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MASTERS' FINAL WORK

DISSERTATION

STOCK PRICE AND COST OF DEBT REACTION TO CHANGES IN CASH FLOW FROM OPERATIONS

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Abstract

We investigate how the Cash Flow from Operations affects both the Stock Price Return and the Cost of Debt and compare the relative effect of Cash Flow versus Net Income on both costs of financing. This paper also compares the liquidity between STOXX Europe 600 and Amman stock exchange 100 (ASE100) indexes using four measures, Cash Flow from Operations, Market Adjusted Return, Cumulative Abnormal Return, and the Cost of Debt and its relative impact on Cash flow association with cost of capital. The quarterly data used for this research comes from publicly listed firms from Jordan and European countries, from 2009 through 2018. This study contributes to literature since it provides evidence on the relative association of Earnings and cash flows with cost of debt and stock returns. We are also the first to consider any market liquidity effect on this association.

The results show a positive effect of Cash Flow from Operations on Stock Price Returns. It also shows a negative association and a more significant influence from Cash Flow from Operations than Net Income on the Cost of Debt, by reducing it. Furthermore, the paper also shows Cash Flow from Operations tend to influence the Cumulative Abnormal Return and the Cost of Debt in a better way in Jordan (a less liquid market) than in the more developed European market.

List of Abbreviations

ABNRET – Cumulative Abnormal Return

ADJ_COST – Adjusted Cost of Debt

CFO – Cash Flow from Operations

MKTADJRET – Market Adjusted Return

N.I – Net Income

RET – Stock Price Return

Acknowledgments

Contents

List of Tables

1. Introduction

Multiple factors affect Stock Prices and Cost of Debt. For example, economic situations, country status and regulations, the size of the company, and financial reporting. Many previous studies discussed analyzing the company's financial statements and how they can affect the Stock Prices and Cost of Debt in the capital market considering liquidity, solvency, and profitability analysis.

Investors look at the financial statements and the data that are published to the public by focusing mainly on the Net Income, paying less attention to the Cash Flow from Operations that explains how a company can have positive cash balance from its day-to-day events, so it is able to finance itself from the main source of business revenue and to have better access to the capital market. This may lead to Earnings fixation rather than a rational maximization of Cash flow (Gonçalves, Gaio & Lelis, 2020).

Extent literature discusses different arguments about the preferences of using Net Income and Cash Flow from the Operations as a measure of the firm market performance. Liu, Nissim, & Thomas (2007) prefer to use net income and they consider it the king for valuing the firm, while Martani, Mulyono & Khairurizka (2009) say that both Net Income and Cash Flow from Operations affect positively on the stock price return, but the higher effect comes from net income. Largay III & Stickney (1980), and Catanach (2000) notice that, on the long run, the effect of the Cash Flow from the Operations will beat the effect of Net Income. The lower the amount of Cash Flow from Operations, the lower will be the stock price return and the higher the Cost of Debt that will be charged to the firm.

This study aims to analyze how the Cash Flow from Operations affects the stock price return, comparing this effect with that of Net Income on the stock returns as well as on the Cost of Debt. We also analyze market liquidity impact on those associations, namely by comparing between STOXX Europe 600 versus Amman stock exchange 100. The quarterly data used in our sample is collected from both the STOXX Europe 600 and Amman stock exchange 100 from the period 2009-2018.

We find that Cash Flow from Operations affects positively the stock price return and this effect is higher than that of the Net Income (similarly to (Graham & Knight, 2000)), yet the higher effect of Cash Flow from Operations is not statistically significant. On the other hand, Cash Flow from Operations affects negatively on the Cost of Debt- by reducing it, and this effect is more significant than from Net Income. In addition, we compare between STOXX Europe 600 and Amman stock exchange 100 indexes. we find that STOXX Europe 600 is more liquid than Amman stock exchange 100 indexes, STOXX Europe 600 has higher returns and lower cost of Debt, and the Cash Flow from Operations generated by STOXX Europe 600 is more able to

increase the Market adjusted returns, but the Cash Flow from Operations generated by Amman stock exchange 100 is more able to increase the Cumulative abnormal return and reduces the cost of Debt by more than the amount generated from STOXX Europe 600.

Our paper contributes to the literature by specifically addressing the differential effect of Cash flow and Net income on Cost of Debt and Stock returns. We show that the impact of Cash flow is higher for both debt holders and stock holders, but it is only robustly significant in the former. We also contribute to show the moderating effect of market liquidity and stock market development on this association. We show that the relative importance of Cash flow on cost of debt is more significant in less liquid markets. These results matter both for investors (stock and debtholders when allocating portfolio budgets) but also for regulators, that should consider the differential impacts of disclosed information on different stakeholders.

The remainder of the paper is divided into different sections: section 2 presents the literature review, section 3 presents the research question and hypotheses, section 4 presents the research methodology, section 5 presents the results, and section 6 presents the conclusion.

2. Literature Review

Money providers look at the financial statements' items and the data that are published to the public, which are based on Accrual Accounting. These items make an effect on borrowing and investment decisions. Cash Flow from Operations, that explains how a company can have positive cash balance from its day-to-day events so it is able to finance itself from the main source of business revenue and to have better access to the capital market. This study focuses mainly on four financial items: Net Income, Cash Flow from Operations, Stock Price Return, and Cost of Debt, as some past studies provide evidence about the interaction of Stock Price Return and Cost of Debt with the Cash Flow from Operations, as well as the Stock Price and Cost of Debt relationships with Net Income alone, but results are mixed and research usually considers only individual impact on one the investment type decisions.

Income Statement is one of the financial statements that is used to give a clear understanding of a company's performance over a given period. The presentation of the Income Statement is done by deducting the total expenses from the total revenue to reach the earnings amount; so Net Income (N.I) is the sum of items recognized as revenues minus the sum of items recognized as expenses, except incomes and expenses transferred to the statement of comprehensive income (Bogle, 2018; Barker, 2010). The International Accounting Standard Board (IASB) identifies N.I as an increase in economic benefits during the accounting period in the form of inflows, enhancements of assets or decreases of liabilities that result in increases in equity, other than those relating to contributions from equity participants. This is the most used item for valuing the

performance of the firm, and one of the earnings components people care about since it has an important influence on securities returns (Cheng, Cheung, & Gopalakrishnan , 2013).

Hicksian's Income Theory indicates that the purpose of showing the income amount is to present the amount firms can consume without being in a deficit. This theory talked about both the personal income that shows the ability of the person to spend the amount she has within a week, and the amount of profit that is in the hand of the company's shareholders after considering the amount of expenses to deduct total revenues (Jameson, 2005).

N.I comes from all the changes in the economic value of the firm that result from repeated activities and circumstances. It can be used as an important measure to predict the future profit and the value of the firm since most of the revenues and expenses transactions repeat themselves in the same way inside the business (Kanagaretnam, Mathieu, & Shehata, 2009) .The change in the amount of earnings reported for a company shows a huge market interaction to that change, so the improvement in the amount of earnings announced increases the investors demand for company's shares and drive up the stock price for the firm (Francis, Schipper, & Vincent, 2002).

International Accounting Standard No. 7 (IAS No. 7) defines the operating activities as events that include day- to- day activities and create revenues, such as selling inventory and providing services. Cash inflows result from cash sales and collection of accounts receivable. Examples include cash received from the provision of services and royalties, commissions, and other revenues. To generate revenue, companies undertake activities such as manufacturing inventory, purchasing inventory from suppliers, and paying employees. Cash outflows result from cash payments for inventory, salaries, taxes, accounts payable, and other operating related expenses. Casey and Bartczak (1985) define Cash Flow from Operations (CFO) as the change in operating working capital added or deducted to any change in the non-cash working capital operation plus Net Income, except for short term debt and the current portion of long term debt. Many textbooks use this definition (Rai, 2003). Austin and Bradbury (1995) add a classification for CFO. They define it as the net cash amount that results from the cash collected from customers, cash paid to suppliers, cash paid for taxes, cash paid for interest, and cash changes in other operating activities.

Hanini and Abdullatif (2013) provide a study in Jordan that discussed whether the Jordanian auditors are giving a significant importance to understand the items published in the statement of cash flow for measuring the going concern of the firm. They state that the auditors must be well knowledgeable about the statement of cash flow as an important role for the professional responsibilities of audit firms; otherwise, this will lead to fraud by the firm and losing clients' trust.

Utomo and Pamungkas (2018) specify how Cash Flow from Operating Activities (CFO), Cash Flow from Investing Activities (CFI), and Cash Flow from Financing Activities (CFF) affect

the stock returns. They include that the analysts should carefully consider how firms operate CFO regarding the economic activities. This leads to CFO is an important factor, that can make huge changes on the economic decisions made by managers, investors, creditors, and any other users of the financial statements, since it is an evidence of real cash on hand collected from the main source of the business during the period. Thus, it is one of the best items to use in measuring performance and liquidity of the firm (Jones & Ratnatunga, 1997).

The amount of earnings reported is a component that plays a significant role in the valuation of the economic events of the firm (Kanagaretnam, Mathieu, & Shehata, 2009). However, if we classify the cash balance of the firm into operating, investing, and financing balances, we will observe that the CFO amount and its components are major in understanding the economic activities of the firm, since they are evidence of the strong operational sources the firm owns, and they reflect the ability of the firm to make internal funding from its daily activities. Therefore, they significantly and positively affect the stock price return more than the amount provided by N.I (Livnat & Zarowin, 1990).

Laitine (1994) made a comparison between traditional cash flow (N.I added to the depreciation expenses) and the CFO reported in the statement of cash flow by dividing each of the two items on total debt. This comparison was between two groups of firms, bankrupted firms and non-bankrupted firms. He found that the traditional cash flow is a more stable and reliable predictor of failure than the CFO reported. The firm that has signs of bankruptcy will have decreasing N.I overtime. However, CFO is more sensitive to the management of accounts receivables, inventory, and accounts payables. Weak management of these operational assets and liabilities could include a warning for the firm to enter in solvency problems, even if the negative CFO is just for a temporary or special period. This analysis agrees with Largay III & Stickney (1980) who conducted a study on W.T Grant Company to understand the reasons why the company had been in bankruptcy. They found that W.T Grant Company was improving in stock price movements and earnings, but at the same time, it was achieving a negative CFO balance during a period, which made the company facing bankruptcy on the long run. In addition, Casey and Bartczak (1985) make a comparison between firms that entered bankruptcy and firms that did not enter bankruptcy. They conclude that the accrual-based ratios are better predictors for failure than the CFO ratios, but they suggest that the CFO ratios may have alternative uses, analyzing bank loan default, unpaid dividends, and any other uses related to the financial situation of the firm.

