Cash flows, capital structure and shareholder value: Empirical evidence from Amman stock exchange

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CHRONICLE	ABSTRACT
	The current study links the information contents of the three main financial statements in a balanced panel data model to empirically examine the effect of cash flows per share and capital structure on shareholder value. The results of the study are based on a sample of 270 firm-year observations from the Jordanian commercial banks and insurance companies that listed on Amman Stock Exchange (ASE) from 2011 to 2019. Based on the Fixed Effect Model (FEM) with Driscoll-Kraay standard errors, the empirical results show that cash flows from operating activities per share had a positive and significant relationship with shareholder value, whereas both the cash flows from investing and financing activities per share had negative but insignificant relationship with shareholders' value. Results also show that capital structure had a negative but insignificant relationship with shareholder value. Finally, the results indicate that dividend per share had a positive and significant relationship with shareholder value. Accordingly, decision-makers should direct cash to efficient investment projects in order for cash outflows from investing activities to create value to shareholders and to generate positive cash flows from financing activities. Similarly, an appropriate capital structure should be selected to create value for shareholders.

1. Introduction

One of the critical roles of business managers is to create value to shareholders through using the available resources in an optimal way (Miglietta, Battisti & Garcia-Perez, 2018). Achieving such a mission in any firm needs cash and proper capital structure. In this context, it has been argued early that shareholder value is shaped by cash flows (Rappaport, 1983; Blyth, Friskey& Rappaport, 1986) as the ability of a firm to pay to shareholders, for example, and to service its debt, as one of its finance sources, depends on its ability to create cash from different activities (Rappaport, 1987). In addition, it has been argued that cash flows offer the liquidity for firms to survive (Charitou & Ketz, 1991). However, Burke and Wieland (2017) provided evidence on the importance of cash flow information in the banking sector, for example, contrary to what was previously known. Therefore, managers need to consider cash flows even in their strategic evaluation plans (Srivastava, Shervani & Fahey, 1999). Accordingly, the current study considers the cash flows from different activities per share as important determinants to shareholder value. In the same context, it has been argued that skilled selection of capital structure is an important management policy to enhance the value for shareholders (Groth & Anderson, 1997). Therefore, firms try to select the appropriate level of leverage to reach a strong capital structure (Salim & Yadav, 2012). The decision of finance should be based mainly on an optimal mixture of debt and equity to support the shareholder value (Atiyet, 2012). Accordingly, the current study also considers the capital structure- as measured by book leverage- as an important determinant to shareholder value. Thus, the main purpose of this study is to examine the effect of cash flows from operating, investing and financing activities per share and capital structure on shareholder value as measured by earnings per share (EPS) in financial sector in Jordan.

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Prior studies in shareholder value in banking (Saif-Alyousfi, 2020) and other financial sectors are rare. In addition, mixed conclusions have been outlined in prior shareholder value studies (Hall, 2016). For example, Gupta and Sikarwar (2016) findings indicated that economic measures outperform the accounting ones in explaining shareholder value. On the other hand and contrary to Hall (2013) findings, Hall (2016) findings indicated that accounting indicators outperform the economic indicators in explaining shareholders value. Furthermore, it looks that prior studies gave more emphasis to the earnings to explain share returns and ignored cash flows (Bartov, Goldberg & Kim, 2001). Therefore, one of the main motivations for the current study is the severe shortage of prior studies that examined the relationship between cash flows and value creation in the banking sector (Burke & Wieland, 2017; Ni et al., 2019) and other financial firms. The justification for inclusion the capital structure in the current model is due to its close relationship with the cash flows in time series studies according to signaling theory (Shenoy & Koch, 1996) and the potential empirical relationship between the two factors as examined in prior research (e.g. Martinez, 2003; Park & Jang, 2013; Ayash, 2019; Harris & Roark, 2019). In addition, cash flows may be used to pay debt in terms of principal and interest (Groth & Anderson, 1997). In this context, Jensen and Meckling (1976) stressed the relationship between cash flows and capital structure in corporations due to the presence of agency cost as the finance decision necessarily affects the potential cash flows and the potential investment opportunities. Most important, it has been argued that the relationship between value creation and capital structure is debatable (Atiyet, 2012). Therefore, one of the main contributions of the current study is the ability to link cash flows with capital structure to create value to shareholders. The current study contributes to prior research in the field by adding new reference comes from emerging markets such as Jordan. The study also focuses on financial firms in terms of commercial banks and insurance companies, which were neglected in prior studies. In addition, the current study focuses on all the three perspectives of statement of cash flows, while the cash flows from investing and financing activities were ignored in several prior studies. Furthermore, and contrary to the prior studies, the current study links cash flows with capital structure to empirically show the extent to which they impact shareholder value. Finally, the study uses robustness panel data analysis techniques to validate the study results.

The next section discusses the theoretical framework of the study. Section three reviews the prior research in the field and develops the study hypotheses. Section four focuses on the study methods. Section five discusses the study results. Finally, section six concludes the study.

