



**The Effects of Cash Flows and Accruals on the Share
Price in Jordan with Special Reference to Financial
Crisis: Audit Quality as a Moderator**

by

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TABLE OF CONTENTS

	PAGE
DECLARATION OF THESIS	i
ACKNOWLEDGMENT	ii
TABLE OF CONTENTS	iii
LIST OF TABLES	x
LIST OF FIGURES	xii
LIST OF ABBREVIATIONS	xiii
ABSTRAK	xv
ABSTRACT	xvi
CHAPTER 1: INTRODUCTION	1
1.1 Background of the Study	1
1.2 Problem Statement	6
1.3 Research Questions	13
1.4 Research Objectives	15
1.5 Scope of the Study	16
1.6 Significance of the Study	16
1.7 Definition of Terms	19
1.7.1 Accounting Information	19
1.7.2 Accruals	19
1.7.3 Aggregate Accruals (AGGAs)	20
1.7.4 Audit Quality	20
1.7.5 Cash Flow	21
1.7.6 Current Accruals	21
1.7.7 Earnings	21

1.7.8	Financing Cash Flows (FCFs)	22
1.7.9	Investing Cash Flows	22
1.7.10	Market Value	23
1.7.11	Operating Cash Flows (OCFs)	23
1.7.12	Share Price	24
1.7.13	Total Accruals	24
1.7.14	Value Relevance	25
1.8	Outline of the Thesis	25
CHAPTER 2 : INSTITUTIONAL REVIEW		27
2.1	Introduction	27
2.2	The Economy of Jordan	27
2.3	Amman Financial Market (AFM)	28
2.3.1	Background to Amman Stock Exchange Market (ASE)	29
2.3.2	The Companies Listed on ASE	31
2.3.3	The Main Restrictions in ASE	32
2.3.4	Market Efficiency and Investment Valuation in ASE	33
2.3.5	Valuation of ASE	37
2.4	Development of the Auditing Profession in Jordan	38
2.5	Governmental Intervention to Regulate the Auditing Profession in Jordan	39
2.6	Financial Reporting in Jordan and its Effect on the Accounting and Auditing Professions	40
2.7	Summary	41
CHAPTER 3 : LITERATURE REVIEW		42
3.1	Introduction	42
3.2	Share Prices	43
3.2.1	The Concept of Share Price	43
3.2.2	Share Price Movement (SPM)	43

3.2.3	Factors Influencing Share Price	48
3.3	Cash-Based Accounting (Cash Flow Accounting)	53
3.3.1	The Concept of Cash Flows	54
3.3.2	Categorization of Cash Flows	54
3.3.3	The Cash Flow Statement	56
3.3.4	Information Content of Cash Flows	58
3.4	Accrual-Based Accounting	63
3.4.1	The Concept of Accruals	66
3.4.2	Categorization of Accruals	67
3.4.3	Information Content of Accruals	68
3.5	Value Relevance of Accounting Information	70
3.6	Association of Share Prices with Financial Performance Indicators	77
3.6.1	Relationships between Cash Flows and Share Price	79
3.6.2	Relationships between Accruals and Share Price	81
3.6.3	Relationships between Cash Flows and Accruals Combined and Share Price	84
3.6.4	Relationships between Earnings and Share Price	85
3.7	Auditing	88
3.7.1	Need and Importance of Auditing	89
3.7.2	Audit Quality	89
3.7.2.1	Proxies for Audit Quality	91
3.7.2.2	Audit Quality and Share Prices	92
3.8	The Global Financial Crisis	96
3.8.1	Nature, Stages, and Effects of the Global Financial Crisis	97
3.8.2	Previous Studies on Impacts of the Global Financial Crisis on Markets Worldwide	100
3.9	Underpinning Theories	103
3.9.1	The Agency Theory	104