The good quality of Net Income, which the company generates, will result in a positive CFO. If we return to a hypothetical Company that was achieving a higher amount of N.I, but a negative CFO, we will find that the company was financing itself using debt. This transaction made the

company have negative cash flow in the long run, which was unable to be paid (Gaugha, Fuentes, & Bonanomi, 1995).

Graham & Knight (2000) argued about the amount of reported N.I and the CFO. Although the N.I is a component of the CFO, and both are highly correlated with each other, they say that the CFO balance is more able to change the movements of both the stock price and the stock price return, because Net Income is based on accrual accounting. Therefore, it can be more manageable by Management, while these accruals are adjusted to arrive at the CFO balance. As so, the CFO is less changeable, and it can be used as a real cash measure. However, Liu, Nissim, and Thomas (2007) prefer N.I over CFO. They say that earnings per share (EPS) forecasts represent better summary for valuation purposes in comparison to CFO, and N.I mentioned in the income statement is the king for valuing a company instead of using cash balance resulted from operations.

Recently, Jabbari, Sadeghi, & Askari (2013) talk in their study about stock price crash risk, in Tehran Stock Exchange, that the more the CFO balance, the lower will be the earnings opacity and thus the lower stock price crash risk. Earnings opacity is the lack of information reported in financial statements, which leads to distorting earnings recognized, and stock price crash risk is the probability of extreme negative stock price return.

Stock represents a share of ownership of a company. It is evidence of owning equity of this company. The Investor buys a stock hoping to obtain dividends income or that this stock will appreciate (Dmouj, 2006). The stock price is the highest price a person is willing to pay for purchasing a share or the lowest price the person is willing to sell that share. It shows the price at which the current stock is trading in the market. According to McCarroll & Khatri (2013), the fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. We can use this definition to describe the stock price because it is the price between the market participants that consists of the company issuing shares and the investor. It is used to calculate the total market value of equity outstanding by the firm (Foerster, Tsagarelis , & Wang, 2017).

Stock price return defines the percentage rate of return generated on holding the stock of the firm for a period of time. This is the return investor generates from the change in the market value of the stock by the appreciation in value, and from the additional amount of money received as dividends. It is the percentage increase in the stock price plus an income (Dmouj, 2006). Analysts use the holding period return (HPR) as a definition of the stock return achieved. HPR is the actual return that investors generate from holding the stock from the time of acquiring with a price (P_0), to the time of selling the stock with a price of (P_T) (Amihud & Mendelson , 1986).

Considering the effect of the N.I reported and keeping the other variables constant, the increase in the amount of N.I mentioned in the annual report will motivate the investor from his or her short memory. The current number is a measure of an improvement in the firm future performance, so she can benefit from the expected increase in the stock price by selling this stock later, and achieving a personal profit (Archibald, 2014). By analyzing each component of the CFO, which consists of N.I and working capital requirements items, we will realize that N.I, working capital requirements, and CFO balances, all significantly affect the securities return (Rayburn, 1986).

Forester, Tsagarelis,& Wang (2017) make a comparison between cash flow return on equity and assets ratios versus accrual profitability return on equity and assets ratios that use operating income and N.I. They find that cash flow ratios are better measures of profitability than the accrual returns ratio, because the CFO is an item that summarizes the clean economic events. They suggest more weight on the cash flow ratios for predicting the stock price returns than the accrual ratios, as they are more understandable by the investors and the analysts.

If the investor fails to identify the components of earnings as real cash earnings and accrual earnings, he will revert to the amount of N.I announced by the firm that is based on accrual recognition of revenues and expenses. Thus, he is overweighting accruals and underweighting cash flows, and the accruals could no longer predict the future stock prices, but if he can identify the CFO balance into N.I, Non-cash expenses, and changes in working capital requirements, he will recognize that each component has a significant effect on the stock price, since the stock price reflects the information of changes in these items (Gonçalves, Gaio, & Lélis, 2020).

CFO/N.I is a measure of how much operating cash is generated from each \$1 of Net Income the company achieves. One prefers to increase this ratio because it is a measure of how much N.I is strong, but a lower amount of CFO and higher amount of N.I could be a sign of collecting accrued revenue or paying an accrued expense in the future. Moreover, changing the Accounting method used for inventory recognition (For example, from FIFO to LIFO or the opposite) may result in a negative N.I, but higher CFO balance. CFO balance is more able to affect positively the stock price.

By valuing the firm using the discounted earnings versus discounted free cash flow (FCF). Gaugha, Fuentes, & Bonanomi (1995) noticed that in case of an existing conflict between N.I and FCF, it is better to use the FCF for valuing the firm since it heavily counts on the CFO balance, which better affects the movements of the stock price.

The cost of Debt is the cost reflected by interest rate, thus, it is the interest charged to the company because of the money borrowed. It is the expense of borrowing from bank loans, bonds issued, and similar financial securities (Aomrah, 2011). Cost of Debt is the explicit cost that the

firm incurs from obtaining bank loans, issuing bonds, or if someone invests in the debt capital that the firm issues. If we divide the total capital to the part of the total debt and the total equity part, then the specialists use the Cost of Debt expression to analyze the opportunity cost related to the debt capital (Lehutová, Križanová, & Klieštik, 2013). On the opposite side, the cost of Debt explains the expected returns for the debt holders (Baule, 2019).

Edmonds, Edmonds, & Maher (2011) test the relationship between CFO and the Cost of Debt. From their research, they say that to improve in the firm bond rating, it needs to meet or beat the required N.I and CFO since both items positively affect the bond rating of the firm and the bond yield negatively. Therefore, this will reduce the cost of issuing bonds, and in this case, the firm can benefit from debt financing. They find that if the firm misses the N.I and CFO requirements, this will have a negative influence on their bond ratings more than the positive influence of meeting or beating N.I and CFO requirements. However, they could not find evidence whether the CFO measure is better than the N.I measure or the opposite. Nevertheless, they stated that the CFO is complementary to the N.I to make better movements in the firm bond rating.

A higher level of leverage will motivate the management to edit the way of recognizing N.I by changing the accounting policies used to prepare the financial report. This can happen by increasing sales, overproducing to increase the inventory amount and to lower the cost of sales, and reducing the selling and administrative expenses. All of the three ways will improve N.I. In this scenario, management can show the creditors and shareholders that they are in a good position based on N.I, and they can obtain debt funds at a lower cost (Zamri, AbdulRahman, & Isa, 2013).

Richardson (2006) mentions in the study of the relationship between Free Cash Flow (FCF) and over investments that if the firm faces a shortfall in the CFO balance, it would enter the capital market regarding equity or debt to finance its long-run operations; since it needs an outside provider of cash to achieve positive net present value (NPV). She did not mention in the study the effect of CFO balance on the cost of Debt, but she concluded that a positive CFO balance will have a positive FCF, which means that the cost of internal financing is lower than the cost of external financing, so the firm can use the positive FCF to keep it in the form of cash and marketable securities or to make an over investment.

Catanach (2000) suggested that managers, external auditors, and bankers should focus on CFO balance more than N.I and other accruals in measuring credit and interest rate risks. Negative CFO increases the probability of making the firm unable to pay the amount of interests required. This situation charges the firm a higher market interest rate because of the increase in the probability of being distressed, which influences negatively on the securities market value of Debt.

By talking about the ability of the corporation to finance itself without a significant loss in asset prices, Lancaster, Stevens, & Jennings (2002) try to replace the Current Ratio with the CFO. They find that CFO better explains the liquidity and Cash Conversion Cycle for the corporation. Additionally, CFO significantly influences these two ratios more than N.I and the Current ratio, because CFO explains the actual Cash that can be used to settle the liquidation needs and to measure the power of the liquidity.

3. Research Question and Hypotheses

As stated before, the CFO component uses a cash basis and represents the actual cash flow collected by the firm. Thus, it is less subject to deceive money providers, as compared to N.I that results from accrual accounting (Graham & Knight, 2000). If the internal financing is not sufficient to fund the long-run operations, the firm will find it necessary to use higher external financing costs as the only choice available. This leads the management to try using some accounting discretionary in a way that gives a nicer picture of N.I. This model provided from earnings reported makes it easier for the firm to enter the capital market since the investors and bankers are focusing on the amount presented in the income statement, where, for instance, less conservative management will increase Earnings Management (Aman , Iskandar, Pourjalali , & Teruya , 2006; Gonçalves & Coelho, 2019; Gonçalves, Gaio, & Santos, 2019; Gaio, Gonçalves, & Azevedo, 2020). Healy & Wahlen (1999) did not find a specific way managers can use to better communicate the firm's performance to the investors. However, they mentioned that distorting N.I could make even a little difference in providing equity capital by investors.

So, our main research question to be investigated is: **Which components of earnings are more relevant to the stock and debt holders?**

To answer this question, we will use the two components of earnings: CFO and N.I; and four major relationships will be considered. Firstly, how the stock price return reacts to CFO. Secondly, comparing the effect between CFO and N.I on the Stock price return. Thirdly, how the cost of Debt reacts to the CFO. Fourthly, comparing the effect of CFO and N.I on the Cost of Debt. Fifthly, comparing the liquidity between STOXX Europe 600 index and Amman Stock Exchange 100 index (ASE100) and its impact on the aforementioned associations. The overall study will use quarterly data for the period from 2009 to 2018.

3.1. Hypotheses Development

3.1.1 CFO and Stock Price Return.

The CFO is an evidence of the strong operational sources the firm has. It reflects the ability of the firm to make internal funding from its daily activities. Besides that, it is one of the best measures that can be used to enter the capital market at a lower cost and it affects the stock price

return more than the amount provided from N.I (Livnat & Zarowin, 1990). Thus, the first two hypotheses to be studied are the relationship between stock price and the CFO:

H1: - CFO associates positively with stock price returns.

H2: - CFO associates relatively higher than N.I with stock price returns.

