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The Value Relevance of Accounting Information in Emerging Stock Exchange Markets "Case of Jordan"

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Abstract

In a different way from the pervious studies concerning factors affecting individual investors' decisions in stock markets, this study aimed to assess the value relevance of accounting information for investment decisions, as well as to investigate if investors` demographic and behavior factors affect this value relevance. A questionnaire was developed and distributed to a sample of individual investors in Amman Stock Exchange (ASE). The results indicated that Jordanian individual investors perceive accounting information to be value relevant to investment decisions regardless of their demographic and behavior factors. Also, the study reveled that investment decisions are affected by other factors, such as trading volume, key investors, and company reputation. A secondary result indicated that trading frequency is affected by factors of sex, portfolio size, and monthly income. Finally, the study revealed that individual investors exhibit behavioral biases such as: overconfidence, herd, and personal judgment.

Key Words: Individual investors, Decisions, Accounting information, Value relevance, Amman Stock Exchange.

1. Introduction

Accounting, as an information system, is assumed to play a vital role in capital allocation. Because investors have limited capital resources, they try to use them rationally. Accounting should help investors and other users in taking these rational decisions by providing them with accurate and timely information. Some argued that accounting outputs are widely used by investors in the process of managing their security portfolios Barlev & Levy (1981), and serve as useful inputs to financial decision makers Lawrence & Kercsmar (1999), and play a vital role in the capital markets. So, the main accounting standard setting bodies (IASB and FASB) have adopted this investor oriented information usefulness perspective and stated that the primary purpose of accounting is to meet the needs of capital markets Chen et al. (2001). Likewise, Chandra & Kumar (2012) asserted that investors rely on traditional information sources including company's financials for their investment decision making process.

However, an opposite point of view exists; according to Gniewosz (1990), efficient market research indicated that financial reports contain only modest information to investor. Also, Ball (2013) stated that accounting does not provide investors with brand new information and there are many competing information sources available to investors that are more timely than periodic financial reporting. So, accounting reports in fact do not provide a relatively large proportion of new information used by investors in stock markets. Luciana et al. (2013) argued that investors need non-accounting information in addition to the accounting information because the annual reports are based on past information and the stock transactions made by investors can not be delayed until the annual reports are published.

For investors, the ultimate goal is to make as much money as possible by acting in such a way that the highest possible profit is realized at minimal risk. But, Bohlin & Rosvall (2014) argued that until yet the optimal way to trade is far from obvious, and many factors influence trading behavior. So, the crucial question is to what extent stock market investors perceive accounting information to be value relevant to their decisions, and what factors affect this value relevance. It is assumed that information structure and the characteristics of investors systematically influence investment decisions, and when it comes to investing decisions, an individual is not always as rational as he thinks he is. Investor's rationality determined by several demographic, economic, behavior, and cognitive factors (e.g., Chandra 2009, Chandra & Kumar 2012, Suresh 2013, ANGELOVSKA 2014). Accordingly, many previous studies examined the effect of these factors on investors' decisions (e.g., KELLY et al. 2012, Charles & Kasilingam 2013, MERLI & ROGER 2013, BURROUGHS 2015). Although there are some studies in the Middle East developing countries stock exchange markets (e.g., Abu Zayed 2008, Al Enezi 2010, Al Swaity 2012, Rahman et al. 2013), these studies are limited. For instance, Abdallah & Hilu (2015) indicated that the literature on financial behavior that concentrates on the Middle East countries is limited.

This study aimed to assess the value relevance of accounting information for investment decisions, analyze if investors demographic and behavior factors affect this value relevance, identify other factors that affect investment decisions, and identify some behavior biases and opinions of individual investors in ASE. The remainder of the paper is organized as follows; section two presents the previous literature on the subject; section three describes data collection process, study variables, hypotheses to be tested and statistical techniques adopted; section four discusses study findings and section five presents study conclusions and limitations.

2. Literature Review

The previous literature found is classified into the following categories: types of investors, behavioral aspects, investor characteristics, accounting information value relevant, and Middle East and Jordan literature.