3.9.2	The Signaling Theory	106
3.9.3	The Decision Usefulness Theory	109
3.10	Market Valuation Models	112
3.11	Summary	116
CHAPTER 4 : RESEARCH METHODOLOGY		119
4.1	Introduction	119
4.2	Research Design	120
4.3	Research Framework	120
4.4	Panel Data and Analysis	124
4.4.1	Panel Data	124
4.4.2	Advantages of Panel Data Analysis	125
4.5	Research Population and Sample	128
4.6	Development of Research Hypotheses	130
4.6.1	Hypothesis 1	131
4.6.2	Hypothesis 2	132
4.6.3	Hypothesis 3	133
4.6.4	Hypotheses 4, 5, 6, and 7	134
4.6.5	Hypothesis 8	136
4.6.6	Hypothesis 9	136
4.7	Model Specification and Regressions	137
4.8	Research Variables	144
4.9	Panel Data Analysis Technique	147
4.9.1	Descriptive Analysis	147
4.10	Correlations among Variables	147
4.11	Diagnostic Statistical Tests	147
4.11.1	Normality	148
4.11.2	Outliers	148

4.11.3	Multicollinearity	149
4.11.4	Heteroskedasticity	149
4.11.5	Autocorrelation	150
4.12	Data Analysis and Interpretation	151
4.12.1	Getting the Data Ready for Analysis	151
4.12.2	Panel Data Analysis	151
4.12.2.1	The Fixed-Effects Model	152
4.12.2.2	The Random Effects Model	153
4.13	Chapter Summary	154
CHAPTER 5 : DATA ANALYSIS AND FINDINGS		155
5.1	Introduction	155
5.2	Sample Profile	155
5.3	Descriptive Statistics	156
5.4	Correlation Analysis	158
5.5	Panel Data Analysis	160
5.5.1	Outliers	161
5.5.2	Diagnostic Checks	165
5.5.2.1	Normality	165
5.5.2.2	Multicollinearity	167
5.5.2.3	Heteroscedasticity and Serial Correlation Tests	170
5.5.2.4	Panel Unit Root Test	173
5.5.3	Breusch-Pagan Lagrange Multiplier Test	176
5.5.4	Hausman Test	178
5.6	Hypotheses Testing Results	179
5.6.1	The First Model	180
5.6.2	The Second Model	182
5.6.3	The Third Model	184

5.6.4	The Fourth Model	186
5.6.4.1	Model 4 – A	187
5.6.4.2	Model 4 -B	189
5.6.4.3	Model 4 – C	190
5.6.4.4	Model 4 - D	192
5.7	Further Analysis	193
5.7.1	The Effect of the Financial Crisis on the Share Prices	193
5.7.1.1	The Fifth Model	193
5.7.1.2	The Sixth Model	195
5.7.2	Effect of Sector	196
5.8	Summary of the Major Findings	199
CHAPTER 6 : DISCUSSIONS AND CONCLUSION		206
6.1	Introduction	206
6.2	Discussion	206
6.2.1	Cash Flows and Share Price	206
6.2.2	Accruals and share price	211
6.2.3	Cash flows combined with accruals and share price	213
6.2.4	Auditor’s Firm Size has a Moderating Effect on the Relationship between Cash Flows and Share Price	218
6.2.5	Auditor’s Firm Size has a Moderating Effect on the Relationship between Accruals and Share Price	219
6.2.6	Auditor’s Tenure has a Moderating effect on the Relationship between Cash Flows and Share Price	220
6.2.7	Auditor’s Tenure has a Moderating Effect on the Relationship between Accruals and Share Price	220
6.2.8	Effect of the Global Financial Crisis on Share Price	225
6.3	Contributions and Implications	226
6.3.1	Theoretical Contributions	226

6.3.2	Practical Implications	227
6.3.2.1	Implications for Investors	227
6.3.2.2	Implications for Managers	229
6.3.2.3	Implications for Researchers	230
6.3.3	Methodological Implications	232
6.4	Limitations of the Study	233
6.5	Recommendations for Future Research	234
6.6	Conclusions	236
	REFERENCES	240
	APPENDIX A	263
	APPENDIX B	286