3.1.2 CFO and Cost of Debt.

Calegari (2000) talks about the change in tax rules. This change affects both the accounting and financial policies that the firm follows. When the change harms the firm, it will try to improve the positive accrual income reported by changing the policies used to recognize expenses or revenues. The change in the accounting policies, discretionarily, creates more benefits since these changes present the ability to improve earnings. Therefore, it can avoid the requirements of higher interest rates by banks regarding an additional increase in the leverage ratios. Thus, the following two hypotheses will be tested:

H3: - CFO associates positively with the Cost of Debt.

H4: - CFO associates relatively higher than N.I with the cost of Debt.

3.1.3 The liquidity of the market.

As we have collected data from the STOXX Europe 600 index, and ASE100 indexes, the following Hypothesis will be tested:

H5: - Market liquidity will moderate the association of CFO to Stock returns and Cost of Debt.

4. Research Methodology

To test the first two hypotheses, our first regression model is similar to what is used by Martani, Mulyono, & Khairurizka (2009) to measure the stock price return, since some of the financial ratios influence the stock price return:

$$RET = \beta_0 + \beta_1 NPM + \beta_2 \frac{CFO}{SALES} + \beta_3 ROE + \beta_4 CR + \beta_5 DER + \beta_6 TATO + \beta_7 PBV + \beta_8 Log\ TA \quad (1)$$

The first dependent variable consists of two measures: cumulative market-adjusted return and cumulative abnormal return. NPM is the net profit margin; $\frac{CFO}{Sales}$ is the cash flow from operation divided by total revenues; ROE is the return on equity; CR is the current ratio; DER is the debt to equity ratio; TATO is the total assets turnover; PBV is the price to book value per share, and Log TA is the measure of the size of the firm.

Our second regression model, to test H3 and H4, is similar to Alvarez-Botas & Gonzalez (2019), added by NPM and CFO/SALES as our two main independent variables for the study:

$$ADJ\_COST_t = \beta_0 + \beta_1 NPM_T + \beta_2 CFO/SALES_T + \beta_3 LEV_{T-1} + \beta_4 EBIT/INT_{T-1} \qquad (2)$$
$$+ \beta_5 MAT_{T-1} + \beta_6 PROF_{T-1} + \beta_7 TANG_{T-1} + \beta_8 SIZE_{T-1}$$
$$+ \beta_9 MTB_{T-1} + \beta_{10} INF_{T-1} + \beta_{11} R\_LAW_T + \beta_{12} LEG\_IND_T$$
$$+ \beta_{13} R\_LAW_T * LRG\_IND_T + \beta_{14} DEP\_INF_T$$
$$+ \beta_{15} DEP\_INF_T * LRG\_IND_T + \beta_{16} B\_CREDIT_T$$
$$+ \beta_{17} B\_CONC_T + \epsilon$$

Where ADJ_COST_t is the adjusted cost of debt; NPM_T is the net profit margin; $\frac{CFO}{Sales}$ is the cash flow from operation divided by total revenues; LEV is the leverage ratio; $EBIT/INT_{T-1}$ is the earnings before interest and tax divided by total interest; MAT_{T-1} is the long term debt divided by total debt; $PROF_{T-1}$ is the earnings before interest and tax divided by total assets; $TANG_{T-1}$ is the tangible fixed assets divided by total assets; $SIZE_{T-1}$ is the measure of the firm size; MAT_{T-1} is the market to book ratio; INF_{T-1} is the inflation rate; R_LAW_T is the rule of law; LEG_IND_T is the strength of legal right index; DEP_INF_T is the depth of credit information index; B_CREDIT_T is the weight of banks in the economy; B_CONC_T is the degree of bank concentration. Consequently, We will model in the second equation additional controls for the influence of macroeconomic conditions on the ability of the credit providers to supply debt, besides microeconomic specific financial ratios.

Martani, Mulyono, & Khairurizka (2009) identify the stock price return as the income generated from holding the stock for a period added by the dividends received during the holding period. Unlike extant research that focus only on the price return itself, RET is testes by two different measures, to add robustness to our conclusions:

$$MKTADJRET = \sum_{t=0}^{n} R_i - R_M \qquad (3)$$

Where MKTADJRET is the first measure defined as the cumulative market-adjusted return.

$$R_i = (P_t + D_t)/P_{t-1} - 1) \qquad (4)$$

Where R_i is the stock price return, P_t is the price at a given quarter, P_{t-1} is the price at one quarter before, D_t is the dividends per share received during the two quarters.

$$R_M = (\frac{index_t}{index_{t-1}} - 1) \qquad (5)$$

R_M is the market return, $index_t$ is the value of the index at a given quarter, and $index_{t-1}$ is the value of the index at the quarter before.

$$ABNRET = \sum_{t=0}^{n} R_i - E(R)_i \qquad (6)$$

$$E(R)_i = \propto_i + \beta_0 R_M \qquad (7)$$

ABNRET is the second measure of RET, defined as the cumulative abnormal return, and $E(R)_i$ is the expected return on the stock, using CAPM.

The cost of Debt for the firm is the interest rate it would pay to refinance its existing debt, which is expected as the return that current purchasers of the debt would earn if they held the debt to maturity and received all of the payments as promised (Pagano & Stout, 2004).

$$(ADJ\_COST)_t = \frac{Total\ financial\ expenses}{Total\ Debts} \qquad (8)$$

ADJ_COST_t is the Cost of Debt adjusted by the median value of the industry as defined by Alvarez-Botas &Gonzalez (2019).

From the point of view of Dita & Isrochmani (2014), the higher the NPM, the more is the firm able to increase its profit and reduce its costs, which gives the investor hope for increasing her return on the shares owned. If the amount of operating income is lower than the amount of fixed interest payments, net income after deducting the fixed interest payments and the amount of taxes required will have a negative sign, so we will have a negative return on equity ratio and a reduction in the market value of capital. Debtholders focus on the ability of the firm to obtain positive profit for measuring the necessary required return on the loan provided (Baxter, 1967; Martani, Mulyono, & Khairurizka, 2009).

$$NPM = \frac{N.I}{SALES} \qquad (9)$$

NPM is the net profit margin ratio. N.I is the total net income reported, and SALES Represents the total Revenues.

According to Zeller & Stanko (2016), cash flow performance ratios, such as cash flow to revenue, cash flow return on equity, cash flow interest coverage ratios, and cash flow debt coverage provide information about the company's operational performance and financial strength. Investors often see a higher value of the ratio to be better for the company, like how they view high NPM as better than low NPM. However, if a company has a low value of the ratio for a given period, it is not always a bad thing. A low ratio could mean that the company is increasing its net working capital in preparation for growth, but consistent low ratios are probably a bad sign.

Martani, Mulyono & Khairurizka (2009) use CFO/SALES as one of the independent variables to study the stock return movements according to Cash Flow from Operations as a percentage of sales.

The higher absolute value of the CFO will encourage especially the overvalued firms to reach the targeted level of leverage and to adjust the total capital obtained from total debt and equity. In fact, higher CFO will make the firm obtain better benefits from increasing debt. In addition, higher CFO makes the firm able to enter the capital market and obtain the necessary debt fund needed at a lower cost (Faulkender, Flannery, Hankins, & Smith, 2011).

Myers (2001) stated that the more CFO available, the more the free cash flow amount will be at dispose to the firm, and this is an indication of the ability of the firm to generate internal financing, sometimes by an amount that exceeds the total capital expenditures. In case that the free cash flow generated by the firm is high but not enough to cover the capital expenditures, there is still a possibility to enter the debt market easily.

$$\frac{CFO}{SALES} \tag{10}$$

Where CFO is the total cash flow generated from operating activities, SALES represents the total revenues.

$$ROE = \frac{N.I}{Equity} \tag{11}$$

Where ROE is the Return on Equity, N.I is the total net income reported.

The current ratio (CR) affects the stock price negatively since the more use of assets will have a negative reaction by the market. However, this effect is not significant. The more the liquidity, the more the investors feel safe in case of quick needs for liquidation, but also more opportunity cost incurred by the firm (Hatta & Dwiyanto , 2012; Raheman & Nasr, 2007; Martani, Mulyono, & Khairurizka, 2009).

$$CR = \frac{CA}{CL} \tag{92}$$

CR is the Current Ratio, CA is the Total Current Assets and CL is the Total Current Liabilities.

We also control for debt to equity ratio (DER), defined as:

$$DER = \frac{Debts}{Equity} \tag{13}$$

The stock return has a significant and inverse relationship with the DER ratio. The more debt used, the lower the stock return and the value of the firm (Pani, 2006). However, sometimes the

increase in this ratio has a significant and positive impact on the stock return; more debt is a sign of the ability to use the cash generated from loans to increase profit, which will lead to an increase in total equity (Dita & Murtaqi, 2014; Cai & Zhang, 2011).

The increase in total assets turnover means the firm is more efficient in managing its operational assets. But there could also be a negative correlation between the assets turnover and the stock return, because large firms cannot expand easily compared to the medium and small-sized firms. However, the overall increase in this ratio increases the stock price return (Martani, Mulyono, & Khairurizka, 2009; Singapurwoko & El-Wahid , 2011).

$$TATO = \frac{SALES}{TA} \qquad (10)$$

TATO is the total assets turn over, SALES represents the total revenue, TA represents the total assets.

A price to book value ratio above one means that the stock market value is higher than the stock book value. Thus, the investor will find it too costly to buy these kind of shares, and the reduction in the demand will reduce the stock price (Dita & Murtaqi, 2014).

$$PBV = \frac{Price\ per\ share}{Book\ value\ per\ share} \qquad (15)$$

The more assets the firm has, the more the firm will try to improve its performance in the market, and this increases the price of the company's share and makes the company more valuable. In addition, the large-sized firms have a lower cost of external funds than the small-sized firms (Siahaan , 2013; Kadapakkam, Kumar, & Riddick, 1998).

$$Firm\ size = Log\ TA \qquad (11)$$

Log TA is the natural logarithm of the total assets.