2.1. Types of investors: Holm & Rikhardsson (2008) study distinguishes between experienced and novice investors and shows that the experience level of investors affect investment decisions. Kumar & Lim (2008) study distinguishes between narrow framing investor and broader framing investor, showing that narrow framing investor considers each investment decision as unique, often isolating the current decision from other investment decisions and exhibits a greater propensity to sell the winners, relative to the losers, in their portfolios. While broader framing investors evaluate the total performance of their respective portfolios and are less likely to exhibit this asymmetry. Chitra & Sreedevi (2011) classify investors either as 'abstract investors', the investor take decisions based on ideas, or 'concrete investors', the investor take decisions based on facts. Suresh (2013) distinguishes between investing and trading. Investing is buying the stocks based on strong fundamentals and holds them for the long run. While trading is for a short period, generally between one day and six months.

2.2. Behavioral aspects: Concerning herding behavior, which is defined by MERLI & ROGER (2013) as "The herding behavior is defined in a broad way as an investor's imitation of the actions of others", several studies revealed that herding behavior exists in stock markets, it was found in the USA (Barber et al., 2009), Finland (Shive, 2010), Lithuania (Levišauskaitė & Kartašova, 2011), Saudi Arabia (Rahman et al., 2013) and in France (MERLI & ROGER, 2013). On the contrary, (TRENCA et al., 2015) study does not confirm the presence of herding behavior in Romania.

In terms of tendencies to gambling, KUMAR (2009a) concluded that at the aggregate level, individual investors prefer stocks with lottery features, and like lottery demand, the demand for lottery-type stocks increases during economic downturns. In addition to this result, a complex set of biological, psychological, religious, and socioeconomic factors jointly determines an individual's propensity to gamble. In particular, relatively poor, less educated, young, single men who undertake nonprofessional jobs are expected to invest disproportionately more in lottery-type stocks. KUMAR (2009b) study revealed that gambling tendencies could motivate some investors to hold their losses stocks longer when idiosyncratic volatility is high. Investors with a gambling mind-set might wait for their stock gambles to yield the desired extreme payoff. Also, Chitra & Sreedevi (2011) revealed that stocks with high volatility may grab retail investors' attention.

In other aspects of investor behavior, Lim (2006) study examined whether mental accounting of multiple outcomes influences the way investors sell stocks and found that investors are more likely to sell multiple stocks when they realize losses than gains. Ivković & Weisbenner (2007) study revealed that individual investors may seek to reduce the search costs and circumvent their lack of expertise by relying on word-of-mouth communication with those around them. Barber & Odean (2008) confirmed the hypothesis that individual investors are net buyers of attention grabbing stocks (e.g., stocks in the news, stocks experiencing high abnormal trading volume, and stocks with extreme one-day returns). Attention-driven buying results from the difficulty that investors have, searching the thousands of stocks they can potentially buy. Whereas investors do not face the same search problem when selling because they tend to sell only stocks they already own. Chandra (2009) stated that in accordance with standard finance theories, it is assumed that investors make decisions based on the expected return and risk calculation. Levišauskaitė & Kartašova (2011) study showed that Lithuanian individual investors suffer from basic biases such as overconfidence, anchoring, mental accounting, herd behavior, confirmation and overreaction which cause irrational behavior. BURROUGHS (2015) study showed that investors often incorrectly make judgments based on personal beliefs, past events and preferences, and these biases lead them away from rational.

2.3. Investor characteristics: Barber & Odean (2001) study showed that the relationship between sex and trading frequency is due to the greater overconfidence of male. The results indicated that male trade is more frequent than female. Chandra (2009) analyzed the impact of competence of individual investors on their trading behavior. The results indicated that investors with high level of competence tend to trade more frequently and that age,

education, and income were the most influencing factors of the individual investors' competence in the stock market activities and trading behavior. KELLY et al. (2012) study revealed that for less sophisticated investors, financial analysts play a critical role in interpreting, analyzing, and disseminating management disclosures. Charles & Kasilingam (2013) study found that investors do not often make wise decisions while doing investments because they are influenced by some biases which hinder their decisions. Demographic factors (e.g., age, sex, education, occupation, profession, financial dependents and income) influence these behavioral biases which in turn affect their investment decisions.