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LIST OF TABLES

NO.		PAGE
Table 4.1:	Population and Sample of Study	130
Table 4.2:	Research variables	145
Table 5.1:	Distribution of the sample companies by sector	156
Table 5.2:	Descriptive statistics of the study variables	156
Table 5.3:	Pearson's Correlation Coefficients.	159
Table 5.4:	Mahalanobis Distances and the Residuals Statistics	164
Table 5.5:	Results of Test for Multicollinearity (VIF and Tolerance)	169
Table 5.6:	The Modified Wald Test for GroupWise Heteroscedasticity	172
Table 5.7:	Outcomes of the Wooldridge Test for Autocorrelation	173
Table 5.8:	Results of the Panel Unit Root Tests	176
Table 5.9:	Outputs of the Breusch-Pagan L.M test for the models of the current study	178
Table 5.10:	Outputs of Hausman Test for the models of the present study	179
Table 5.11:	Results of regression modeling- The first model	181
Table 5.12:	The Results of regression modeling-The second model	183
Table 5.13:	The Results of regression modeling- The third model	185
Table 5.14:	Results of regression analysis related to Hypothesis 4	188
Table 5.15:	Results of regression analysis related to Hypothesis 5	189
Table 5.16:	Results of regression analysis related to Hypothesis 6	191
Table 5.17:	Results of regression analysis related to Hypothesis 7	192
Table 5.18:	The regression result of the cash flows model with financial crisis	194

Table 5.19:	The regression result of the accruals model with financial crisis	196
Table 5.20:	Differences between the financial, industrial, and service sectors according to the cash flows model	197
Table 5.21:	Differences between the financial, industrial, and service sectors according to the accrual model	198
Table 5.22:	Summary of the Hypothesis testing results	203

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LIST OF FIGURES

NO.		PAGE
Figure 4.1:	Research Framework	123

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LIST OF ABBREVIATIONS

AFM	Amman Financial Market
AFS	Audit Firm Size
AGGAs	Aggregate Accruals
AT	Audit Tenure
ASE	Amman Stock Exchange
CAs	Current Accruals
CFOs	Cash Flow from Operations
DEPR	Depreciation
DPS	Dividend Per Share
DTAX	Deferred Tax
EMT	Efficient Market Theory
EPS	Earnings Per Share
ERC	Earning Response Coefficient
EUROSAI	The European Supreme Audit Institution
FASB	The Financial Accounting Standard Board
FCF	Financing Cash Flows
FCFE	Free Cash Flow to Equity
GAAP	General Accepted Accounting Principles
GDP	Gross Domestic Product
IASB	The International Accounting Standards Board
IAASB	International Auditing and Assurance Standards Board
ICF	Investing Cash Flow
IFRS	International Financial Reporting Standards
IPO	Initial Public Offering
JSC	Jordan Securities Commission
MVBV	Market Value to Book Value Ratio
NAV	Net Asset Value
NCAs	Non-Current Accruals
NPAT	Net Profit After Tax
OCF	Operating Cash Flow
PCAOB	Public Company Accounting Oversight Board
P/B	Price to Book Ratio

P/E	Price to Earnings Ratio
POR	Payout Ratio
RET	Rational Expectation Theory
ROA	Return on Assets
ROE	Return on Equity
FCFE	Free Cash Flow to Equity
RET	The Rational Expectation Theory
SDC	Securities Depository Center
SP	Share Price
TAs	Total Accruals
TSEM	Tehran Stock Exchange Market
WCFO	Working Capital from Operations

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**Kesan Aliran Tunai Dan Akruan Terhadap Harga Syer di Jordan Berpandukan
Krisis Kewangan: Kualiti Audit Sebagai Moderator
ABSTRAK**