The increase in leverage will increase the cost of debt since these firms are classified as risky firms (Petersen & Rajan, 1994).

$$LEV = \frac{Debts}{Assets} \qquad (17)$$

Firms with a high amount of profit tend to have a chance of getting lower borrowing costs. If these firms have a strong relationship with their banks, they will try to improve this ratio to protect their reputation first, and second to keep the ability to have lower loan costs as a way of keeping a sustainable relationship with the loan provider. A good relationship between the bank and the

firm makes the bank able to know more about the business, operation, and the performance of the firm (Quijano, 2013; Beladi & Quijano, 2013).

$$\frac{EBIT}{INT} \qquad (18)$$

Where EBIT represents Earnings Before Interest and Taxes, INT represents Total Financial Expenses.

Longer maturity of the loans increases the cost of debt. The long-term maturity loans are much riskier than short-term maturity loans (Berger & Udell, 1995).

$$MAT = \frac{Long\ term\ Debts}{Total\ Debts} \qquad (12)$$

When the firm obtains higher economical profit, its ability to meet debt commitment will be higher, thereby providing greater assurance to lenders and resulting in a lower cost of Debt (Petersen & Rajan, 1994; Berger & Udell, 1995).

$$PROF = \frac{EBIT}{Assets} \qquad (13)$$

Where PROF represents the measure of Profitability, EBIT represents Earnings Before Interests and Taxes.

If most of the assets owned by a firm are tangible assets, and the firm has trouble meeting its debt commitments, it can access the market and get cash. This will provide greater guarantees, which in turn will allow it to obtain financing at a lower cost (Berger & Udell, 1995; Bae & Goyal, 2009).

$$TANG = \frac{Total\ Tangible\ Fixed\ Assets}{Total\ Assets} \qquad (14)$$

Where TANG represents the percentage of Tangible Fixed Assets of the total assets the firm has.

The large-sized firms have a low cost for entering the capital market comparing to the small-sized firms. Since the small-sized firms need to have external funding and obtaining debt regarding the internal cash flow generated, while the large-sized firms can delay obtaining investment from the capital market, and take the opportunity for expanding, so in this case, the cost of money needed by using debt can be reduced (Kadapakkam, Kumar, & Riddick, 1998).

$$SIZE = Log(Sales) \qquad (15)$$

Where SIZE is measured by the natural logarithm of Sales, and Sales represents the total revenues.

Higher levels of MTB will indicate higher growth opportunities and therefore higher risk, which will accordingly lead to a higher cost of debt (Alvarez-Botas & Gonzalez, 2019; Bae & Goyal, 2009).

$$MTB = \frac{MVE + BVA - BVE}{BVA} \qquad (16)$$

Where MTB is the Market to Book ratio, MVE is the Market Value of Equity BVA is the Book Value of Assets, BVE is the Book Value of Equity.

Inflation has a positive and significant influence on the cost of debt. A higher inflation rate will make the lenders ask for a higher interest rate (King, 1986). INF is the percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals.

Rule of Law is the perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular, the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. The index ranges between -2.5 (poor legal system) and 2.5 (efficient legal system). Better rules forced by the country enable banks to charge firms a lower cost of debt (Bae & Goyal, 2009).

Strength of Legal Right Index (LEG_IND) is the degree to which collateral and bankruptcy laws protect the rights of borrowers and lenders and thus facilitate lending. The index ranges from 0 to 10, with higher scores indicating that these laws are better designed to expand access to credit, more protection provided for loan providers makes them willing to provide loans with lower costs (Qian, Cao, & Cao, 2018).

The Depth of Credit Information (DEP_INF) is an index that measures rules affecting the scope, accessibility, and quality of credit information available through public or private credit registers. The index ranges from 0 to 6, with higher values indicating the availability of more credit information, from either a public register or a private bureau to facilitate lending decisions. More information available by the firms to the bank reduces the cost of debt financing (Petersen & Rajan, 1994).

Weight of Banks in the Economy (B_CREDIT) is the ratio of private credit by deposit money banks and other financial institutions to the Gross Domestic Product, reflecting the weight that financial institutions have in the economy of a country. Higher weights of banks tend to reduce the cost of corporate debt (Qian, Cao, & Cao, 2018; Alvarez-Botas & Gonzalez, 2019).

Degree of Bank Concentration (B_CONC) is the percentage of assets of the three largest banks as a share of the assets of all commercial banks. A higher degree of bank concentration usually has a positive relationship with the cost of borrowing (Petersen & Raman, 1995).

In the Appendix, we summarize all the variables.

The financial variables information was collected from Thomson Returns Eikon. From it, we can get data quarterly, like stock price returns, indexes values, accounting information, and so on (Oehler, Horn, & Wendt, 2017; Achim & Tudor , 2018; Baule, 2019). We collected the economic data from the World Bank website (The world Bank, 2020). This study will use the quarterly reports between (2009-2018). The research takes a sample of companies included in the STOXX Europe 600 index and ASE100 index. It will take the companies that have the end of the fiscal year at Dec-31 to compare the liquidity of both markets during the same period, and will exclude banks, insurance, and other financial institutions since their reports have significant differences compared to the other sectors. Also, it will exclude companies that do not have quarterly financial reports available, and companies that have a negative equity amount. The ending sample consists of 151 companies from both markets as the following table:

Table I- Net Sample

Total Sample from STOXX Europe 600	**600**
Banks, Insurance, and Financial institutions	(200)
Companies that do not have Quarterly reports from the period 2009-2018	(257)
Companies Fiscal year doesn't end on Dec 31	(10)
Companies that have negative Equities	(1)
Net sample from Europe	**132**
Total Sample from ASE100	**100**
Banks, Insurance, and Financial institutions	(21)
Companies that do not have Quarterly reports from the period 2009-2018	(59)
Companies Fiscal year doesn't end on Dec 31	-
Companies that have negative Equities	(1)
Net sample from Amman	**19**
Total Net Sample	**151**
Number of quarters	40
Total Observations	**6040**

5- Results

5.1. Descriptive Statistics

We, firstly, show the descriptive statistics of the CFO/SALES for Jordanian and European markets.

Table II- Descriptive Statistics for STOXX EUROPE 600 and ASE100 Index in terms of CFO/SALES

	CFO/ SALES Europe	CFO/SALES Jordan
Mean	0.20	0.31
Median	0.11	0.17
Maximum	20.11	96.58
Minimum	-5.92	-20.40
Std. Dev.	1.15	4.07

Both mean and standard deviation are lower for STOXX Europe 600 than ASE100 index. We test also the equality of mean and standard deviation between the European CFO/SALES and Jordanian CFO/SALES. The Jordanian CFO/SALES has higher mean but also higher volatility comparing to the European CFO/SALES.

The mean difference is not significant but the volatility difference is significant, the results are shown in the following tables respectively, as we can see in tables III and IV.

Table II-Testing the equality of Jordanian CFO/SALES mean and European CFO/SALES mean

Test for Equality of Means Between Series

Sample: 2009Q1 2018Q4

Included observations: 760

Method	df	Value	Probability
t-test	1518	-0.708485	0.4788
Satterthwaite-Welch t-test*	879.2182	-0.708485	0.4788
Anova F-test	(1, 1518)	0.501951	0.4788
Welch F-test*	(1, 879.218)	0.501951	0.4788

*Test allows for unequal cell variances

Analysis of Variance

Source of Variation	df	Sum of Sq.	Mean Sq.
Between	1	4.484312	4.484312
Within	1518	13561.45	8.933760
Total	1519	13565.93	8.930831

Category Statistics

Variable	Count	Mean	Std. Dev.	Std. Err. of Mean
CFO/ SALES EU	760	0.198697	1.148432	0.041658
CFO/ SALES JOD	760	0.307329	4.068000	0.147562
All	1520	0.253013	2.988450	0.076652

Table IIII-Testing the equality of Jordanian CFO/SALES variance and European CFO/SALES variance

Test for Equality of Variances Between Series

Sample: 2009Q1 2018Q4

Included observations: 760

Method	df	Value	Probability
F-test	(759, 759)	12.54734	* ** ***0.0000
Siegel-Tukey		12.85666	* ** ***0.0000
Bartlett	1	983.4542	* ** ***0.0000
Levene	(1, 1518)	16.83130	* ** ***0.0000
Brown-Forsythe	(1, 1518)	16.86515	* ** ***0.0000

Category Statistics

Variable	Count	Std. Dev.	Mean Abs. Mean Diff.	Mean Abs. Median Diff.	Mean Tukey-Siegel Rank
CFO/SALES EU	760	1.148432	0.294060	0.268250	905.2268
CFO/SALES JOR	760	4.068000	0.906878	0.883197	615.7732
All	1520	2.988450	0.600469	0.575724	760.5000

Bartlett weighted standard deviation: 2.988940, *** ** and * means significance at 1%, 5%, and 10% respectively, CFO/SALES EU represents the Europe Cash Flow from Operations divided by total Sales and CFO/SALES JOR represents the Jordan Cash Flow from Operations divided by total Sales.

In the Appendix, we also provide descriptive statistics for all the variables used in our models,

5.2. Correlation matrix

From the correlation matrix in the appendix, we can see that PBV is the variable that has the highest positive correlation with both components of the stock price returns, MKTADJRET and ABNRET.

All of the correlations agree with Martani, Mulyono, & Khairurizka (2009) analysis of the effect of the financial ratios on the stock price return, except for ROE and Log TA. The increase in the firm size does not always mean a good sign for the firm, it depends on the type of the industry, and the way of managing the operational risks after the expansion (Martani, Mulyono, & Khairurizka, 2009; Singapurwoko & El-Wahid , 2011). PBV affects positively on the stock

price return, which agrees with Martani, Mulyono, & Khairurizka (2009), but violates other evidence like Dita & Murtaqi (2014)**.** Considering the effect of dividends to calculate the return instead of using only the percentage change in the price, the increase in dividends will reduce both the market value and the book value of the share. However, the change in the book value is higher than the change in the market value which causes an increase in both components of the stock price return.

The increase in the market value of the stock precludes the investor to buy this stock if there was an expectation for an additional increase in the value, and when the amount collected from selling the stock later exceeds the current cost of purchasing that stock, which leads the investor to generate a profit on the long run.

By taking the absolute effect, we will notice that the CFO/SALES effect on MKTADJRET, ABNRET, and ADJ_COST is higher than the NPM effect. However, the correlations of Log TA and PBV affect more significantly on MKTADJRET and ABNRET, comparing to the other variables used in Equation 1.