2. Theoretical Framework

2.1 Shareholder value

It has been argued that getting successful investment opportunities and reducing risks are necessary procedures that managers should follow to create value for shareholders (Amra & Kulatilaka, 2000). Therefore, one of the main objectives of any firm is to maximize the wealth of shareholders through enabling them to generate competitive returns on their investments (Miglietta, Battisti & Garcia-Perez, 2018). In this context, G20/OECD Principles of Corporate Governance focus on the shareholder value through the second principle "*The rights and equitable treatment of shareholders and key ownership functions*" (OECD, 2015). Similarly, in Jordan, the corporate governance instructions for banks stress the importance of shareholder rights in paragraph (B) of article (21) (CBJ, 2016). Likewise, the Board of Director of the Insurance Commission (BDIC) indicates in paragraph (B) of article (2) of corporate governance instructions for insurance companies in corporate governance definition that insurance companies should regulate the relationship between shareholders and the rest of stakeholders to ensure equality to all parties (BDIC, 2006).

Typically, the shareholder value is centralized in the returns of the share. Therefore, prior research used several share return proxies to measure shareholder value. For example, Gupta and Sikarwar (2016) used stock total return to measure the shareholder value, Ibrahim, Ahmad and Khan (2017) used EPS as a proxy for shareholder value, de Vasconcelos and Martins (2019) used ROE, Miglietta, Battisti and Garcia-Perez (2018) used dividends to measure the shareholder value. In this context, the shareholder value approach considers the total return of shareholder as an important indicator for firm value (Blyth, Friskey, & Rappaport, 1986) and accordingly, the creation of shareholder value requires generating returns on such shares exceeds their total cost (e.g. Rappaport, 1983; Fernández, 2002). In addition, Rappaport (2006) offered the main strategies that enable managers and other decision-makers to effectively service the interests of shareholders and to maximize their returns.

2.2 Statement of Cash Flows

The International Accounting Standard No.7 (IAS 7) covers different aspects of the statement of cash flows (IFRS Foundation, 2017). In addition, the Statement of Financial Accounting Standards No. 95 (SFAS 95) also outlined in detail the purpose and classification of the statement of cash flows (FASB, 1987). It has been argued that statement of cash flows is very helpful in decision-making process due to the availability of many qualitative characteristics in its components (Hung, Chan & Yhi, 1995) and the difficulty of being manipulated compared to earnings (Rayburn, 1986; Consler, Lepak & Havranek, 2011). However, several prior studies (e.g. Charitou & Ketz, 1991; Charitou, Clubb & Andreou, 2000) stressed the importance of cash flow

information to firm, shareholder and other users. In this context, Rujoub, Cook and Hay (1995) findings show that cash flow data have a considerable power to predict firm failure than other accounting data. Similarly, Charitou, Clubb and Andreou (2000) findings stressed the importance of cash flow information over earnings in market valuation. In addition, Dawar (2015) findings revealed that the ability of cash flow from operating activities exceeds that of earnings in forecasting the future cash flows. Furthermore, findings from Charitou and Ketz (1991) indicated that cash flows from operations help in meeting the different types of expenditures, and cash flows from investing and financing activities help in accomplishing the future strategic plans of firms. In the same context, Ni et al. (2019) argued that investing cash flows should impact firm value positively as the outflows from investing activities should go to reasonable projects. Nevertheless, some prior studies interested in the value relevance of cash flow information in comparison with that of earnings (e.g. Dechow, 1994; Dechow, Kothari & Watts, 1998; Bartov, Goldberg & Kim, 2001; Liu, Nissim & Thomas, 2007). Others such as Clacher, Ricquebourg and Hodgson (2013) are interested even in comparing the value relevance of direct and indirect statements of cash flows. In general, prior research worldwide could not reach a conclusive conclusion in this controversial issue due to the variation in some accounting practices from one country to another as a result of the difference in some internal reporting requirements of such countries (Bartov, Goldberg & Kim, 2001) and due to the potential effect of several internal and external factors (Dechow & Ge, 2006; Bepari, Rahman & Mollik, 2013).

2.3 Capital Structure

Several theories interested in the capital structure of firms including, for example, agency theory, pecking order theory and trade-off theory (Abdullah & Tursoy, 2019). However, most of these theories suggest that capital structure selection is a critical step in enhancing the earnings of firms (Rahayu, Suhadak & Saifi, 2020). According to Chakraborty (2010, p. 297) leverage has two types including the book leverage which is defined "*as the book value of total debt divided by the book value of total assets*", while the second one is the market leverage which is defined "*as the book value of total debt divided by the book value of total liabilities plus the market value of total equity*". Groth and Anderson (1997, p. 553) defined the total capital as the total assets of the firm that presented in the balance sheet, which equal "*the sum of equity capital and debt capital*".

3. Literature Review and Hypotheses Development

This section discusses the empirical findings of prior research in the field and develops the study hypotheses and questions.