Kesan maklumat perakaunan terhadap harga syer telah menjadi tumpuan para pengkaji sejak enam dekad yang lalu berikutan krisis kewangan dunia yang semakin meningkat. Justeru, kajian ini cuba untuk memberi nilai tambah kepada kajian-kajian yang sedia ada dengan memberi fokus kepada perkaitan di antara maklumat perakaunan dan harga syer di Jordan. Secara khusus, kajian ini mengkaji perhubungan di antara aliran tunai dan akruan dengan harga syer bagi syarikat-syarikat yang tersenarai di Pasaran Saham Amman (ASE) di Jordan bagi tahun 2002 sehingga tahun 2014. Seterusnya, kajian ini juga bermatlamat untuk mengkaji kesan krisis kewangan terhadap harga syer iaitu sebelum dan selepas tahun 2008. Model kajian dibentuk berpandukan kepada Teori Agensi dan Teori Pesignalan. Data-data yang digunakan untuk kajian ini diambil daripada laporan tahunan 236 buah syarikat yang tersenarai di ASE. Kaedah ekonometrik menggunakan data panel telah digunakan untuk menganalisis data 117 syarikat dengan melibatkan sebanyak 1,521 pemerhatian. Selain itu, kajian ini juga turut memasukkan pembolehubah kualiti audit (saiz firma juruaudit dan tempoh hubungan antara juruaudit dan syarikat) sebagai moderator. Berdasarkan kepada keputusan analisis data panel yang telah dijalankan, model kesan tetap telah digunakan untuk mengkaji kesan aliran tunai dan akruan terhadap harga-harga syer. Kajian ini mendapati bahawa kombinasi antara aliran tunai dan akruan mempunyai kesan yang signifikan terhadap harga syer syarikat-syarikat di Jordan yang tersenarai di ASE, dan kombinasi aliran tunai dan akruan ini dapat menerangkan 40.93% variasi yang berlaku terhadap harga syer. Selain itu, kajian ini juga mendapati bahawa aliran tunai, secara statistiknya telah mempunyai kesan yang signifikan terhadap harga syer syarikat-syarikat di Jordan yang tersenarai di ASE. Tiga faktor iaitu aliran tunai operasi, aliran tunai pembiayaan, serta aliran tunai pelaburan dapat menerangkan 13.27% variasi yang berlaku terhadap harga syer. Hasil analisis data menunjukkan aliran tunai operasi mempunyai kesan yang positif terhadap harga syer syarikat manakala kesan aliran tunai pembiayaan terhadap harga syer adalah negatif. Hasil kajian juga menunjukkan bahawa akruan yang terdiri daripada akruan agregat, akruan semasa dan jumlah akruan mempunyai hubungan yang positif terhadap harga syer syarikat-syarikat di Jordan yang tersenarai di ASE. Kombinasi antara akruan agregat dan akruan semasa didapati dapat menerangkan 38.92% variasi yang berlaku terhadap harga-harga syer. Kualiti audit, sama ada saiz firma juruaudit atau tempoh hubungan antara juruaudit dan syarikat telah menunjukkan kesan moderator yang signifikan terhadap perkaitan antara harga-harga syer dengan akruan dan juga aliran tunai; manakala krisis kewangan yang berlaku pada tahun 2008 telah menunjukkan kesan negatif terhadap harga syer syarikat-syarikat Jordan yang tersenarai di ASE. Kajian ini turut mengemukakan beberapa cadangan dan penambahbaikan kepada para pengguna maklumat kewangan serta kepada para pengkaji masa depan.

The Effects of Cash Flows and Accruals on The Share Price in Jordan with Special Reference to Financial Crisis: Audit Quality as A Moderator
ABSTRACT

Effect of accounting information on the share price has been having the share of attention from researchers for over six decades owing to the increasing of global financial crisis. Hence, this study attempts to contribute to literature by investigating such relationship in Jordan, a developing country. Specifically, this study investigates the relationship between the cash flow and accruals on share price of listed companies on Amman stock Exchange for the year 2002 to 2014 also the effect of financial crisis on the share price before and after 2008. The model of this study was theoretically founded on both the agency and the signaling theories. To examine the developed model, the required data were gathered from the annual reports of 236 listed firms. In analyzing the data, this study utilized the panel data methodology on 117 companies with 1521 observations. Moreover, this study used audit quality (audit firm size and audit tenure) as moderating variable. Based on the panel data results, the fixed effect model was used to examine the effect of the cash flows and accruals on the share price. The accruals and cash flows combined have significant effects on the share prices of the Jordanian companies listed on ASE and that they together explain 40.93% of the variations in these prices. In addition, the study found that the cash flows have a significant effect on the share prices of the Jordanian companies listed on ASE and that the operating cash flows (OCFs), financing cash flows (FCFs), and investment cash flows (ICFs) together explain 13.27% of the variations in these prices. Whereas the OCFs have positive effect on the share prices of these companies, the effect of FCFs is negative. On the other hand, the accruals (aggregate accruals (AGGAs), current accruals (CAs), and total accruals (TAs)) have a statistically-significant, positive effect on the share prices of the Jordanian companies listed on ASE and CAs, TAs and AGGAs, together explain 38.92% of the variations in these prices. Audit quality, whether auditor's firm size or auditor's tenure, has significant moderating effect on associations of the share prices with accruals and with cash flows and the 2008 financial crisis had negative effects on share prices of the Jordanian companies listed on ASE. Besides providing suggestions for future research work, this study provides deep insights into relative usefulness of cash-based and accrual-based accounting measures and assist investors, regulators, analysts, and other stakeholders in evaluating the liquidity and financial performance of Jordanian companies listed on ASE, which may result in better allocation of economic resources by enabling the investors to take informed investment decisions, thus promoting a more efficient Jordanian capital market.