2.4. Accounting information value relevant: Gniewosz (1990) study examined the use of accounting information by institutional investor in the investment process. This study revealed that the significance of accounting information changes throughout the year from serving as a primary source of information to serving in a confirmatory role. In Asia, Chen et al. (2001), examined whether investors in the Chinese stock market perceive accounting information to be value-relevant. This study provided evidence that accounting information is value-relevant to investors in the Chinese market despite the young age of the market and the perception of inadequate accounting and financial reporting in China. Also, Hussain & Nasrin (2012) study found that accounting information is one of the most important principal factors influencing individual investors in Bangladesh. In Europe, Ionaşcu & Ionaşcu (2012) investigated the use of accounting information by Romanian financial analysts, and found that analysts rely more on simple valuation models and that accounting variables are perceived as less important compared to macroeconomic factors. Also, ANGELOVSKA (2014) study aimed to identify the most and the least influencing factors on the Macedonian Stock Exchange small investor behavior. This study found that the most affecting factor is the neutral information. While factors such as reputation of the company, acceptable stock price, and accounting information are identified as the second most influencing category for the Macedonian stock investors. In Africa, Obamuyi (2013) study tried to determine the main factors influencing investment decisions of investors in the Nigerian capital market and how these factors are related to the investors' socio-economic characteristics. The results indicate that accounting information (e.g., past performance of the company's stock, expected stock split, dividend policy, and expected corporate earnings) is the most influencing factor on investment decisions of investors in Nigeria. While the least influencing factors include religions, rumors, loyalty to the company's products/services, opinions of members of the family and expected losses in other investments. Also the study finds that the socio-economic characteristics of investors (age, sex, marital status and educational qualifications) statistically and significantly influenced the investment decisions of investors in Nigeria.

2.5. Middle East and Jordan literature: Abu Zayed (2008) study aimed to identify the behavioral factors that affect the investment decisions of investment managers and financial brokers at ASE in Jordan. The study has concluded that brokers and investment managers have a tendency to avert losses and are subject to the effect of herd behavior. Also, the results show that there is a strong relationship between behavioral factors and investment decisions made by investment managers and brokers. In Kuwait, Al Enezi (2010) study aimed to explore the effect of accounting information on the stock market value and on the subsequent investment decisions in Kuwait Stock Exchange Market. The results indicated that there are effects of accounting information included in the financial statement on the investment decisions in Kuwait Stock Exchange Market. Fares & Khamis (2011) study investigated individual investors' trading behavior in Jordan. Four behavioral factors have been tested (age, accessibility to the internet, level of education, and interaction with broker) that may influence investors' behavior. Results indicated that age, accessibility to the internet, and level of education had a significant positive effect on investors' behavior, while the interaction with broker had a significant negative effect on investors' behavior. Al Swaity (2012) study aimed to identify the effect of the information content of the annual financial reports of Jordanian industrial shareholder companies on investors decision, and explore the effect of demographic factors of investor on their decisions. The author found that information content of the annual financial reports is vital for investment decision, and found that the demographic factor of investor is considered as one of the most important factors that affect investment decision. Al Sawalqa (2012) study examined the importance of different corporate financial information sources in investment decision-making in Jordan. The result of the study indicated that Jordanian individual investors ranked corporate annual reports as the most important source of information for the purpose of their investment decision-making. The results also indicated that the usage of corporate annual report and the discussion with company staff contribute significantly towards a good investment opportunity. Rahman et al. (2013) study investigated herding phenomenon in Saudi Arabian stock market, and the results indicated a strong and persistent herding towards the market, and this behavior is attributed to the lack of quality information available to investors.

3. Research method

3.1. Data instrument and study sample

A questionnaire was used as an instrument to collect data. As stated by Chandra & Kumar (2012), questionnaire survey is a well adopted approach in behavioral finance research to assess individual investor behavior (also, see; Holm & Rikhardsson 2008, Chandra 2009, Chitra & Sreedevi 2011, Levišauskaitė & Kartašova 2011, Ionaşcu & Ionaşcu 2012, Al Sawalqa 2012, Chandra & Kumar 2012, Obamuyi 2013, Charles & Kasilingam 2013, ANGELOVSKA 2014, Abdallah & Hilu 2015). Accordingly, a sample was drawn from individual investor in ASE market in Jordan. The researcher depended on the previous literature and his own experience to develop the questionnaire. Several academicians were consulted to assess the construct and content validity of the questionnaire. 334 questionnaires were distributed to individual investor in ASE market. Only 92 questionnaires were collected. 8 of them were excluded because they were fully or partially uncompleted, which means that the current study is based on 84 usable questionnaires. And this reflects 25% response rate. Although this percentage is low, some previous studies in this field achieved a low response rate (for example, 27% in Nagy & Obenberger, 1994 study). Proper care was taken to ensure that investors understood all the questions asked during the survey, and answered them truthfully.