3.1 Cash Flows and Shareholder Value

Most prior studies investigated the value relevant to cash flows and earnings and tried to identify the dominant in predicting the future earnings and cash flows and ignored the empirical relationship between cash flows and shareholder value. Therefore, the current study suffers the lack of prior studies that match the study model which focuses on examining empirically the effect of the three components of the statement of cash flows and capital structure on the shareholder value as measured by EPS. Therefore and consistent with Consler, Lepak and Havranek (2011), the current study investigates those studies that were almost similar to the current study**.**

The first stream of prior studies relevant to the current study are those studies that link the different accounting and economic indicators with shareholder value as measured by different proxies. For example, Fiordelisi (2007) performed a study to examine the relationship between shareholder value creation and shareholder value efficiency. Author's findings revealed a positive and significant relationship between shareholder value and the efficiency measures. Hall (2013) performed a study to examine the relationship between shareholder value of nonfinancial South African firms and several accounting and economic measures over the period from 2001 to 2011. Author's findings revealed that EPS has a positive and significant effect on shareholder value creation. Similarly, Hall (2016) results revealed that accounting indicators such as EPS and ROA have a positive and significant relationship with shareholder value. Radić (2015) examined the determinants of shareholder value among Japanese banks for the period from 1999 to 2011. Results revealed that cost efficiency, risk and size are the main determinants of shareholder value in Japanese banks. Cyril, Echobu and Chukwuemeka (2019) examined the effect of accounting indicators on shareholder value of Nigeria pharmaceutical firms for the period from 2008 to 2017. Authors' findings show that sales and operating profit have positive and significant effects on EPS, while the investment in working capital has a negative but insignificant effect on EPS. Saif-Alyousfi (2020) performed a study to determine the relationship between the different bank indicators and shareholder value as measured by Tobin's Q of 70 GCC banks during the period from 2000 to 2017. Results based on several panel data models revealed, for example, that capitalization, demand deposits, higher loan exposure, and growth have positive and significant impact on shareholder value. On the other hand, Siburian and Yohanes (2019) findings revealed a negative significant relationship between cash flows from operating activities and market value added.

Other studies interested in examining the effect of several accounting and economic indicators on shareholder value as based on share returns in terms of price, value and dividends**.** For example, Rayburn (1986) findings revealed that both operating cash flows and earnings are associated with the return of securities for 175 companies for the period from 1962 to 1982. In this result, EPS

can be simulated to share returns for example. Charitou and Ketz (1991) performed a study to investigate the effect of cash flows from operating, investing and financing activities on the market price of shares for 403 U.S companies over the period from 1976 to 1965. Authors' results show that all the three components of the statement of cash flows associated positively with the market value of share. Watson and Wells (2005) performed a study to investigate the effect of cash flows per share from operating, investing and financing activities on the stock returns of Australian companies for the period from 1992 to 2003. Authors' findings revealed that the effect of earnings based indicators on stock returns exceeds that of cash flow indicators especially for profitable companies. Martani, Khairurizka and Khairurizka (2009) studied the effect of cash flows from operating activities, financial ratios and firm size on the return of shares for 39 Indonesian listed manufacturing companies for the period from 2003 to 2006. Results revealed that net profit margin, return on equity, assets turnover, market value ratio have significant relationships with stock return, while the cash flows from operating activities have no effect on stock return. Dastgir, Sajadi and Akhgar (2010) performed a study to examine the impact of cash flows from operating, investing and financing activities per share and the components of income statement on stock return of 65 Iranian listed companies for the period from 2003 to 2005. Results indicated that cash flows from investing activities have a significant relationship with stock return. Consler, Lepak and Havranek (2011) examined the effect of EPS and cash flows from operating activities per share on the dividend per share of 1902 companies for the period from 2000 to 2006. Findings revealed that operating cash flows per share outperformed EPS in predicting dividend per share and the effect was positive and significant for both variables. Bepari, Rahman and Mollik (2013) examined the effect of cash flows from operating activities per share, book value of firm and EPS on the market value per share of the Australian companies for the period from 2004 to 2009. Authors' findings revealed that both earnings and cash flows have positive and significant effect on the market value of shares. Papadatos and Makri (2013) findings show that the earnings have positive and significant effects on stock price, while the effect of operating cash flows is insignificant for Greece companies that were forced to employ IFRS for the period from 2005 to 2010. Burke and Wieland (2017) performed a study to investigate the ability of cash flows from operating activities to explain the future cash flows, earnings and share price. Results revealed that cash flows from operating activities have a positive and significant relationship with stock price of U.S companies for the period from 2004 to 2014. Kasmiati and Santosa (2019) performed a study to examine the impact of profitability, cash flows from operating activities, investing and financing activities and leverage on stock return of Indonesia listed service companies for the period from 2011 to 2016. Based on the fixed effect model, authors' results show that earning information, operating cash flows and financing cash flows have positive and a significant effect on stock returns, while investing cash flows and leverage have negative significant effect on the stock return. Some prior studies also focused on the impact of cash flows on the market value of firms as measured by Tobin's Q. For example, Salehi (2009) findings show insignificant relationship between the market value of firms as measured by Tobin's Q and the cash flow per share from operating and investing activities of Iranian listed mechanical companies for the period from 2005 to 2007. Ni et al. (2019) findings also indicated that cash flows from financing activities impacted firm value positively and significantly, whereas cash flows from operating and investing activities impacted firm value of Taiwan listed companies negatively during the period from 2005 t0 2014. Another stream of prior research focused on the value relevance of earnings and current cash flows in predicting the future cash flows. For example, Dechow, Kothari and Watts (1998) examined the effect of current cash flows per share from operating activities and EPS on the future operating cash flows of 1337 U.S firms for the period from 1963 to 1992 and found that EPS has a positive and significant impact on future operating cash flows, while the impact of current operating cash flows was very weak. This result is contradicting that of Farshadfar and Brimble (2008) who found that the ability of operating cash flows exceeds that of earning in predicting the future cash flows of 323 Australian companies over the period from 1992 to 2004. In addition, Al-Debi'e (2011) found that operating cash flows also exceed earnings in forecasting the future cash flows of industrial and services Jordanian listed companies over the period from 2000 to 2009. To sum up, the above mentioned studies that examined the relationship between cash flows and different indicators of shareholder value or share returns revealed mixed results, with a dominant positive relationship for the impact of operating cash flows (e.g. Charitou & Ketz, 1991; Consler, Lepak & Havranek, 2011; Bepari, Rahman & Mollik, 2013; Burke & Wieland, 2017; Kasmiati & Santosa, 2019). Accordingly, it can be hypothesized that:

H1. There is a positive significant relationship between cash flows from operating activities per share and Shareholder value.

The actual relationship between cash flows from investing and financing activities and shareholder value is ambiguous due to the focus of most prior studies on cash flows from operating activities only. Accordingly, two research questions are developed to test the relationship between cash flows from investing and financing activities and Shareholder value.

Q1. Is there any relationship between cash flows from investing activities per share and Shareholder value?

Q2. Is there any relationship between cash flows from financing activities per share and Shareholder value?

3.2 Capital Structures and Shareholder Value

Very few studies tried to link the capital structure with shareholder value explicitly. For example, Atiyet (2012) performed a study to examine the relationship between shareholder value creation and capital structure for 88 French companies for the period

from 1999 to 2005. Results revealed that internal financing has a positive significant effect on shareholder value, while the equity issue has a negative and significant impact. Hoang, Hoang and Yarram (2020) performed a study to examine the relationship between shareholder value and some variables including capital structure for Australian banks. Authors' results revealed that capital structure has a significant and positive relationship with ROE, for example, but the relationship was negative with Tobin's q. Other stream of prior literature is focused on the determinants of capital structure (e.g. Ramli, Latan & Solovida, 2019) and also interested in its impact on firm performance and profitability using several proxies (e.g. Al-Kayed, Zain & Duasa, 2014; Abdullah & Tursoy, 2019). This stream of studies revealed mixed results with the different measures of leverage. For example, Abor (2005) investigated the relationship between the capital structure and the ROE of Ghanaian companies for the period from 1998 to 2002. The OLS regression results show that both short-term debt and total debt ratios affect ROE positively and significantly, while the effect of long-term debt ratio was negative and significant. In Jordan, Zeitun and Tian (2007) findings revealed a significant and negative relationship between capital structure and performance of 167 nonfinancial Jordanian companies for the period from 1989 to 2003. Salim and Yadav (2012) results revealed a significant negative relationship between capital structure and EPS for 237 Malaysian companies for the period from 1995 to 2011. Sheikh and Wang (2013) investigated the effect of capital structure on financial and market performance of 240 non-financial Pakistani companies for the period from 2004 to 2009. Results revealed that capital structure impacted ROA significantly and negatively. Similarly, the results show that the ratios of total debt and long-term debt impacted the market performance significantly and negatively, while the effect was positive and significant on market performance when the fixed effect model was used. Al-Kayed, Zain and Duasa (2014) performed a study to examine the effect of capital structure of 85 Islamic banks from 19 countries on the profitability for the period from 2003 to 2008. Authors' findings revealed a positive and negative impact on profitability. Gombola, Ho and Huang (2016) results revealed a positive and significant relationship between leverage and earnings, while the relationship was negative and significant in case of equity for U.S banks over the period from 1999 to 2013. Abdullah and Tursoy (2019) also found a significant positive relationship between the capital structure and the financial performance and a significant negative relationship with the market performance for non-financial Germany companies for the period from 1993 to 2016. Rahayu, Suhadak and Saifi (2020) findings indicated that the relationship between the capital structure and profitability was negative and significant, while it was positive and significant with firm value for 33 Indonesian manufacturing companies for the period from 2008 to 2015.Ramli, Latan and Solovida (2019) findings revealed a positive and significant relationship between the leverage of Malaysian companies and financial performance, while in case of Indonesian companies the relationship was insignificant. Vu and Nguyen (2020) performed a study to examine the effect of capital structure on the profitability of 59 construction companies in Vietnam for the period from 2014 to 2016. Authors' findings revealed that the ratios of total debt to total equity and long-term debt to total equity have significant and negative effects on ROA, while the impact of total debt to equity ratio was significant and positive. In respect to the proposed relationship between capital structure and shareholder value, Salim and Yadav (2012) found a significant negative relationship between capital structure and EPS. Similarly, Zeitun and Tian (2014) findings revealed a significant and negative relationship between capital structure and performance (see also, Fama & French, 1998). In addition, Sheikh and Qureshi (2017) found a negative relationship between book leverage and profitability. In this context, it has been argued that high leveraged firms suffer high shareholders agency problems (Fama & French, 1998). In the context of Jordanian non-financial companies, the ratio of total liabilities to total assets is high. Therefore, it can be hypothesized that:

H2. There is a negative significant relationship between the capital structure and shareholder value.

4. Methods

4.1 Sample Selection and Data Source

The sample of the study is based on the financial listed companies in Jordan. In particular, the secondary data of 30 commercial banks and insurance companies were used to conduct the current study. Jordan has 16 banks and 23 commercial banks listed on ASE. 3 Islamic banks and 2 Islamic insurance companies were excluded. In addition, 4 suspended insurance companies were excluded as they are traded only in the Over-The-Counter (OTC) market.

Table 1
Study Sample Selection Process

Population	Number	%
Banks	16	41
Insurance	23	59
Total	**39**	**100**
less		
Islamic firms	(5)	(12.8)
OTC firms	(4)	(10.3)
Final sample	**30**	**(76.9)**
Time span: 9 years (2011-2019)		
Firm-year observations: 270		

As shown in Table 1, these procedures produced 30 firms including 13 commercial banks and 17 insurance companies. The time span of the data is 9 years (2011-2019). This provides a balanced panel data with 270 firm-year observations. The source of the cash flows data is the website of ASE and the statements of cash flows that included in the annual corporate report of each firm that also founded on the website of ASE. The capital structure data and the earning per share data were extracted from the website of Securities Depository Center (SDC).

4.2 Variables and Model

As shown in Table 2, the current study strives to examine the effect of four explanatory variables on shareholder value as measured by EPS. The study also controls for dividend per share (DPS) due to its importance to the dependent variable.

1. Dependent variable: Shareholder value is the dependent variable in this study. EPS is used as a proxy for shareholder value. EPS represents the net income divided by the number of outstanding shares (Salim & Yadav, 2012).

2. Independent variables: Four independent variables were used in the current study including cash flows from operating activities per share (CFOP), cash flows from investing activities per share (CFIP), cash flows from financing activities per share (CFFP), and capital structure as measured by book leverage (LEV). According to Jooste (2006) there is no consensus among practitioners and academics on a specific set of indicators to measure the effectiveness of the statement of cash flows. Despite that, prior research ignored share-based cash flows (e.g. Jooste, 2006; Rujoub, Cook & Hay, 1995), and only few studies (e.g. Dechow, Kothari & Watts, 1998; Watson & Wells, 2005; Consler, Lepak & Havranek, 2011; Bepari, Rahman & Mollik, 2013; Burke & Wieland, 2017) considered such important market-based measure. The fourth independent variable in this study is capital structure. Prior studies used several measures for leverage (e.g. Ezeoha, 2008; Omran & Pointon, 2009; El-Khatib, 2017; Rahayu, Suhadak & Saifi, 2020; Abdullah & Tursoy, 2019). Consistent with prior studies (e.g. Bepari, Rahman & Mollik, 2013; Sheikh & Qureshi, 2017; Khan, Bashir & Islam, 2020), the current study uses book leverage as proxy for capital structure due to its explanatory ability (Fama & French, 1998) and the availability of study data.

3. Control variable: Dividend per share (DPS) is used as a control variable in the current study due to its relatively close relationship with cash flows (Consler, Lepak & Havranek, 2011) and its potential significant effect on shareholder value.

Table 2
Measurement of study variables

Variable	Symbol	Measurement	Reference (e.g.)
Dependent variable:			
Shareholder value	EPS	Net income/ Number of outstanding shares	Salim and Yadav (2012).
Independent variables:			
Cash flows from operating activities per share	CFOP	Cash flows from operating activities/Number of shares outstanding	Watson and Wells (2005); Salehi (2009); Dastgir, Sajadi and Akhgar (2010); Bepari, Rahman and Mollik (2013).
Cash flows from investing activities per share	CFIP	Cash flows from investing activities/Number of shares outstanding	Watson and Wells (2005); Salehi (2009); Dastgir, Sajadi and Akhgar (2010).
Cash flows from financing activities per share	CFFP	Cash flows from financing activities/Number of shares outstanding	Watson and Wells (2005); Dastgir, Sajadi and Akhgar (2010).
Capital structure	Lev	Total liabilities/ total assets	Bepari, Rahman and Mollik (2013); Khan, Bashir and Islam (2020); Sheikh and Qureshi (2017).
Control variable:			
Dividend per share	DPS	Cash dividends paid/ Number of shares outstanding	Consler, Lepak and Havranek (2011).