CHAPTER 1 :INTRODUCTION

1.1 Background of the Study

The accounting information drawn from published financial statements is a vital source of information for varied purposes. The firm owners usually utilize the reported financial information to evaluate managers' performance in carrying their stewardship responsibilities and for taking economic decisions (Godfrey, Hodgson, Holmes & Tarca, 2006). The employees, managers, researchers, and the government all analyze companies and make decisions based primarily on financial information, which can be drawn from many sources, including advice from analysts, the financial press, and changes in economic and market conditions. However, one of the major sources of financial information is firm's reports (Scott, 2003). The investors, managers, creditors, owners, and other users should be able to depend on the financial statements so that they can take informed investment decisions. Therefore, firms are supposed to have high-quality financial reporting and the management personnel carry the responsibility of preparing financial statements that, in a correct way, reflect reporting requirements such as the International Financial Reporting Standards (IFRS) or the General Accepted Accounting Principles (GAAP) (Arens, Elder & Beasley, 2010).

Assessing share price of a firm is an important element in the economic decision-making process (e.g., assessing risk and returns of probable investments; valuing securities; evaluating short-term versus long-term investments; and capital budgeting). In this regard, the fundamental objective of the financial statement is to enable its users to

assess firm's ability to predict share price in sustainable manner, thus enhancing their own investment decision making (IASB, 2004).

The fundamental facets of forecasting the share price is to find roots in the financial theory which considers the share prices to be equal to the current value of the estimated (predicted) future cash flows (Keown, Martin, Petty & Scott, 2005; Watson & Head, 2007). It is argued that firms' share prices in an efficient market hold information about, and reflect, anticipated future benefits. Previous research (e.g., Charitou, Clubb & Andreou (2001), Pourheydari & Ahmadi (2008), and Penman & Yehuda (2009)) supports this perspective and provides evidence on that share price is associated significantly with reported operating cash flows (OCFs) and earnings.

The accrual accounting basis is the most widely-accepted accounting convention that is recommended when preparing the financial statements (IASB, 2004). The Financial Accounting Standard Board (FASB) of the United States too has stressed that the information content of reports based on accrual accounting principles is better than cash receipts and payments for evaluating firm's capability to sustainably generate cash flows. Arnedo, Lizarraga and Sánchez (2012) brought to notice that the two main accounting standards boards (FASB and The International Accounting Standard Board (IASB)) agree on superiority of accrual-basis accounting over the cash basis in providing summary indicators of company's performance. These boards support that, generally, accrual-based earnings provide better indication of timing and the uncertainty of potential cash flows than information confined to cash receipts and payments. Rahimi and Motlagh (2014) argued that operating earnings are among the most important factors which encourage investors to invest. So, solid knowledge of how earnings behave using some

reliable criterion is prerequisite for making successful investment. In consequence, specification of a measure related to operational earnings is of topmost importance. Many economic and accounting criteria have been suggested in this regard, including accounting indices like accruals and cash flows from operational activities. Since in economic theories the firm's value is based on the present value of its future cash flows, and the earnings are used as alternative for cash flows, then prediction of earnings is highly important and, in consequence, one of the goals of financial reporting is helping creditors and investors to forecast future earnings.

Accruals are to a large extent controlled by the management personnel who may manipulate the accrual items to reflect better than true firm performance; a practice commonly known as 'Earnings Management'. Auditing is one of the ways to stop or reduce earnings management since an intervention that misshapes accuracy of the reported earnings will in turn influence users' decisions (Karaibrahimoğlu & Özkan, 2011). When the financial information is supported by audited reports, the investors may perceive the reliability of that information. However, if 'Unqualified' opinion was erroneously issued for a company, then the investors will be basing their decisions on non-reliable information, which may result in unsuitable decisions are being taken. Hence, the financial statements should in general be truthful, transparent, and complete (Flanagan, Muse & O'Shaughnessy, 2008).