3.2. Study variables

In addition to the factors extrapolated from previous literature, other factors that are supposed to influence the investors' investment decisions in ASE market in Jordan are also considered. The questionnaire includes four sections with a well-designated covering letter. All questions of the questionnaire are close-ended. The first section includes seven demographic questions; the second section includes twelve questions concerning investment and attitudes (e.g., investment period, preferred sector, amount invested, monthly income, purpose of investment, nature of the investment); the third section includes one question concerning the value relevance of accounting information for investment decisions and the fourth section includes nineteen questions concerning factors affecting investment decision, investors' behavior bias, and investors' opinion. Five-point likert scale was used in developing the third and fourth sections (e.g. strongly disagree = 1, strongly agree = 5), (see for example, Chandra & Kumar (2012)). The questionnaire includes simple and direct questions in order to avoid any confusion to the investors.

3.3. Hypotheses

Based on the previous discussion, the following hypotheses were developed:

Main hypotheses:

MH1: Individual investors perceive accounting information to be value relevant to investment decisions.

MH2: Demographic and behavior factors affect the value relevance perception of the accounting information.

Secondary hypothesis: although this study concentrated on the issues related to the value relevance of accounting information in investment decisions, the data collected through the study instrument allow testing hypothesis related to investors' behavior in behavioral finance theories which has not been tested previously in Jordanian literature. This hypothesis is based on Chandra (2009) study that tries to establish a link between investors' competence and the trading frequency. Accordingly, the following secondary hypothesis was developed:

SH: Individual investors' competences affect trading frequency.

4. Results and Discussion

4.1. Demographic Characteristics

Table 1 shows the demographic characteristics of the study sample of the individual investors. In particular, 82.1% of the sample was male. 96.4% was Jordanian. 22.6% of the sample was between 21-30 years old, 31% was between 31-40 years old, and 42.9% was over 40 years old. On the other hand, 78.6% of the sample was married. Concerning education, 16.7% of the sample have a diploma, 60.7% have B.A., 8.3% have M.A., and 3.6% of them have Ph.D. In the same context, 58.3% of the sample has a university certification in business majors (e.g., Accounting, Management, Finance, and Economics). Finally, 11.9% of the sample works at public sector, 56% work at private sector, and 17.9% of them work as free businessmen.

Table 1. Demographic characteristics of investors sample

Sex	**Male**	**Female**			
No.	69	15			
%	82.1%	17.9%			
Nationality	**Jordanian**	**Non-Jordanian**			
No.	81	3			
%	96.4%	3.6%			
Age	**< 20 years**	**21 - 30**	**31 - 40**	**41 - 50**	**> 50**
No.	3	19	26	10	26
%	3.6%	22.6%	31%	11.9%	31%
Marital Status	**Married**	**Single**			
No.	66	18			
%	78.6%	21.4%			
Education level	**High school**	**Diploma**	**B.A.**	**M.A.**	**Ph.D.**
No.	9	14	51	7	3
%	10.7%	16.7%	60.7%	8.3%	3.6%
University major	**Business**	**Other**			
No.	49	35			
%	58.3%	41.7%			
Current work	**Public sector**	**Private sector**	**Free businesses**	**Non-working**	
No.	10	47	15	12	
%	11.9%	56%	17.9%	14.3%	

4.2. Descriptive Statistics

As Table 2 illustrate, 26.2% of the investors have invested in stock market for less than five years, 39.3% of them between five and ten years, 17.9% between eleven and fifteen years. In terms of preferred sector, it's obvious that 44% of investors prefer investment in all sectors, while service sector seems to be the most attractive sector, followed by commercial sector, then by industrial sector, and the least attractive sector was bank sector. This confirms the work of Al Sawalqa (2012) which documented that the service sector is the most attractive sector for investor in ASE. Concerning portfolio size, 89.3% of investors invest less than (105,000 $), and this means that the majority of individual investors are small investors. On the other hand, 79.8% of investors have less than (2,800 $) monthly income and 17.9% of them have a monthly income between (2,801 – 5,600 $).

