chi_{\alpha,(k-1)}^2$ : accept the hypothesis 1 and hypothesis 3.



The two sample Chi-Square test is used for hypothesis 2, 4, 5, 6 with the reference value determined by the following formula:

$$\chi^2 = \sum_{i=1}^r \sum_{j=1}^c \frac{(O_{ij} - E_{ij})^2}{E_{ij}} \quad (1.02)$$

- $O_{ij}$ : observed value in row  $i$  column  $j$
- $E_{ij}$ : expected number of observation ( $E_{ij} = \frac{n_r n_j}{n}$  in which  $n_i$ ;  $n_j$ : the sum of observation in the reality of row  $i$  column  $j$ )
- $\chi_{\alpha, (r-1)(c-1)}^2$ : The Chi-Square distribution value. If  $\chi^2 < \chi_{\alpha, (r-1)(c-1)}^2$ , accept the hypothesis 2,4,5

### Data Collection

The panel data used in this research is from the Vietnamese listed firms on Hochiminh Stock Exchange (HOSE) from the year 2012 to 2017. The total observation is 1344 from 10 industries, in which the industrial has 390 observations; accounting for the highest percentage (29%) and the Information Technology has 36 observations, comprised of 2.7%. In general, the size and the structure of research data meet the requirements of research methods employed in the paper.

**Table 2: The Industry Sector Structure Of Vietnamese Listed Firms In The Research From The Year 2012 To 2017**

Industry sector	Frequency	Percentage (%)
Financial	48	3.6
Consumer Staples	156	11.6
Consumer Discretionary	168	12.5
Materials	204	15.2
Health Care	54	4.0
Real Estate	162	12.1
Utilities	72	5.4
Industrials	390	29.0
Information Technology	36	2.7
Energy	54	4.0
Total	1,344	100.0

### Empirical Result

Distribution of Cash Flow Statement Patterns, The Link Between the Cash Flow Statement Patterns and The Industry Sectors of Vietnamese Listed Firms On Hochiminh Stock Exchange

**Table 3: Distribution Test Result About CFS Patterns Of Vietnamese Listed Firms On Hose In The Period From 2012 To 2017**

CFS pattern		Frequency	Percentage (%)
Number 1	(+) (+) (+)	16	1.2
Number 2	(+) (-) (-)	482	35.9
Number 3	(+) (+) (-)	217	16.1
Number 4	(+) (-) (+)	230	17.1
Number 5	(-) (+) (+)	83	6.2
Number 6	(-) (-) (+)	217	16.1
Number 7	(-) (+) (-)	74	5.5
Number 8	(-) (-) (-)	25	1.9
Total		1,344	100.0
Chi-Square test		830.382	***

\*\*\*, \*\*, \* significance levels at 1%; 5%; 10%

The result of Chi-square test in table 3 (detail in appendix 1) shows that the sig value is 0.000, as a result, hypothesis 1 is accepted. It means that there is a difference in the distribution of CFS patterns of Vietnamese listed companies on Ho Chi Minh Stock Exchange, of which CFS pattern 2 (+,-,-) was found to be the most popular CFS pattern in Vietnam during the period of 2012-2017 (35.9%). This trend is homogenous with the research result of Gup et al. (1993) and Bruwer et al. (2005). CFS pattern 4 (+, -, +) occupies the second largest group of firms with 17.1%, followed by CFS pattern 3 (+,+,-) and CFS pattern 6 (-,-,+) with the same number of observation (217) and same percentage (15%). The residual CFS patterns (1, 5, 7 and 8) compose less than 15% of total sample. The “strange” CFS patterns, including CFS pattern 1 (+,+,+) and CFS pattern 8 (-,-,-), are also very rare in Vietnam. Each of these two CFS patterns only holds less than 2% of listed firms in the research period.