5.3. Regression Analysis

We show six results of the regression analysis: firstly by showing the result of equation 1 on MKTADJRET, secondly, by showing the results of equation 1 on ABNRET, and thirdly we will show the results of analyzing equation 2 on the ADJ_COST. Also, we will rerun the two regression models by adding another two independent variables, MKT and MKT*CFO/SALES. MKT is a proxy variable to distinguish between the Jordanian market and the European market, where a value of 1 represents the Jordanian Market, while 0 represents the European Market. MKT*CFO/SALES aims to distinguish between the Jordanian Cash Flow from Operations marginal impact.

5.3.1. Market Adjusted Return (MKTADJRET)

Through Table V, we can see that the CFO/SALES will have a higher effect on the stock price over NPM, although not statistically significant. This agrees with the previous studies that CFO impacts more than earnings, and could make a change over the long-run on the stock price return (Graham & Knight, 2000; Livnat & Zarowin, 1990; Gaugha, Fuentes, & Bonanomi, 1995).

Table IV-Regression results for equation 1(MKTADJRET)

Dependent Variable: MKTADJRET

Method: Panel Least Squares

Sample: 2009Q1 2018Q4

Periods included: 40

Cross-sections included: 151

Total panel (balanced) observations: 6040

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NPM	0.001043	0.001217	0.856818	0.3916
CFO/SALES	0.001948	0.001191	1.636156	0.1019
ROE	-0.010156	0.010231	-0.992671	0.3209
CR	-0.000319	0.001180	-0.269914	0.7872
DER	0.005024	0.002159	2.326837	* **0.0200
TATO	0.005812	0.003440	1.689675	*0.0911
PBV	0.000452	0.000227	1.988020	* **0.0469
Log TA	-0.008698	0.001930	-4.507414	* ** ***0.0000
C	0.050352	0.008880	5.670289	0.0000

R-squared	0.005473	Mean dependent var		0.025724
Adjusted R-squared	0.004154	S.D. dependent var		0.143843
S.E. of regression	0.143544	Akaike info criterion		-1.042860
Sum squared resid	124.2682	Schwarz criterion		-1.032867
Log-likelihood	3158.438	Hannan-Quinn criter.		-1.039391
F-statistic	4.148623	Durbin-Watson stat		1.831328
Prob(F-statistic)	0.000059			

*** ** and * means significance at 1%, 5%, and 10% respectively.

Log TA, PBV, and DER affect significantly at 5% level comparing to other variables used in equation 1. Investors first look at the current position of the firm regarding Debt, market, and size situations, the current good situation for the firm will motivate investors to buy shares, they feel that they are in a safe position right now.

5.3.2. Cumulative Abnormal Return (ABNRET)

In table VI, we run the same regression, except that we change the measurement to ABNRET. We can notice that Log TA and DER affect more significantly on ABNRET than PBV and other variables used. Investors consider the size of the firm and the Debt situations more than the current market situations for the abnormal return, and the current market situation is first to be considered by the investors before the profitability measures.

Table V-Regression results for equation 1 (ABNRET)

Dependent Variable: ABNRET

Method: Panel Least Squares

Sample: 2009Q1 2018Q4

Periods included: 40

Cross-sections included: 151

Total panel (balanced) observations: 6040

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NPM	0.001013	0.001693	0.598408	0.5496
CFO/SALES	0.002248	0.001656	1.357698	0.1746
ROE	-0.003111	0.014224	-0.218743	0.8269
CR	-0.001354	0.001641	-0.825319	0.4092
DER	0.007904	0.003002	2.633212	* ** ***0.0085
TATO	0.006759	0.004783	1.413265	0.1576
PBV	0.000535	0.000316	1.693544	*0.0904
Log TA	-0.010090	0.002683	-3.760628	* ** ***0.0002
C	0.061482	0.012346	4.979887	0.0000

R-squared	0.004241	Mean dependent var		0.033949
Adjusted R-squared	0.002920	S.D. dependent var		0.199866
S.E. of regression	0.199574	Akaike info criterion		-0.383773
Sum squared resid	240.2138	Schwarz criterion		-0.373780
Log-likelihood	1167.993	Hannan-Quinn criter.		-0.380304
F-statistic	3.210610	Durbin-Watson stat		1.771221
Prob(F-statistic)	0.001209			

*** ** and * means significance at 1%, 5%, and 10% respectively.

CFO/SALES has a higher effect on the ABNRET than NPM. However, the effect is also not significant. Yet, in our sample, CFO associate positively on the stock price return, and has a higher effect on both the adjusted market return and the abnormal return than N.I.

5.3.3. Adjusted Cost of Debt (ADJ_COST)

From table VII below, we can see that the CFO/SALES coefficient was -0.06%, and the absolute negative coefficient was higher than the absolute negative coefficient of NPM. In this model, the effect of CFO/SALES was significant at 5% level.

Table VIII-Regression Analysis for equation 2

Dependent Variable: ADJ_COST

Method: Panel Least Squares

22

Sample: 2009Q1 2018Q4

Periods included: 40

Cross-sections included: 151

Total panel (balanced) observations: 6040

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NPM	-0.000458	0.002673	-0.171389	0.8639
CFO/SALES	-0.006070	0.002604	-2.331101	* **0.0198
LEV	0.285425	0.032429	8.801515	* ** ***0.0000
EBIT/INT	-0.000324	1.60E-05	-20.25253	* ** ***0.0000
MAT	0.216277	0.016615	13.01670	* ** ***0.0000
PROF	-0.153041	0.198277	-0.771853	0.4402
TANG	0.035240	0.022281	1.581586	0.1138
SIZE	0.085270	0.005411	15.75971	* ** ***0.0000
MTB	-0.001676	0.003685	-0.454692	0.6493
INF	-0.005323	0.003289	-1.618331	0.1056
R_LAW	-0.014386	0.013768	-1.044901	0.2961
LEG_IND	-0.024801	0.007641	-3.245680	* ** ***0.0012
DEP_INF	-0.053427	0.007668	-6.967248	* ** ***0.0000
DEP_INF*LEG_IND	0.009523	0.001463	6.511639	* ** ***0.0000
B_CREDIT	-0.002232	0.000158	-14.16266	* ** ***0.0000
B_CONC	0.002132	0.000495	4.310751	* ** ***0.0000
C	0.598765	0.037430	15.99677	0.0000

R-squared	0.229269	Mean dependent var		0.851159
Adjusted R-squared	0.227221	S.D. dependent var		0.355961
S.E. of regression	0.312918	Akaike info criterion		0.517058
Sum squared resid	589.7574	Schwarz criterion		0.535933
Log-likelihood	-1544.516	Hannan-Quinn criter.		0.523611
F-statistic	111.9784	Durbin-Watson stat		0.622683
Prob(F-statistic)	0.000000			

*** ** and * means significance at 1%, 5%, and 10% respectively.

The economic variables of each country play also an important role, like the firm's variables, in explaining the cost of Debt. The stronger the regulations and the protection of the lenders, the more it will reduce the cost of Debt charged to the firm (Alvarez-Botas & Gonzalez, 2019; Bae

& Goyal, 2009; Qian, Cao, & Cao, 2018), and more information available for the lenders about the borrower will make them charge a lower cost (Quijano, 2013; Beladi & Quijano, 2013; Petersen & Rajan, 1994).

However, by looking at table XIX (see appendix VI), the correlation between the R_LAW and the interaction of R_LAW*LEG_IND was 0.93, which is closer to 1, to deal with the Multicollinearity we run the regression model excluding R_LAW*LEG_IND. The result are shown in Table IV below. CFO/SALES is significant at 5%, while the NPM is not significant.

Both NPM and CFO/SALES affect negatively on the cost of Debt, but the CFO/SALES effect is more significant. CFO associates negatively on the Cost of Debt, by reducing it, and it has a higher absolute effect comparing to the N.I.

Our findings to the main research question is that CFO, as a component of earnings, does matter both for Stock and Debt holders. Both N.I and CFO are relevant components of earnings in explaining the movements of the market-adjusted return and the cumulative abnormal return. However, CFO has a higher impact for Debt holders than N.I. CFO has a higher effect than N.I on both the stock price returns and the cost of debt. Results are still not significant for stock price returns. Regarding the cost of Debt, the effect of CFO is significant because the holders of the debt would charge the firm a commission for delaying the payments of the accrued debt or interest, the bankers will require more return on their loans because the maturity of banks Assets are less than the maturity of banks liabilities, meaning that the amount of interests received is less than the interests paid compared to the same time, so the demand of money by the borrowers will be charged with a higher cost for the firms that has a weak CFO amount (Gambacorta & Mistrulli, 2004). In general, this may indicate that the effect of CFO depends on the investment horizon.

5.4. Comparing the liquidity between STOXX Europe 600 and ASE100 indexes

As mentioned in section, we will add another two independent variables to the equations 1 and 2 to compare between the European market and the Jordanian market. MKT is a variable that receives a value of 1 if the firm is Jordanian, and 0 if the firm is European, and MKT*CFO/SALES to distinguish between the European CFO/SALES and Jordanian CFO/SALES.

Table VII-testing the effect of MKT and MKT*CFO/SALES on MKTADJRET

Dependent Variable: MARADJRET

Method: Panel Least Squares

Sample: 2009Q1 2018Q4

Periods included: 40

Cross-sections included: 151

Total panel (balanced) observations: 6040

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NPM	0.000486	0.001304	0.372513	0.7095
CFO/SALES	0.003510	0.002894	1.213081	0.2251
ROE	-0.015765	0.010245	-1.538730	0.1239
CR	-0.000225	0.001178	-0.191304	0.8483
DER	0.004922	0.002153	2.286410	* **0.0223
TATO	0.002795	0.003480	0.803371	0.4218
PBV	0.000336	0.000228	1.476945	0.1397
Log TA	-0.019793	0.002659	-7.445310	* ** ***0.0000
MKT	-0.049051	0.008148	-6.020152	* ** ***0.0000
MKT*CFO/SALES	-0.002044	0.003302	-0.619063	0.5359
C	0.101944	0.012391	8.227275	0.0000

R-squared	0.011666	Mean dependent var	0.025724
Adjusted R-squared	0.010026	S.D. dependent var	0.143843
S.E. of regression	0.143120	Akaike info criterion	-1.048444
Sum squared resid	123.4944	Schwarz criterion	-1.036231
Log likelihood	3177.301	Hannan-Quinn criter.	-1.044204
F-statistic	7.116153	Durbin-Watson stat	1.842522
Prob(F-statistic)	0.000000		

*** ** and * means significance at 1%, 5%, and 10% respectively.

From table VIII, we can notice that MKT is significant, and has a negative effect on the MKTADJRET, and MKT*CFO/SALES affect negatively on MKTADJRET. This means that the European Market Adjusted Return is higher than the Jordanian Market Adjusted Return, and the CFO for the European market increases the MKTADJRET more than the CFO for the Jordanian market. However, the effect of MKT*CFO/SALES is not significant.