Concerning the nature of investment, 66.7% of investors stated that their investment is a short term investment, while 33.3% stated that their investment is a long term investment. This is related to the purpose of investment because the same percentage of investors (66.7%) stated that the main purpose of their investment is to achieve a quick gain, while 20.2% invest in stock market because they have surplus money. However, on the contrary of this purpose, 71.4% of investors realized loss during the investment period, which is reflected on the tendency about the investment, where 57.1% of investors are pessimistic about their investment. Regarding decisions, 64.3% of investors considered purchasing stock as the hardest decision compared with the decision of selling the stock. Also, with regard to decision, 53.6% of investors prefer to sell loser stock as soon as possible, while the rest (46.4%) prefer to hold it until their prices increase. These results concur with Lim (2006) and Barber & Odean (2008) studies. Finally, a considerable percentage of the investors (79.8%) usually make less than sixteen trading transactions monthly, and invest in less than eleven companies. In this regard, Merton (1987) study cited by Barber & Odean (2008) notes that individual investors tend to hold only a few different common stocks in their portfolios because gathering information on stocks requires resources and suggests that investors conserve these resources by actively following only a few stocks.

Table 2. Descriptive statistics

					Investment period (in years)
	< 5	**6 - 10**	**11 - 15**	**15 - 20**	**> 20**
No.	22	33	15	4	10
%	26.2%	39.3%	17.9%	4.8%	11.9%
					Preferred sector(s)
	Industry	**Commercial**	**Service**	**Banks**	**All**
No.	9	12	21	5	37
%	10.7%	14.3%	25%	6%	44%
					Portfolio size (in thousand US. Dollars)
	< 35	**35 - 70**	**71 - 105**	**106 - 141**	**> 141**
No.	54	14	7	3	6
%	64.3%	16.7%	8.3%	3.6%	7.1%
					Monthly income from all sources (in US. Dollars)
	< 2,800	**2,801 – 5,600**	**5,601 – 8,400**	**8,401 – 11,200**	**> 11,200**
No.	67	15	1	0	1
%	79.8%	17.9%	1.2%	0%	1.2%
					Overall investment result in stock market
	Gain	**Loss**			
No.	24	60			
%	28.6%	71.4%			
					Purpose of investment
	Quick gain	**Invest surplus money**		**Dividends**	**Unspecific**
No.	56	17		5	6
%	66.7%	20.2%		6%	7.1%
					Difficult decision
	Purchasing stock	**Selling stock**			
No.	54	30			
%	64.3%	35.7%			
					Decision for loser stock
	Selling it as soon as possible	**Holding it until price increase**			
No.	45	39			
%	53.6%	46.4%			
					Tendency about the investment
	Optimistic	**Pessimistic**			
No.	36	48			
%	42.9%	57.1%			
					No. of companies currently investing in
	< 5	**6 - 10**	**11 - 15**	**16 - 20**	**> 20**
No.	42	25	8	1	8
%	50%	29.8%	9.5%	1.2%	9.5%
					Monthly trading frequency
	< 5	**6 - 10**	**11 - 15**	**16 - 20**	**> 20**
No.	32	25	10	4	13
%	38.1%	29.8%	11.9%	4.8%	15.5%
					Nature of investment
	Short term	**Long term**			
No.	56	28			
%	66.7%	33.3%			

4.3. Hypotheses Testing

4.3.1. Main Hypotheses

Table 3 shows the One Sample T-test results for the first main hypothesis. As shown, the mean for this hypothesis is significant. Therefore, this hypothesis is accepted, which means that Jordanian individual investors perceive the accounting information to be value relevant for investment decisions. This result concurs with previous studies in Jordan, where Al Swaity (2012) and Al Sawalqa (2012) studies found that information content of the annual financial reports is the most important source of information and vital for investment decision made by the Jordanian individual investors. Also, this result concurs with previous studies in other countries such as; Chen et al. (2001) study in China, ANGELOVSKA (2014) study in Macedonia, and Obamuyi

(2013) study in Nigeria which found that accounting information is value relevant for investment decisions in stock markets.