**Table 4: Testing Result About the Link Between The CFS Patterns And The Industry Sectors Of Vietnamese Listed Firms On Hose In The Period From 2012 To 2017**

Industry sectors	CFS pattern (%)								Total
	Number 1 (+, +, +)	Number 2 (+, -, -)	Number 3 (+, +, -)	Number 4 (+, -, +)	Number 5 (-, +, +)	Number 6 (-, -, +)	Number 7 (-, +, -)	Number 8 (-, -, -)	
Financial	2.1	31.2	12.5	20.8	4.2	16.7	12.5		100
Consumer Staples	2.6	37.8	12.2	20.5	2.6	16.7	5.1	2.6	100
Consumer Discretionary	1.2	35.7	17.9	16.7	3.6	18.5	4.8	1.8	100
Materials	0.5	37.7	17.2	16.7	3.9	16.7	5.9	1.5	100
Health Care	1.9	66.7	1.9	13.0	5.6	5.6		5.6	100
Real Estate	1.2	22.2	21.6	15.4	15.4	17.3	5.6	1.2	100
Utilities		63.9	13.9	13.9		2.8	4.2	1.4	100
Industrials	1.3	30.8	17.2	17.7	7.7	18.7	4.9	1.8	100
Information Technology	-	27.8	8.3	16.7	11.1	13.9	19.4	2.8	100
Energy	-	42.6	20.4	16.7	1.9	13.0	3.7	1.9	100
Total	1.2	35.9	16.1	17.1	6.2	16.1	5.5	1.9	100
Chi-Square test	1.467E2***				Sig			0.000	

\*\*\*, \*\*, \* significant at the 1; 5; 10

The Chi-Square testing result in table 4 (detail in appendix 2) proves that the cash flow statement patterns and the industry sectors of Vietnamese listed firms on HOSE have a connection (hypothesis 2 is accepted). Overall, more than 50% of listed firms in the research have positive cash flow values for operating activities. However, while nearly 92% of listed firms of Utilities sector have cash inflows greater than cash outflows from operating activities, this percentage for Information Technology sector is only around 53%. In all industry sectors, the CFS pattern number 2 is always the most frequently occurring, especially in Health Care and Utilities. More than 60% of listed firms in these two industry sectors have positive values for the cash flow from operating activities, negative values for investing and financing activities in the period 2012 -2017.

## The Dividend Policies and The Link Between the Dividend Policies and The Industry Sectors of Vietnamese Listed Firms On Hochiminh Stock Exchange

**Table 5: Distribution Test Result About Dividend Policies Of Vietnamese Listed Firms On Hose In The Period From 2012 To 2017**

Dividend policy	Frequency	Percentage (%)	
Cash dividend	816	60.7	
Cash dividend and stock dividend	97	7.2	
Stock dividend	73	5.4	
Profitable firms without dividend	269	20.0	
Unprofitable firms without dividend	89	6.6	
Total	1,344	100	
Chi-Square test	1486.640***	Sig	0.000

\*\*\*; \*\*; \* significant at the 1%; 5%; 10%

The value of Chi-Square test in table 5 (detail in appendix 3) secures for hypothesis 3. The dividend policies of Vietnamese listed firms on HOSE are different in the research period. The research indicates that cash dividend is the most favorable choice of listed firms in the years from 2012 to 2017 with around 61% of observation firms. At the same time, there are only 12.6% listed firms that use stock dividend. It is worth noticing that one-fifth of Vietnamese listed firms in this research do not use any type of dividend policy regardless of the fact that they are profitable. The testing result in table 6 (detail in appendix 4) supports that there is a relationship between the dividend policies and the industry sectors of Vietnamese listed firms on HOSE (hypothesis 4 is accepted). The shareholders of Utilities sector seem to be the happiest with 100% of listed firm paying dividend, of which 98.6% pays cash dividend and only 1.4% pays stock dividend. The number of listed firms of the Real Estate sector and Information Technology sector used cash dividend is the lowest among ten industry sectors. The percentages for these sectors are 38.9% and 27.8% respectively. Around one-fourth of observation firms do not pay any type of dividend policy from the year 2012 to 2017. It can be indicated that Real Estate sector and Information Technology sector constitute the largest amount for this group as half of Real Estate observed firms and 45.1% of Information Technology observed firms do not pay dividend in the research period.

**Table 6: Testing Result About the Link Between the Dividend Policies and The Industry Sectors of Vietnamese Listed Firms on Hose in The Period from 2012 To 2017**

Industry sectors	Dividend policy (%)					Total
	Cash dividend	Cash dividend and stock dividend	Stock dividend	Profitable firms without dividend	Unprofitable firms without dividend	
Financial	66.7	4.2	10.4	12.5	6.2	100
Consumer Staples	66.0	3.8	3.2	21.8	5.1	100
Consumer Discretionary	66.1	10.7	1.2	14.3	7.7	100
Materials	58.8	9.8	6.4	17.2	7.8	100
Health Care	68.5	5.6	1.9	20.4	3.7	100
Real Estate	38.9	1.9	14.2	35.2	9.9	100
Utilities	98.6		1.4			100
Industrials	60.3	8.5	4.9	19.7	6.7	100
Information Technology	27.8	22.2		41.7	8.3	100
Energy	63.0	7.4	7.4	18.5	3.7	100
Total	60.7	7.2	5.4	20.0	6.6	100
Chi-Square test	1.658E2a ***		Sig		0.000	
***; **; * significant at the 1; 5; 10						