Financial statements are the fundamental source of information in the capital markets. It is argued that high quality of audit will improve the perceptions of reliability for the users (investors and shareholders) of this information. One of the basic functions of the external auditors is to impart credibility on financial reports by assessing,

independently, the accuracy and fairness of the information presented in the reports. There is evidence (e.g., Balsam, Krishnan & Yang (2003), Krishnan (2003), and Khurana & Raman (2004)) supporting that improved audit quality increases perceived reliability of the financial statements. Some researchers (e.g., Doyle, Ge & McVay (2007) and Drake, Myers & Myers (2009)) provided evidence indicating that quality of financial reporting affects accruals and that a low-quality audit means a high level of mispricing.

Fundamentally, the Stakeholder Theory, the Signaling Theory, and the Agency Theory of Inspired Confidence define auditing as a mechanism for mitigating information asymmetries amongst involved parties (Okolie, Izedonmi & Enofe, 2013; Okolie, 2014a). The high auditing quality treats information asymmetry and reduces the uncertainties related to earnings. Owing to that audit quality is not observable directly, early researchers employed varied proxies to approach it and study its impacts. The most common means of quantifying audit quality is 'Brand Name', which may also be expressed as auditor's firm size (Reynolds & Francis, 2000; Khurana & Raman, 2004), and industry specialization (Balsam et al., 2003; Moroney, 2007). On the other hand, Caramanis and Lennox (2008) employed audit engagement hours as proxy for audit quality and found that quality of client's earnings is better when the auditors expend more time on audit engagements. Moreover, Gunny and Zhang (2009) established link between audit quality, approached by auditor's rank, and client's earnings quality. They reported that clients of auditors with higher rank had higher earnings quality, and vice versa.

The most recent economic crisis which the world witnessed is the financial crisis, also referred to as the 2008-2009 crisis and the 2008 crisis. According to Athukoralalage, Valadkhani, and O'Brien (2010), this crisis began in early 2007 in the USA with collapse

of the sub-prime mortgage market, followed by several other financial catastrophes like bankruptcy of the Lehman Brothers Holdings Incorporation. In line with this, Abubakar, Jagongo, Almadi, and Muktar (2014) spotlighted that the financial crisis was a result of currency, liquidity, fluctuations in the share prices of banks, and risks in business with banks that started with major financial institutions of the USA and spread all over the world. These researchers are of the opinion that financial instability of the leading American and European investment banks, mortgage banks, and insurance companies subsequent to the sub-prime mortgage crisis were the root cause of this crisis from the global standpoint. As to consequences of this crisis, the African Development Bank Group (2009) summarized the main effects of the financial crisis in four aspects: (i) collapse of the financial markets; (ii) increase in the sovereign debt spread; (iii) volatility of the exchange markets; and (iv) fall of commodity prices.

The financial crisis of 2008 is categorized as the world's largest crisis after the recession of the 1930s (Njiforti, 2015) whereby the economic cycle of the whole world was affected (Abubakar et al., 2014). However, while the former crisis caused stock market crash, the latter crisis resulted in credit market decline (Jahromi, Yazdi, & Sarlak, 2013). In effect, this crisis was unprecedented in its effects on the market values of stocks and on numerous other assets. In this regard, Naude (2009) reported that by October 2008, this financial crisis had erased about US\$ 25 trillion from the values of the stock markets worldwide and Aisen and Franken (2010) underlined that this crisis was unique in terms of wealth destruction that was estimated at US\$ 50 trillion, which is equivalent to a year of the world GDP. Further lights will be shed on this crisis in the next sections and chapters, especially in the literature review section.