Table 3. One Sample T-test results for the first main hypothesis

Hypothesis	No.	Mean	Std. Dev.	t	Sig.	95% Confidence Interval of the Difference	
						Lower	Upper
Accounting information value relevance	84	4.077	.57176	65.353	.000	3.9529	4.2011

Regarding the second main hypothesis, Tables 4 and 5 show the statistical result of Independent Sample T test and One Way ANOVA test that are used to test this hypothesis. This hypothesis stated that "demographic and behavior factors affect the value relevance perception of the accounting information". The factors tested are grouped into two groups according to the statistical test that should be used, where the first group includes factors of: sex, marital status, university major, nature of investment, tendency, and result in stock market, while the second group includes: age, education level, current work, investment period, preferred sector, portfolio size income, purpose of investment, number of companies, and trading frequency.

As shown in Tables 4 and 5, the means differences within any group are not significant. Therefore, the second main hypothesis is rejected, which means that demographic and behavior factors do not affect the value relevance perception of the accounting information. Although most of the previous studies revealed that these factors affect investor decisions (e.g., Chandra 2009, KELLY et al. 2012, Charles & Kasilingam 2013, MERLI & ROGER 2013, BURROUGHS 2015). This study does not aim to find the effect of these factors on investment decisions. It aimed to find if the demographic and behavior factors affect the value relevance perception of the accounting information. By linking the results of the first and second main hypotheses, it can be argued that individual investors perceived the accounting information to be a value relevant to the investment decisions, regardless of their demographic and behavior factors (e.g., age, sex, marital status, education level, nature and purpose of investment, amount invested, result in the market, investment period, amount invested, tendency).

Table 4. Independent Sample T- test results for the second main hypothesis

Factor		Levene's Test		t-test for Equality of Means				
		F	Sig.	T	df	Sig.	Mean Difference	Std. Error Difference
Sex	Equal variance assumed	0.094	0.760	0.077	82	0.939	0.01256	0.16387
	Equal variance not assumed			0.073	19.553	0.943	0.01256	0.17239
Marital status	Equal variance assumed	0.002	0.964	1.365	82	0.176	0.20640	0.15125
	Equal variance not assumed			1.388	27.643	0.176	0.20640	0.14874
University major	Equal variance assumed	0.109	0.742	-0.118	82	0.907	-0.01497	0.12730
	Equal variance not assumed			-0.119	76.178	0.906	-0.01497	0.12588
Nature of investment	Equal variance assumed	0.014	0.905	-1.236	82	0.220	-0.16310	0.13192
	Equal variance not assumed			-1.233	53.722	0.223	-0.16310	0.13227
Tendency	Equal variance assumed	0.822	0.367	-0.219	82	0.827	-0.02778	0.12679
	Equal variance not assumed			-0.217	73.347	0.828	-0.02778	0.12775
Result in stock market	Equal variance assumed	0.073	0.788	-0.750	82	0.455	-0.10389	0.13846
	Equal variance not assumed			-0.740	41.222	0.464	-0.10389	0.14041

4.3.2. Secondary Hypothesis

Secondary hypothesis stated that "Individual investors' competences affect trading frequency". The competences tested were: sex, age, marital status, education level, university major, current work, portfolio size, and monthly income. Table 6 shows the Chi-Square statistical result for this hypothesis. As shown, three competences have an effect on trading frequency, which are: sex, portfolio size, and monthly income. However, the other competences have no effect on trading frequency. Concerning sex, Barber & Odean (2001) study found that male investors tend to trade most frequently than female and this is due to the greater overconfidence of male. The result concerning portfolio size concurs with Cohn-Urbach and Westerholm (2006) study cited by Chandra (2009) which shows that investors with larger portfolios tended to trade more frequently than those with smaller portfolios. Finally, the result concerning monthly income concurs with Chandra (2009) study that found that income is one of the most influencing competences that affect trading frequency. On the contrary to Chandra (2009) findings, age and education level do not affect the trading frequency.