Table VIII- testing the effect of MKT and MKT*CFO/SALES on ABNRET

Dependent Variable: ABNRET

Method: Panel Least Squares

Sample: 2009Q1 2018Q4

Periods included: 40

Cross-sections included: 151

Total panel (balanced) observations: 6040

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NPM	0.001441	0.001812	0.795465	0.4264
CFO/SALES	-0.002486	0.004020	-0.618323	0.5364
ROE	-0.012261	0.014233	-0.861445	0.3890
CR	-0.001361	0.001636	-0.831749	0.4056
DER	0.007754	0.002991	2.592626	* ** ***0.0095
TATO	0.001387	0.004834	0.286922	0.7742
PBV	0.000361	0.000316	1.141011	0.2539
Log TA	-0.027531	0.003693	-7.454285	* ** ***0.0000
MKT	-0.077634	0.011319	-6.858593	* ** ***0.0000
MKT*CFO/SALES	0.005786	0.004588	1.261126	0.2073
C	0.144316	0.017214	8.383644	0.0000

R-squared	0.012002	Mean dependent var		0.033949
Adjusted R-squared	0.010363	S.D. dependent var		0.199866
S.E. of regression	0.198828	Akaike info criterion		-0.390935
Sum squared resid	238.3415	Schwarz criterion		-0.378722
Log-likelihood	1191.624	Hannan-Quinn criter.		-0.386695
F-statistic	7.323859	Durbin-Watson stat		1.784247
Prob(F-statistic)	0.000000			

*** ** and * means significance at 1%, 5%, and 10% respectively.

From table IX, we can notice that MKT is significant, and has a negative effect on the ABNRET, and MKT*CFO/SALES affect positively on ABNRET. This means that the European Cumulative Abnormal Return is higher than the Jordanian Cumulative Abnormal Return, but the CFO for the Jordanian market increases the ABNRET more than the CFO for the European market, and the effect of CFO/SALES turned to be negative on the Abnormal Return by adding the two independent variables MKT and MKT*CFO/SALES to the regression. However, each effect of MKT*CFO/SALES and CFO/SALES itself is insignificant.

Table IX- testing the effect of MKT and MKT*CFO/SALES on Cost of Debt

Dependent Variable: ADJ_COST

Method: Panel Least Squares

Sample: 2009Q1 2018Q4

Periods included: 40

Cross-sections included: 151

Total panel (balanced) observations: 6040

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NPM	-0.004518	0.002854	-1.583315	0.1134
CFO/SALES	0.017273	0.006320	2.733308	* ** ***0.0063
LEV	0.244330	0.032703	7.471240	* ** ***0.0000
EBIT/INT	-0.000320	1.59E-05	-20.03798	* ** ***0.0000
MAT	0.225671	0.016581	13.61001	* ** ***0.0000
PROF	-0.140638	0.197293	-0.712837	0.4760
TANG	0.024065	0.022217	1.083203	0.2788
SIZE	0.093735	0.005487	17.08201	* ** ***0.0000
MTB	-0.004144	0.003684	-1.124778	0.2607
INF	-0.002846	0.003288	-0.865468	0.3868
R_LAW	0.021061	0.014580	1.444506	0.1486
LEG_IND	0.108583	0.020207	5.373588	* ** ***0.0000
DEP_INF	0.164772	0.031545	5.223428	* ** ***0.0000
DEP_INF*LEG_IND	-0.019431	0.004318	-4.500136	* ** ***0.0000
B_CREDIT	-0.002059	0.000159	-12.99144	* ** ***0.0000
B_CONC	0.000589	0.000537	1.098544	0.2720
MKT	0.821539	0.114191	7.194439	* ** ***0.0000
MKT*CFO/SALES	-0.028525	0.007203	-3.960091	* ** ***0.0001
C	-0.393962	0.143207	-2.750995	0.0060

R-squared	0.237300	Mean dependent var		0.851159
Adjusted R-squared	0.235020	S.D. dependent var		0.355961
S.E. of regression	0.311335	Akaike info criterion		0.507245
Sum squared resid	583.6119	Schwarz criterion		0.528341
Log-likelihood	-1512.881	Hannan-Quinn criter.		0.514569
F-statistic	104.0734	Durbin-Watson stat		0.627318
Prob(F-statistic)	0.000000			

*** ** and * means significance at 1%, 5%, and 10% respectively.

From table X we can notice that the situation is different for the cost of Debt. By adding the two independent variables MKT and MKT * CFO/SALES, the effect of CFO/SALES itself is positive and significant on ADJ_COST, MKT affect positively on the ADJ_COST, and MKT*CFO/SALES affect negatively on the ADJ_COST. The positive MKT effect means that

the cost of Debt for the Jordanian Market is higher than the cost of Debt for the European Market. However, the negative effect of multiplying MKT by CFO/SALES means that the Jordanian CFO influences more on reducing the cost of Debt than the European CFO. This could be justified because in our sample most of the Jordanian firms had zero leverage ratios over five and six years. Jordanian firms don't increase their Debt unless they have or they expect enough amount of Cash in the future to pay the required interests, while the European firms increase their Debt because it is cheaper than Equity funding.

For further investigation, we analyzed the variances of MKTADJRET, ABNRET, and ADJ_COST as other tests to compare between the liquidity of STOXX Europe 600 and ASE100 indexes. Table XI below represents the descriptive statistics for the three dependent variables MKTADJRET, ABNRET, and ADJ_COST for the two indexes, in the following tables (XII, XIII, XIV), we have tested the equality of variances between European MKTADJRET and Jordanian MKTADJRET, the equality of variances between European ABNRET and Jordanian ABNRET, and the equality of variances between European ADJ_COST and Jordanian ADJ_COST respectively, the results are shown below

Table X- Descriptive statistics for MKTADJRET, ABNRET, and ADJ_COST

	MKTADJRET		ABNRET		ADJ_COST	
	JOR	EUR	JOR	EUR	JOR	EUR
Mean	0.018	0.024	0.015	0.026	0.348	0.011
Median	0.000	0.020	-0.001	0.015	0.010	0.010
Maximum	1.730	0.810	1.698	1.004	69.600	0.260
Minimum	-1.120	-0.460	-1.184	-1.153	0.000	-0.010
Std. Dev.	0.166	0.140	0.191	0.196	4.171	0.016

JOR represents Jordan, and EUR represents Europe.

Table XI-Testing the MKTADJRET variance equality between Jordan and Europe

Test for Equality of MKTADJRET Variances Between Europe and Jordan

Sample: 2009Q1 2018Q4

Included observations: 760

Method	df	Value	Probability
F-test	(759, 759)	1.421364	* ** ***0.0000
Siegel-Tukey		3.225708	* ** ***0.0013
Bartlett	1	23.32446	* ** ***0.0000

Levene	(1, 1518)	0.167777	0.6822
Brown-Forsythe	(1, 1518)	0.309549	0.5780

Category Statistics

Variable	Count	Std. Dev.	Mean Abs. Mean Diff.	Mean Abs. Median Diff.	Mean Tukey-Siegel Rank
JOR	760	0.166495	0.096897	0.095855	796.8003
EUR	760	0.139652	0.099380	0.099263	724.1997
All	1520	0.153640	0.098139	0.097559	760.5000

Bartlett weighted standard deviation: 0.153661, *** ** and * means significance at 1%, 5%, and 10% respectively, MKTADJRET represents Market Adjusted Return, JOR represents Jordan, and EUR represents Europe.

Table XII- Testing the ABNRET variance equality between Jordan and Europe

Test for Equality of ABNRET Variances Between Europe and Jordan

Sample: 2009Q1 2018Q4

Included observations: 760

Method	df	Value	Probability
F-test	(759, 759)	1.059306	0.4276
Siegel-Tukey		3.833420	* ** ***0.0001
Bartlett	1	0.629343	0.4276
Levene	(1, 1518)	4.877058	* **0.0274
Brown-Forsythe	(1, 1518)	5.414837	* **0.0201

Category Statistics

Variable	Count	Std. Dev.	Mean Abs. Mean Diff.	Mean Abs. Median Diff.	Mean Tukey-Siegel Rank
JOR	760	0.190528	0.113091	0.111684	803.6586
EUR	760	0.196096	0.130085	0.129749	717.3414
All	1520	0.193347	0.121588	0.120717	760.5000

Bartlett weighted standard deviation: 0.193332, *** ** and * means significance at 1%, 5%, and 10% respectively, ABNRET represents Cumulative Abnormal Return, JOR represents Jordan, and EUR represents Europe.

Table XIII- Testing the ADJ_COST variance equality between Jordan and Europe

Test for Equality of ADJ_COST Variances Between Europe and Jordan

Sample: 2009Q1 2018Q4

Included observations: 760

Method	df	Value	Probability
F-test	(759, 759)	69821.12	* ** ***0.0000
Siegel-Tukey		8.690973	* ** ***0.0000
Bartlett	1	7408.596	* ** ***0.0000
Levene	(1, 1518)	18.88757	* ** ***0.0000
Brown-Forsythe	(1, 1518)	5.014756	* **0.0253

Category Statistics

Variable	Count	Std. Dev.	Mean Abs. Mean Diff.	Mean Abs. Median Diff.	Mean Tukey-Siegel Rank
JOR	760	4.171167	0.656787	0.345566	667.4919
EUR	760	0.015786	0.007431	0.006789	853.5081
All	1520	2.953317	0.332109	0.176178	760.5000

Bartlett weighted standard deviation: 2.949481, *** ** and * means significance at 1%, 5%, and 10% respectively, ADJ_COST represents adjusted cost of Debt, JOR represents Jordan, and EUR represents Europe.