### **The Relationship Between the Dividend Policies and The Cash Flow from Operating Activities as Well as The Cash Flow Statement Patterns of Vietnamese Listed Firms On Hochiminh Stock Exchange**

From the data of table 7 (detail in appendix 5), the relationship between the dividend policies and the cash flow from operating activities of Vietnamese listed firms on HOSE is confirmed (hypothesis 5 is accepted). The research result presents 73.2% of firms that have positive values of cash flow from operating activities and pay cash dividend during the period of 2012-2017, while the value for firms that have negative values of cash flow from operating activities is 55.4%. On the contrary, there is 16.1% of listed firms with positive values of cash flow from operating activities and profit that do not pay any type of dividend while the percentage for profitable and negative value of cash flow from operating activities is around 30%.

**Table 7: Testing Result About The Relationship Between The Dividend Policies And The Cash Flow From Operating Activities of Vietnamese Listed Firms On Hose In The Period From 2012 To 2017**

Dividend policy		The cash flow from operating activities		Total
		Positive value	Negative value	
Cash dividend	Count	616	200	816
	%	65.2	50.1	60.7
Cash dividend and stock dividend	Count	76	21	97
	%	8.0	5.3	7.2
Stock dividend	Count	45	28	73
	%	4.8	7.0	5.4
Profitable firms without dividend	Count	152	117	269
	%	16.1	29.3	20.0
Unprofitable firms without dividend	Count	56	33	89
	%	5.9	8.3	6.6
Total	Count	945	399	1,344
	%	100.0	100.0	100.0
Chi-Square test	43.006 <sup>***</sup>	Sig		0.000

\*\*\*, \*\*, \* significant at the 1; 5; 10

**Table 8: Testing Result About The Link Between The Dividend Policies And The CFS Patterns Of Vietnamese Listed Firms On Hose In The Period From 2012 To 2017**

Dividend policy		CFS pattern (%)								Total
		number 1 (+, +, +)	number 2 (+, -, -)	number 3 (+, +, -)	number 4 (+, -, +)	number 5 (-, +, +)	number 6 (-, -, +)	number 7 (-, +, -)	number 8 (-, -, -)	
Cash dividend	Count	10	340	133	133	43	101	38	18	816
	%	62.5	70.5	61.3	57.8	51.8	46.5	51.4	72.0	60.7
Cash dividend and stock dividend	Count	1	35	11	29	0	18	2	1	97
	%	6.2	7.3	5.1	12.6	.0	8.3	2.7	4.0	7.2
Stock dividend	Count	1	18	5	21	6	20	2	0	73
	%	6.2	3.7	2.3	9.1	7.2	9.2	2.7	.0	5.4
Profitable firms without dividend	Count	3	60	53	36	27	67	19	4	269
	%	18.8	12.4	24.4	15.7	32.5	30.9	25.7	16.0	20.0
Unprofitable firms without dividend	Count	1	29	15	11	7	11	13	2	89
	%	6.2	6.0	6.9	4.8	8.4	5.1	17.6	8.0	6.6
Total	Count	16	482	217	230	83	217	74	25	1344
	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Chi-Square test		113.082***			Sig			0.000		

\*\*\*; \*\*, \* significant at the 1%; 5%; 10%

The hypothesis 6 is proved with the data of table 8 (detail in appendix 6). The Vietnamese listed firms on HOSE with different CFS patterns will have different dividend policies in the period from 2012 to 2017. The listed companies of the most frequent CFS pattern number 2 (+, -, -) have the highest percentage of cash dividend policy in the related period (77,8%). This seems reasonable because company with CFS pattern number 2 (+, -, -) is believed belonging to mature stage (Gup et al., 1993; Bruwer & Hamman, 2005; Dickinson, 2011). Firms of the second most common CFS pattern number 4 (+, -, +) which is assumed to have the characteristics of the growth stage (Gup et al., 1993; Dickinson, 2011) take the second highest value of cash dividend (70,4%). The third frequent CFS pattern number 3 (+, +, -) occupies the third largest percentage value of using cash dividend (66,4%). Nearly one-fourth of listed firms with CFS pattern number 3 (+, +, -) tend to keep retained earnings as they do not pay any type of dividend regardless that they are profitable. Having the same attribute as the shake-out stage of companies with CFS pattern number 3 (Dickinson, 2011), companies with CFS pattern number 5 (-, +, +) occupy the highest percentage of policy “profitable without dividend”. Possessing the same distribution percentage with CFS pattern number 3, enterprises of CFS