Thus far, little is known in Jordan about the capability of accounting information to explain changes in the share prices of companies listed in the Amman Stock Exchange (ASE). As will, reaction of the Jordanian market, especially the share prices of listed companies, to the 2008 financial crisis is not much researched. Therefore, this work investigates value relevance of accounting information in ASE, with particular emphasis on determining whether or not accounting data capture information that influence share prices of the firms listed on ASE. In view of this and the foregoing discussion, it is of great interest to investigate the effects of cash flows and accruals on the share prices of Jordanian companies listed on ASE for future improvement of the levels of performance of the listed companies and their market values. Consequently, the main objective of this research is to investigate the effects of cash flows and accruals on the share prices of Jordanian companies and to examine the potential for audit quality to moderate these effects, with particular emphasis on the effect of the 2008 financial crisis on interrelations between these variables. To this end, this study employs the Agency Theory and the Signaling Theory to provide the needed theoretical basis for an exploration of the variables that explain the importance of the accounting basis and the relationships of its elements with the share prices of companies in Jordan. Outcomes of this study are thus expected to contribute to predictions of future performance and investment opportunities of the investigated Jordanian, and similar, firms.

1.2 Problem Statement

Numerous studies (e.g., Chotkunakitti (2005), Lorek and Willinger (2009), Daraghma (2010), Waldron and Jordan (2010), and Ebaid (2011)) investigated the ability of accruals and cash flows to provide forecasts of future Operating Cash Flows (OCFs).

However, those studies obtained varying and inconsistent, even contradictory, findings. For instance, Lorek and Willinger (2009) examined the ability of previous OCFs and previous accrual earnings to provide forecasts of future OCFs during the period from 1990 to 2004 and found that cash flow from operations (CFOs) has incremental information content over that of accruals. Comparable finding was reported by Waldron and Jordan (2010) who explored and compared the information contents of accrual earnings and current OCFs as predictors of future OCFs during economic boom and economic duress (1994-2004) and found that the current OCFs outdo accrual earnings in forecasting future cash flows. To the contrary, Daraghma (2010) studied the relative and the incremental information contents of earnings and OCFs in Palestine for 23 firms listed on the Palestinian Stock Exchange Market from 2004 to 2008 and found that earnings had incremental information content over the OCFs.

Furthermore, a major line of research investigated the additional explanatory power of accruals via disaggregating earnings into the OCF and accrual components of earnings and then holding comparisons between the predictive capacities of OCFs, earnings, and the combination of OCFs and aggregated/disaggregated accruals. These studies reported conflicting results. Some studies (e.g., Barth, Cram & Nelson (2001), Al-Attar & Hussain (2004), and Ebaid (2011)) found that disintegrating earnings into aggregated accruals and individual OCFs enhances the predictive capability of earnings and that further disintegration of accruals into individual accrual components like accounts payable changes, accounts receivable changes, depreciation and amortization expenses, and inventory changes further raises the predictive capability of earnings. Though, early research (e.g., Chotkunakitti (2005)) presented conflicting evidence on that OCFs as the only predictor are superior to OCFs plus aggregated/disaggregated accruals

and to earnings. Other studies (e.g., Khadash, Badran & Nassar (2013)) even reported no significant difference between OCFs alone and OCFs plus accruals as predictors of share prices of companies. These inconclusive results indicate a knowledge gap that merits further investigation.

On the other hand, a noticeable line of research investigated association of share prices of companies with earnings only (e.g., Al Barrak (2011)); or with cash flows only, integrated or disintegrated (e.g., Hadi, Bashir, Abolfazl & Maryam (2013) and Al Zararee & Al-Azzawi (2014)); or with accruals only, integrated or disintegrated (e.g., Hirshleifer, Hou & Teoh (2007)). Thus, the majority of the works published in the literature addressed the sources of variations in share prices of companies in an isolated manner. Studies exploring the combined effects of cash flows, integrated or disintegrated, and accruals, integrated or disintegrated, on share prices of companies are remarkably few, especially in Jordan.

As regards the effects of cash flows on share prices of companies, it is noticed that earlier research either (i) did not decompose cash flows into their three major elements (investing, operating, and financing cash flows (ICFs, OCFs, and FCFs, respectively) or (ii) did break the cash flows into these elements but did not investigate the individual effects of all these three elements on share prices of companies. Most of the previous studies concentrated more, or only, on the OCF (e.g., Habib (2010) and Waldron & Jordan (2010)), thus leaving two knowledge gaps in market research. In this regard, the present study addressed these knowledge gaps in two steps: (i) taking into account all three elements of cash flows; and (ii) studying the individual, as well as the combined, effects of these elements on the share prices of companies.