From table XI we can notice that the European MKTADJRET mean (0.024) is higher compared to the Jordanian MKTADJRET mean (0.018), and the standard deviation for the European MKTADJRET (0.140) is lower than the Jordanian MKTADJRET standard deviation (0.166). Regarding the ABNRET, the European ABNRET mean (0.026) is higher than the Jordanian ABNRET mean (0.015), but the volatility for the European one is higher also, regarding the ADJ_COST the Jordanian one has higher mean and higher volatility too.

In table XII, F-test, Siegel-Tukey test, and Bartlett test show a significant p-value at 1% level: the volatility for the Jordanian MKTADJRET is higher than the volatility of European MKTADJRET, which supports our analysis of the MKT and MKT*CFO/SALES components in table VIII. In table XIII, Siegel-Tukey test shows the significance at 1% level, Levene and Brown-Forsythe tests show the significance at 5% level, the European ABNRET volatility is higher than the Jordanian ABNRET volatility, which violates our analysis of MKT, but support

our analysis of MKT*CFO/SALES effect in table IX. In table XIV, all of the variances tests show the significance at 1% level, except for the Brown-Forsythe which shows the significance at 5% level. The Jordanian ADJ_COST has higher volatility than the European ADJ_COST, which support our analysis of the MKT component, but violate our analysis of MKT*CFO/SALES component in table X.

To summarize our results. Firstly, the European MKTADJRET has a higher value and lower volatility comparing to the Jordanian MKTADJRET, and the effect of European CFO/SALES on the MKTADJRET is better than the Jordanian one, which means that the European market is in a better position than the Jordanian market in terms of the MKTADJRET and in terms of CFO association with MKTADJRET. Secondly, the European ABNRET has a higher value and higher volatility than the Jordanian, and the Jordanian CFO/SALES affects the ABNRET more than the European one, which means that the European market is in a better position than the Jordanian market in terms of the ABNRET, but not in terms of the ABNRET volatility and terms of CFO association with ABNRET. Finally, the European ADJ_COST has a lower value and lower volatility than the Jordanian ADJ_COST, which means that the European market is in a better position than the Jordanian market in terms of a lower cost of Debt in the European market, but considering the effect of the Jordanian CFO we will notice that it can reduce the cost of Debt more than the European one.

6- Conclusion

This study aims to analyze the relationship between the Cash Flow from Operations with the stock price return, as well as with the Cost of Debt. Thus, we compared the effect of the Income and Cash Flow from Operations on both the stock price return and the Cost of Debt.

We argue that both Cash Flow from Operations and Net Income affect positively on the market-adjusted return and the cumulative abnormal return (Martani, Mulyono, & Khairurizka, 2009). However, the effect of Cash Flow from Operations is higher than the effect of Net Income. Our results show that the effect was not significant. This result may be due to investors buying stocks to keep them on the long run, thus, they consider first Net Income achieved at the time of the investment, especially the accrual part of it which will translate into cash in the future.

We noticed also that both Cash Flow from Operations and Net Income affect positively the Cost of Debt – by reducing it, but the effect of the Cash Flow from Operations was higher and significant compared to that of Net Income. We argue that because most of the Debt securities require periodic interest payments, if there is no availability of cash amount to pay the accrued interest, Debt holders would charge the firm additional fees costs, and would restrict the movement of the firm in investments through Debt contracts requirements. The economic

measures and cash profit are more supporting to the firm in Debt situations than the Accounting profit (Quijano, 2013; Beladi & Quijano, 2013; Alvarez-Botas & Gonzalez, 2019).

Also, we evaluated any market liquidity effects, comparing between STOXX Europe 600 index and Amman stock exchange 100 (ASE100) index. Firstly, we find that the Jordanian Cash Flow from Operations has higher mean and higher volatility than the European Cash Flow from Operations. Secondly, we find that the Market adjusted return and the Cumulative abnormal return for European firms have a higher mean than the Market adjusted return and Cumulative abnormal return of Jordanian firms, but the volatility of the Jordanian Cumulative Abnormal Return is lower. We also find that the cost of Debt for the European firms is lower than the cost of Debt for Jordanian firms.

In addition, we noticed that the Cash Flow from Operations for European firms tends to increase the Market Adjusted Return more than the Cash Flow from Operation generated from the Jordanian firms, but the Cash Flow from Operation for the Jordanian firms tends to increase the Cumulative abnormal return more than the Cash Flow from Operation generated by the European firms, both effects were insignificant.

However, the Cash Flow from Operations generated by the Jordanian firms tends to reduce the cost of Debt more than the Cash Flow from Operations generated by the European firms, this is because of the cost of external financing, Jordanian firms prefer equity and internal financing more than the Debt financing since it is cheaper, and most of them don't take the risk of Debt financing unless they are in somehow sure about the cash amount that will be on the hand of the firm, while the cost of Debt for European firms is cheaper than the Cost of Equity.

In future venues, it is suggested to extend this analysis to other market indexes and examine if the conclusions remain the same, to test the effect of Earnings Quality and its components on the stock price return and the Cost of Debt, and to test also some economic variables with Cash Flow from Operation to compare between the economic and cash profits with the Accounting Profit on the stock price return.

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8. Appendixes
Table XIV- Net total Sample and the number of the observations

Country	Number of Samples	Number of Observations
JORDAN	19	**760**
NORWAY	8	320
FRANCE	7	280
BELGIUM	3	120
SWITZERLAND	8	320
GERMANY	37	1480
UK	2	80
FINLAND	9	360
ITALY	10	400
SWEEDEN	23	920
POLAND	4	160
NETHERLAD	6	240
DENMARK	6	240
PORTUGAL	2	80
AUSTRIA	3	120
SPAIN	4	160
All	**132**	**6040**

Table XVI -Variables Definitions

Definition	Descriptions
Market-Adjusted Return (MKTADJRET)	The Sum of the difference between stock return and the market return ($\sum Ri - Rm$)
Cumulative Abnormal Return (ABNRET)	The Sum of the difference between Stock return and Stock expected return ($\sum Ri - E(Ri)$)
Net profit margin	Net Income / Sales
Cash flow from operation divided by sales (CFO / SALES)	Cash Flow from Operation / Sales
Return on equity (ROE)	Net Income / Equity
Current ratio (CR)	Current Assets / Current Liabilities
Total Debt / Total Equity (DER)	Debt /Equity

Total Assets turnover (TATO)	Sales / Total Assets
Price to book value (PBV)	Price per share/book value per share
Natural Logarithm of Total Assets (Log TA)	Log (Total Assets)
Adjusted Cost of Debt (ADJ_COST)	Total financial expenses / Total Debt
Leverage (LEV)	Total Debt / Total Assets
Earnings before interest and taxes / Financial Expenses (EBIT/INT)	Earnings before interest and taxes / Total financial expenses
Long term Debt / Total Debt (MAT)	Long term Debt / Total Debt
Earnings before interest and taxes / Total Assets (EBIT/Total Assets)	Earnings before interest and taxes / Total Assets
Tangible Fixed Assets / Total Assets	Tangible Fixed Assets / Total Assets
Natural Logarithm of Total Sales (Log (sales))	Log (Total Sales)
Market to book value (MTB)	(Market value of Equity + Book Value of Assets - Book Value of Equity)/ Book value of Assets
inflation Rate (INF)	The percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals.
Rule of Law (R_LAW)	From a poor legal system to an efficient legal System (-2.5_2.5)
Strength of legal Rights index (LEG_IND)	From law protection for creditors to high law protection for creditors (0_10)
Depth of credit information (DEP_INF)	From less credit Information available to more Credit information available (0_6)
Weight of banks in the economy (B_CREDIT)	The ratio of private credit by deposit money banks and other financial institutions to the Gross Domestic Product
Degree of bank concentration (B_CONC)	The percentage of assets of the three largest banks as a share of the assets of all commercial banks
MKT	A variable used to distinguish between Jordanian firms and European firms, a value of 1 represents Jordanian firms, and a value of 0 represents European firms

Table XV-Descriptive statistics for each variable

Variables	Mean	Median	Max	Min	Std.Dev	Observation
MARADJRET	0.03	0.02	2.09	-1.12	0.14	6040
ABNRET	0.03	0.02	2.61	-1.58	0.20	6040
NPM	0.07	0.07	46.23	-82.97	1.56	6040
CFO/SALES	0.18	0.12	96.58	-20.40	1.59	6040
ROE	0.14	0.13	4.94	-2.04	0.19	6040
CR	1.74	1.34	23.99	0.05	1.68	6040
DER	0.71	0.51	22.33	0.00	0.91	6040
TATO	0.84	0.73	3.75	-0.06	0.57	6040
PBV	3.09	2.05	580.57	0.00	8.41	6040
Log TA	3.78	3.89	5.68	0.97	1.03	6040
ADJ_COST	0.85	1.00	1.00	0.00	0.36	6040
LEV	0.23	0.22	0.83	0.00	0.15	6040
EBIT/INT	50.72	8.21	9012.75	-4711.00	260.33	6040
MAT	0.68	0.78	1.00	0.00	0.29	6040
PROF	0.02	0.02	0.63	-0.15	0.02	6040
TANG	0.25	0.21	0.93	0.00	0.20	6040
SIZE	2.95	3.20	5.09	-1.52	1.21	6040
MTB	1.77	1.37	17.63	0.22	1.42	6040
INF	1.37	1.16	4.84	-1.14	1.35	6040
R_LAW	1.44	1.66	2.10	0.19	0.63	6040
LEG_IND	6.29	7.00	10.00	2.00	2.37	6040
R_LAW*LEG_IND	10.19	11.41	18.87	0.39	5.85	6040
DEP_INF	4.30	4.00	6.00	0.00	1.84	6040
DEP_INF*LEG_IND	29.68	36.00	60.00	0.00	15.18	6040
B_CREDIT	102.87	93.45	201.26	47.03	32.27	6040
B_CONC	76.83	77.33	96.05	34.32	13.40	6040