Accordingly, the data model is shown in Eq. (1) below:

$$EPS_{it} = \alpha + \beta_1\,CFOP_{it} + \beta_2\,CFIP_{it} + \beta_3\,CFFP_{it} + \beta_4 LEV_{it} + \beta_5 DPS_{it} + \varepsilon_{it} \tag{1}$$

5. Results and Discussion

This section explains the descriptive statistics and the correlation among the different variables of the study. In addition, variance inflation factor (VIF) test and other necessary diagnoses tests are offered in this section. The section also presents and discusses the empirical results based on FEM, FEM with clustered standard errors and FEM with Driscoll and Kraay standard errors.

5.1 Descriptive Statistics

Table 3 describes the study variables. With respect to the dependent variable, it looks that the mean of EPS is 0.1233 JOD with a minimum value of -0.517 and a maximum value of 0.677. This mean value is higher than that of several prior studies (e.g. Salim & Yadav, 2012; Bepari, Rahman & Mollik, 2013). This is because the sample of the study includes banks which are rarely achieve

losses. In addition, most of the insurance companies have achieved profits during the study period. The mean values of CFOP, CFIP and CFFP are 0.2107 JOD, -0.1654 JOD and -0.0326 JOD respectively. The results show that only the cash flows from operating activities are positive. This result is consistent with that of Watson and Wells (2005). Interesting result is that the mean value of CFOP is higher than that of several prior studies that excluded the financial firm from their samples (e.g. Charitou, Clubb & Andreou, 2000; Bepari, Rahman & Mollik, 2013), while it less than that of Burke and Wieland (2017) who based on banking sector. The LEV ratio is ranged from 0.2608 to 0.9249, with a mean of .7270. This mean value is relatively high but stills less than that of Saudi banks in Khan, Bashir and Islam (2020) and Pakistani banks in Sheikh and Qureshi (2017). On the other hand, this mean value is higher than that of other nonfinancial sectors as reported in several prior studies (e.g. Zeitun & Tian, 2007; Salim & Yadav, 2012). Finally, the mean value of DPS is 0.0686 JOD.

Table 3
Descriptive Statistics

Variable	observations	Mean	SD	Minimum	Maximum
Dependent Variable:					
EPS	270	0.1233	0.1517	-0.517	0.677
Independent Variables:					
CFOP	270	0.2107	0.6182	-2.3877	2.2557
CFIP	270	-0.1654	0.5281	-2.2695	2.1633
CFFP	270	-0.0326	0.2058	-1.0495	0.9371
LEV	270	0.7270	0.1450	0.2608	0.9249
Control Variable:					
DPS	270	0.0686	0.0835	0.000	0.4500

5.2 Correlation Analysis

Bothe the correlation coefficients (Table 4) and Variance Inflation Factors (VIF) values (Table 5) indicate the absence of multicollinearity among the explanatory variables. The relationship between EPS and CFOP is positive, while it negative in case of CFIP and CFFP. In addition, it looks that the relationship is positive between EPS and LEV. In respect to DPS, the relationship with EPS is also positive.

Table 4
Correlation Matrix

variable	EPS	CFOP	CFIP	CFFP	LEV	DPS
EPS	1.0000					
CFOP	0.2856	1.0000				
CFIP	-0.1854	-0.4901	1.0000			
CFFP	-0.2922	-0.2490	-0.0868	1.0000		
LEV	0.3601	0.1220	-0.1276	0.0268	1.0000	
DPS	0.7376	0.1469	-0.1012	-0.3130	0.2817	1.0000

Table 5
Variance Inflation Factors (VIF) results

Variable	VIF	1/VIF
CFOP	1.49	0.669734
CFIP	1.42	0.703385
CFFP	1.28	0.783392
LEV	1.12	0.892798
DPS	1.24	0.808811
Mean VIF	1.31	

5.3 Empirical Results and Discussion

To get reliable results in panel data, several procedures are conducted. Firstly, FEM and random effect model (REM) were prepared. As shown in Table 6, the result of Hausman test indicates that FEM is the appropriate model for the current study data (Chi2 =30.94, *P*= 0.0000).