pattern number 6 (-, -, +) have the percentage value of using cash dividend that ranked at the fourth position (54.8%). Perceived to be in introduction stage (Dickinson, 2011), 30.9% of firm of CFS pattern number 6 do not use any kind of dividend despite the fact that they are profitable in the period. The remaining CFS patterns including number 1 (+, +, +), number 7 (-, +, -) and number 8 (-, -, -) are assumed to be relevant to the decline and shake-out stage (Dickinson, 2011). The research result points out that the percentage of listed firm of CFS pattern number 1 and number 8 of the shake-out stage giving cash dividend is higher than that of listed firm of CFS pattern number 7 of the decline stage.

It is interesting that although there are 5 different dividend policies recognized in the research period, cash dividend and profitable firms without dividend are two prominent trends. Each of the remaining dividend policies (both cash and stock dividend, stock dividend and unprofitable firms without dividend) is chosen by less than 13% of all CFS patterns companies (except 17.6% of firm with CFS pattern number 7 are unprofitable firms without dividend).

### **Conclusion**

Dividend policy continues as one of the most controversial topics in corporate finance in the last few decades (Ashamu, 2012). There is no proper standard or regulation about dividend payment in Vietnam, as a result, listed firms are entitled to make decision about the type of dividends and the amount of cash dividend to return to its shareholders. This study tries to examine the link between the company's disclosure information and dividend policy in the case of listed enterprises on HOSE. The result indicates that there are relationships between cash flow from operating activities and dividend policies, as well as between cash flow statement patterns and dividend policies of listed firms in Vietnam. In addition, the difference in the distribution of CFS patterns and dividend policies of these companies in relation with their industries is proved. This research is significant for both theoretical and practical purposes. It will develop the literature on dividend policy by analyzing for the first time the link of CFS patterns and dividend policies. The result of this study has practical meanings for financial statements users because the information asymmetry could be lessened with more signaling to externals (Morris, 1987). For external users like investors and analysts, grasping dividend policy will improve the forecast of dividend payment, as a result, enhance the confidence and boost trading activities in the stock market.



## Appendix

### Appendix 1

Chi-Square Test for CFS patterns distribution

	Cash flow statement pattern
Chi-Square	993.190 <sup>a</sup>
Df	7
Asymp. Sig.	.000

a. 0 cells (.0) have expected frequencies less than 5. The minimum expected cell frequency is 168.0.

### Appendix 2

Chi-Square Test for the the link between the CFS patterns and the industry sectors

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.467E2 <sup>a</sup>	63	.000
Likelihood Ratio	149.531	63	.000
Linear-by-Linear Association	.353	1	.552
N of Valid Cases	1344		

### Appendix 3

Chi-Square Test for dividend policy distribution

	dividend policy
Chi-Square	1486.640 <sup>a</sup>
Df	4
Asymp. Sig.	.000

a. 0 cells (.0) have expected frequencies less than 5. The minimum expected cell frequency is 268.8.

#### Appendix 4

Chi-Square Test for the link between the dividend policy and the industry sectors

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.658E2 <sup>a</sup>	36	.000
Likelihood Ratio	183.203	36	.000
Linear-by-Linear Association	1.621	1	.203
N of Valid Cases	1344		

#### Appendix 5

Chi-Square Test for the relationship between the dividend policy and cash flow from operating activities

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	43.006a	4	.000
Likelihood Ratio	41.715	4	.000
Linear-by-Linear Association	35.226	1	.000
N of Valid Cases	1344		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 21.67.

#### Appendix 6

Chi-Square Test for the relationship between the dividend policy and cash flow patterns

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	113.082a	28	.000
Likelihood Ratio	114.738	28	.000
Linear-by-Linear Association	34.053	1	.000
N of Valid Cases	1344		

a. 10 cells (25.0) have expected count less than 5. The minimum expected count is .87.

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