Table XVI-Correlation table for the variables used in Equation 1

Variables	MARADJRET	NPM	CFO/SALES	ROE	CR
MARADJRET	1	0.004	0.020	-0.001	0.008
NPM	0.004	1	* ** *** -0.202	* ** *** 0.081	0.010
CFO/SALES	0.020	* ** *** -0.202	1	-0.013	* ** 0.030
ROE	-0.001	* ** *** 0.081	-0.013	1	* ** *** -0.039
CR	0.008	0.010	* ** 0.030	* ** *** -0.039	1
DER	0.016	0.020	-0.002	* ** *** 0.075	* ** *** -0.205
TATO	0.016	-0.004	* ** *** -0.054	* ** *** 0.243	* ** *** -0.115
PBV	* ** 0.039	0.005	-0.001	* ** *** 0.237	0.000
Log TA	* ** *** -0.054	* ** *** 0.041	* ** *** -0.034	* ** 0.032	* ** *** -0.319

Variables	DER	TATO	PBV	Log TA
MARADJRET	0.016	0.016	* ** 0.039	* ** *** -0.054
NPM	0.020	-0.004	0.005	* ** *** 0.041
CFO/SALES	-0.002	* ** *** -0.054	-0.001	* ** *** -0.034
ROE	* ** *** 0.075	* ** *** 0.243	* ** *** 0.237	* ** 0.032
CR	* ** *** -0.205	* ** *** -0.115	0.000	* ** *** -0.319
DER	1	* ** *** -0.132	* ** *** 0.102	* ** *** 0.244
TATO	* ** *** -0.132	1	* ** *** 0.085	0.021

	* ** ***	* ** ***		
PBV	0.102	0.085	1	-0.013
Log TA	* ** *** 0.244	0.021	-0.013	1

Variables	ABNRET
ABNRET	1
NPM	0.003
CFO/SALES	0.017
ROE	0.009
CR	-0.004
DER	0.025
TATO	0.015
PBV	* ** 0.028
Log TA	* ** *** -0.040

*** ** and * means significance at 1%, 5%, and 10% respectively

Table XVII-Correlation table for the Variables used in Equation 2

Note: the correlation between R_LAW and R_LAW*LEG_IND is 0.929, *** ** and * means significance at 1%, 5%, and 10% respectively.

Variables	ADJ_ COST	NPM	CFO/ SALES	LEV	EBIT/ INT	MAT
ADJ_COST	1	0.010	* ** *** -0.048	* ** *** 0.247	* ** *** -0.271	* ** *** 0.278
NPM	0.010	1	* ** *** -0.202	* ** *** 0.045	* ** 0.028	0.020
CFO/ SALES	* ** *** -0.048	* ** *** -0.202	1	0.010	0.013	* ** -0.031
LEV	* ** *** 0.247	* ** *** 0.045	0.010	1	* ** *** -0.120	* ** *** 0.434
EBIT/ INT	* ** *** -0.271	* ** 0.028	0.013	* ** *** -0.120	1	* ** *** -0.063
MAT	* ** *** 0.277	0.020	* ** -0.031	* ** *** 0.434	* ** *** -0.063	1

Variables	PROF	TANG	SIZE	MTB	INF	R_LAW
PROF	* ** *** -0.063	* ** *** 0.118	0.005	* ** *** -0.121	* ** *** 0.205	0.018
TANG	* ** *** 0.083	* ** *** -0.036	0.002	* ** *** 0.036	* ** -0.032	* 0.024
SIZE	* ** *** 0.253	* ** *** 0.045	* ** *** -0.064	* ** *** 0.180	* ** *** 0.047	* ** *** 0.325
MTB	* ** *** -0.122	0.017	0.003	* ** *** -0.221	* ** *** 0.147	* ** *** -0.035
INF	* ** *** -0.070	* -0.023	* ** *** 0.062	* ** *** -0.110	0.016	* ** *** -0.135
R_LAW	* ** *** 0.084	* ** *** 0.042	-0.017	* ** 0.029	* ** *** 0.068	* ** *** 0.226
LEG_IND	* ** *** 0.128	* ** *** 0.050	* ** -0.027	* ** *** 0.044	* ** *** 0.050	* ** *** 0.226
R_LAW * LEG_IND	* ** *** 0.092	* ** *** 0.045	-0.021	* 0.022	* ** *** 0.057	* ** *** 0.187
DEP_INF	* ** *** 0.172	* ** *** 0.058	* ** -0.029	* ** *** 0.242	0.008	* ** *** 0.386
DEP_INF * LEG_IND	* ** *** 0.156	* ** *** 0.056	* ** -0.028	* ** *** 0.109	0.018	* ** *** 0.275
B_CREDIT	* ** *** -0.084	* 0.024	-0.017	-0.009	* ** *** 0.091	* ** *** 0.118
B_CONC	-0.020	0.003	0.009	* ** *** -0.054	* ** *** 0.063	* ** *** -0.036
Variables	**PROF**	**TANG**	**SIZE**	**MTB**	**INF**	**R_LAW**
ADJ_COST	* ** *** -0.063	* ** *** 0.083	* ** *** 0.253	* ** *** -0.122	* ** *** -0.070	* ** *** 0.084
NPM	* ** *** 0.118	* ** *** -0.0361	* ** *** 0.045	0.017	* -0.023	* ** *** 0.042
CFO/ SALES	0.005	0.002	* ** *** -0.064	0.003	* ** *** 0.062	-0.017
LEV	* ** *** -0.121	* ** *** 0.037	* ** *** 0.180	* ** *** -0.221	* ** *** -0.110	* ** 0.029

Variable						
EBIT/ INT	* ** *** 0.205	* ** -0.032	* ** *** 0.047	* ** *** 0.147	0.016	* ** *** 0.068
MAT	0.018	* 0.024	* ** *** 0.325	* ** *** -0.035	* ** *** -0.135	* ** *** 0.226
PROF	1	* ** *** -0.088	* ** *** 0.084	* ** *** 0.519	-0.017	* ** *** 0.131
TANG	* ** *** -0.088	1	* ** *** 0.092	* ** *** -0.224	* ** *** 0.119	* ** *** -0.200
SIZE	* ** *** 0.084	* ** *** 0.092	1	* ** *** -0.043	* ** *** -0.270	* ** *** 0.479
MTB	* ** *** 0.519	* ** *** -0.224	* ** *** -0.043	1	* ** *** -0.104	* ** *** 0.207
INF	-0.017	* ** *** 0.119	* ** *** -0.267	* ** *** -0.104	1	* ** *** -0.307
R_LAW	* ** *** 0.131	* ** *** -0.200	* ** *** 0.479	* ** *** 0.207	* ** *** -0.307	1
LEG_IND	* ** *** 0.170	* ** *** -0.177	* ** *** 0.553	* ** *** 0.254	* ** *** -0.293	* ** *** 0.745
R_LAW * LEG_IND	* ** *** 0.155	* ** *** -0.195	* ** *** 0.467	* ** *** 0.254	* ** *** -0.314	* ** *** **0.929**
DEP_INF	* ** *** 0.121	* ** *** -0.224	* ** *** 0.589	* ** *** 0.153	* ** *** -0.345	* ** *** 0.499
DEP_INF * LEG_IND	* ** *** 0.156	* ** *** -0.225	* ** *** 0.531	* ** *** 0.230	* ** *** -0.318	* ** *** 0.611
B_CREDIT	* ** *** 0.075	* ** *** -0.098	* ** *** 0.343	* ** *** 0.181	* ** *** -0.230	* ** *** 0.444
B_CONC	* ** *** 0.059	* ** *** -0.047	* ** *** 0.100	* ** *** 0.066	* ** -0.030	* ** *** 0.579

Variables	LEG_IND	R_LAW * LEG_IND	DEP_INF	DEP_INF * LEG_IND	B_CREDIT	B_CONC
ADJ_COST	* ** *** 0.128	* ** *** 0.092	* ** *** 0.172	* ** *** 0.156	* ** *** -0.084	-0.020

	* ** ***	* ** ***	* ** ***	* ** ***	*	
NPM	0.050	0.045	0.058	0.056	0.024	0.003
CFO/	* **		* **	* **		
SALES	-0.027	-0.021	-0.029	-0.028	-0.017	0.009
	* ** ***	*	* ** ***	* ** ***		* ** ***
LEV	0.044	0.022	0.242	0.109	-0.009	-0.054
EBIT/	* ** ***	* ** ***			* ** ***	* ** ***
INT	0.050	0.057	0.008	0.018	0.091	0.063
	* ** ***	* ** ***	* ** ***	* ** ***	* ** ***	* ** ***
MAT	0.226	0.187	0.386	0.275	0.118	-0.036
	* ** ***	* ** ***	* ** ***	* ** ***	* ** ***	* ** ***
PROF	0.170	0.155	0.121	0.156	0.075	0.059
	* ** ***	* ** ***	* ** ***	* ** ***	* ** ***	* ** ***
TANG	-0.177	-0.195	-0.224	-0.225	-0.098	-0.047
	* ** ***	* ** ***	* ** ***	* ** ***	* ** ***	* ** ***
SIZE	0.553	0.469	0.589	0.531	0.343	0.100
	* ** ***	* ** ***	* ** ***	* ** ***	* ** ***	* ** ***
MTB	0.254	0.254	0.153	0.230	0.181	0.066
	* ** ***	* ** ***	* ** ***	* ** ***	* ** ***	* **
INF	-0.293	-0.314	-0.345	-0.318	-0.230	-0.030
	* ** ***	* ** ***	* ** ***	* ** ***	* ** ***	* ** ***
R_LAW	0.745	0.929	0.499	0.612	0.444	0.579
		* ** ***	* ** ***	* ** ***	* ** ***	* ** ***
LEG_IND	1	0.882	0.607	0.888	0.486	0.298
R_LAW						
*	* ** ***		* ** ***	* ** ***	* ** ***	* ** ***
LEG_IND	0.882	1	0.453	0.691	0.521	0.597
	* ** ***	* ** ***		* ** ***	* ** ***	* ** ***
DEP_INF	0.607	0.453	1	0.849	0.189	-0.146
DEP_INF						
*	* ** ***	* ** ***	* ** ***		* ** ***	
LEG_IND	0.888	0.691	0.849	1	0.322	0.016
	* ** ***	* ** ***	* ** ***	* ** ***		* ** ***
B_CREDIT	0.486	0.521	0.189	0.322	1	0.408
B_CONC	* ** ***	* ** ***	* ** ***	0.016	* ** ***	1

| | 0.298 | 0.597 | -0.146 | | 0.408 | |