Table 6
Hausman test results

Hausman Test	Chi-Square Statistic	Probability
Results	30.94	0.0000

After preparing the FEM, several diagnoses tests were performed to ensure the reliability of FEM. In particular, Pesaran's test of cross-sectional independence is prepared and the results indicate the presence of cross-sectional dependence (p<0.05). In addition, Wooldridge test for autocorrelation in panel data was prepared and the results indicate that FEM suffers autocorrelation (F= 22.890, P=0.0000). Furthermore, a Modified Wald test for groupwise heteroskedasticity in fixed effect regression model was prepared and the results show that the FEM also suffers groupwise heteroskedasticity (Chi^2=5683.22, p= 0.0000). To correct for these problems, Feasible Generalized Least Square (FGLS) and panel-corrected standard errors (PCSE) (Beck & Katz, 1995) can be used in special circumstances. For example, FGLS is mainly based on OLS (Park, 2011) and used when T >N (Reed & Ye, 2011), which is not available in the current study. PCSE is an alternative to FGLS according to Reed and Ye (2011). Accordingly, a decision has been taken to continue using the FEM in this study as it is the most appropriate for the current data. To validate FEM, it was recommended to correct for such problems by using some options to create robust standard errors (Hoechle, 2007). Therefore, the FEM was firstly prepared with "*Rogers or clustered standard errors*" (Hoechle, 2007, p. 283). However, FEM with clustered standard errors is prepared in this study only as a robustness analysis as it is preferred in time periods exceeding 50 periods (Thompson, 2011). In line with the recommendation of Hoechle (2007) and due to the presence of cross-sectional dependence problem, the fixed effect regression is prepared with Driscoll-Kraay standard errors. Therefore, the discussion of the study results is based mainly on FEM with Driscoll and Kraay (1998) robust standard errors.

As shown in Table 7, the model of the study is appropriate and significant (F= 22.26; $p < 0.05$). In addition, the different estimates produce similar coefficients (Hoechle, 2007). The results of FEM with Driscoll-Kraay indicate that CFOP has a positive and significant relationship with EPS (t= 2.95; p=0.018). The result is also positive and significant under FEM and FEM with clustered standard errors. Therefore, H1 is accepted. Accordingly, it can be concluded that there is a positive and significant relationship between cash flows from operating activities per share and shareholder value. However, the positive cash flows from operating activities are important for shareholders as they increase their share in the income of the firm. This result is in line with the findings of Burke and Wieland (2017), which indicated that cash flows from operations offer important and valuable information to the decision-makers. This result is also consistent with the results of some studies that focused on the relationship between cash flows from operating activities or other different accounting indicators and different proxies of shareholder value (e.g. Charitou & Ketz; 1991; Fiordelisi, 2007; Bepari, Rahman & Mollik , 2013; Hall, 2013 ; Hall, 2016; Burke & Wieland, 2017; Kasmiati & Santosa, 2019; Cyril, Echobu & Chukwuemeka, 2019). An in-depth look at the statements of cash flows of Jordanian banks and insurance companies gives important implications to the business managers in these two important sectors. In respect to banks, three main variables influence the nature of operating cash flows. These include annual results in terms of profit and loss, customer credit facilities and customer deposits. This, however, is consistent with the argument of Saif-Alyousfi (2020) in respect to deposits where their low costs contribute significantly towards the shareholder value. In addition, the current result supports the agency theory suggestion in respect to the role of low agency costs activities in supporting the shareholder value (Jensen & Meckling, 1976).Therefore; these three accounts should be given more attention by bank managers and shareholders. In respect to insurance companies, the re-insurance activities should be given more emphasis due to their role in supporting the positive operating cash flows which in turn decreases the shareholders investments risks. One important implication of this result is that positive cash flows (inflows) from operating activities are not only important to meet the short-term obligations, but also important to support the value of shares which is one of the main priorities of shareholders.

The relationship between cash flows from investing and financing activities and shareholder value is ambiguous due to the lack of studies that interested in such relationships explicitly. Accordingly, two research questions were developed. The first question (*Q1*) asks if there is any relationship between cash flows from investing activities per share and shareholder value. Result of analysis indicates that the relationship between CFIP and EPS is negative but not significant (t= -1.51; p=0.169). Therefore, it can be concluded that cash flows from investing activities per share has no effect on the shareholder value. The possible justification for such a result is that the cash flows from investing activities are negative (outflows) as shown in the descriptive analysis results. Nevertheless, cash outflows from investing activities should support shareholder value if they used effectively (Ni et al., 2019). Thus, the main implication of such a result is that such sectors should direct their investments to projects that can generate returns. However, it should be noted that the main components of the cash flows from investing activities section in the statements of cash flows of Jordanian banks and insurance companies are purchasing and selling of financial assets in fair value or on amortized cost. These activities are not represent the main activities of banks and insurance companies and, in general, have not achieved any value to shareholders.

Similarly, the second question (*Q2*) seeks to find if there is any relationship between cash flows from financing activities per share and shareholder value. Result also indicates that the relationship between CFFP and EPS is negative but not significant (t= -1.13; p=0.293). In the same context, the mean value of the cash flows from financing activities is negative. Therefore, it can be concluded that cash flows from financing activities per share has also no effect on the shareholder value. The justification for this result is based on the result of the first question in that the unavailability of investment projects prevents such firms from dividend income for example. More importantly, the banks and insurance companies in Jordan are in general old in the market and therefore their

capitals are almost reached the maximum levels. This, for example, may limit the ability of such firms to issue additional common shares to generate cash.

In respect to H2, the result revealed a negative but insignificant relationship between LEV and EPS (t= -0.59; p=0.570). Therefore, H2 is rejected. Accordingly, it can be concluded that there is no relationship between the capital structure of Jordanian banks and insurance companies and shareholder value. The main justification for this result is due to the high book leverage ratio of Jordanian banks and insurance companies as shown in the above descriptive statistics. Another justification for the current negative result according to Sheikh and Qureshi (2017) is due to the usage of customers funds in these firms to finance different activities instead of using, for example, the retained earnings. This result is in line with the argument that high leveraged firms suffer high shareholders agency problems (Fama & French, 1998). The result is also consistent with the argument of Modigliani and Miller (1958) who argued that capital structure has no relationship with firm value. Therefore, decision-makers should select the appropriate and low cost finance tool to support the shareholder value (Jensen & Meckling, 1976). However, this result is in line with those from several prior studies (e.g. Fama & French, 1998; Salim & Yadav, 2012; Zeitun & Tian, 2014; Sheikh & Qureshi, 2017). In respect to the control variable, results show a positive and significant (t= 3.04; p=0.016) relationship between DPS and shareholder value.

Table 7
Results of analysis using standard errors estimates for FEM

Variable	FEM			FEM with clustered standard errors			FEM with Driscoll-Kraay standard errors		
	Coef.	t-stats.	p-v	Coef.	t-stats.	p-v	Coef.	t-stats.	p-v
Constant	0.1737702	2.06	0.041	.1737702	1.64	0.111	0.1737702	1.00	0.349
CFOP	0.0236755	2.26	0.024	.0236755	2.22	0.034	0.0236755	2.95	0.018
CFIP	-0.0110279	-0.92	0.357	-.0110279	-1.09	0.283	-0.0110279	-1.51	0.169
CFFP	-0.0271677	-0.93	0.352	-.0271677	-1.63	0.114	-0.0271677	-1.13	0.293
LEV	-0.1371922	-1.20	0.233	-.1371922	-0.94	0.356	-0.1371922	-0.59	0.570
DPS	0.60617	5.40	0.000	.60617	3.05	0.005	0.60617	3.04	0.016
F- Stats	8.42			9.26			22.26		
Prob.	0.0000			0.0000			0.0000		
R^2within	0.1519			0.1519			0.1519		
R^2between	0.6300			0.6300			--------		
R^2overall	0.4363			0.4363			--------		
Obs. No.	270			270			270		

6. Conclusion and Recommendations

This study is one of the first studies that based on in-depth theoretical bases to examine empirically the effect of cash flows from operating, investing and financing activities per share and capital structure on shareholder value. Based on 270 firm-year observations from Jordanian commercial listed banks and insurance companies for the period from 2011 to 2019, the results of panel FEM with Driscoll-Kraay robust standard errors revealed that cash flows from operating activities per share have positive and significant relationship with shareholder value. On the other hand, both the cash flows from investing and financing activities per share have negative but insignificant relationship with shareholder value. In respect to the capital structure, the result shows a negative but insignificant relationship with shareholder value. Results also show a positive and significant relationship between dividend per share and shareholder value. The descriptive analysis shows that the sample of the study, in general, characterized by profitability, positive cash flows from operating activities with negative cash flows from both investing and financing activities and high leveraged firms. However, it can be concluded that cash flows from operating activities is an important factor in shareholder value creation in banks and insurance companies. Therefore, decision-makers in banks and insurance companies - where cash is the dominant activity- are required to put more emphasis on operating activities. On the other hand, it looks that cash outflows from investing activities do not create value to shareholders, which indicates that cash is directed towards unfeasible projects. This, however, places additional responsibility on decision-makers in these firms to reconsider the evaluation process for any future investment projects. Consequently, selecting efficient investment projects will generate positive cash flows from financing activities. In respect to the capital structure, one main implication of the current result is for decision-makers in Jordanian firms to put more emphasis on selecting an appropriate capital structure to support the value of shareholders.

The importance of the current study comes from the importance of banking and insurance sectors and from the model of the study which links the informational content of income statement, balance sheet and statement of cash flows. In addition, the current study adds new reference to the current knowledge in this topic comes from emerging markets.

In light of the lack of adequate studies on this topic, especially in developing countries, this study offers several future opportunities for researchers. First, future studies may reconsider the current study model using longer time spans, with unbalanced panel data

if necessary. Second, future studies may employ the current study model and take banks and insurance companies as a benchmarking to other sectors. Third, future studies may add additional variables to the variables of the current model to examine the impact on shareholder value. Fourth, future studies may use additional proxies to the current study explanatory variables to examine the impact on different shareholder value proxies. Fifth, future studies may be performed based on the positive and negative (dummy variables) cash flows from the three components of the statement of cash flows. Finally, future studies may also be conducted based on the corporate results in terms of profits and losses.

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