4.4. Other Factors

All factors listed in Table 7 are considered important in their effect on investment decisions; they are significant at 0.05 level, but this effect is different from one factor to another. As shown, the most influencing factor is the trading volume, followed by key investors, company reputation, stability of stock price, company management, none financial information, brokers' advice, economic conditions, and company age, respectively. The trading volume on company stock and the key investors of the company came first which indicates a strong probability of herd behavior by individual investors (which is show in Table 8). This result concurs with Gervais et al. (2001) study which found that stocks experiencing unusually high trading volume over a day or a week tend to appreciate over the course of the following month. Concerning the third important factor, it is clear that individual investors prefer famous companies and this agrees with Grullon et al. (2004) study which documents that investors are more likely to favor investing in familiar companies. Another affecting factor that seems logical is the financial brokers' advice. Because investors in Jordan can not trade directly in the market, and the only way is through brokerage house in which they had to open their accounts. All investors are in a constant contact with the brokers and receive instructions and recommendations about the investments from them. This agrees with Al Sawalqa (2012) study that indicated that financial brokers' advice is one of the most important sources of information for Jordanian individual investors. KELLY et al. (2012) indicated that financial brokers play a critical role in interpreting and analyzing information to less sophisticated investors. In terms of non-financial information which is, according to the results, considered an important factor, Luciana et al. (2013) found that, in addition to financial information, investors need none financial information to make their decisions.

4.5. Investors' Behavior and Opinion

The last section of the questionnaire includes paragraphs concerning some aspects of investors' behavior bias and opinion. According to Charles & Kasilingam (2013), individual investors do not often make wise investments decisions because they are influenced by some biases which hinder their decisions. These biases vary from emotional to cognitive ones. As shown in Table 8, individual investors believe that there are biases in providing investors with information. So, they rely to a great extent on the private sources of information. The results also prove Chandra (2009) study hypothesis which stated that "Overconfidence caused by a number of factors, affects the feeling of competence of investors and thereby their willingness to act on their judgments". According to the results it's obvious that Jordanian individual investors feel themselves more competent in a way which allows them to invest better than others and this is due to overconfidence. So they rely, to a great extent, on personal judgment and estimate. In this context, Fares & Khamis (2011) documented that investors in ASE do not use stock trading programs that are built on advanced mathematical models, and most stock trading is executed by traditional face-to-face way. Therefore, stock trading depends on individual investors' personal judgments. Moreover, and in consistent with some previous studies in this filed (e.g., KUMAR 2009a, KUMAR 2009b, Chitra & Sreedevi 2011), individual investors prefer gambling in stock market and they resemble investing in stock market with gambling. This is reflected in the preference of investing in companies that achieved the highest increase in stock price last day. This fact agrees with Seasholes and Wu (2004) study cited by Barber & Odean (2008) which observes that on the Shanghai Stock Exchange, individual investors are net buyers of stocks that hit an upper price limit last day. In terms of herding behavior, the result confirms the results of previous studies in Jordan and other countries which revealed that individual investors herd (e.g., Abu Zayed 2008, Barber et al. 2009, Shive 2010, Levišauskaitė & Kartašova 2011, Rahman et al. 2013, MERLI & ROGER

2013). Finally, according to the individual investors' opinion, market stock prices reflect companies' financial conditions.

Table 5. One Way ANOVA test results for the second main hypothesis

Factor		Sum of Squares	df	Mean Square	F	Sig.
	Between Groups	1.684	4	0.421		
Age	Within Groups	25.450	79	0.322	1.307	0.275
	Total	27.133	83			
	Between Groups	1.138	4	0.284		
Education level	Within Groups	25.996	79	0.329	0.864	0.489
	Total	27.133	83			
	Between Groups	0.486	3	0.162		
Current work	Within Groups	26.647	80	0.333	0.487	0.692
	Total	27.133	83			
	Between Groups	0.944	4	0.236		
Investment period	Within Groups	26.189	79	0.332	0.712	0.586
	Total	27.133	83			
	Between Groups	0.857	4	0.214		
Preferred sector	Within Groups	26.276	79	0.333	0.644	0.633
	Total	27.133	83			
	Between Groups	0.203	4	0.051		
Portfolio size	Within Groups	26.931	79	0.341	0.149	0.963
	Total	27.133	83			
	Between Groups	1.177	3	0.392		
Income	Within Groups	25.957	80	0.324	1.209	0.312
	Total	27.133	83			
	Between Groups	0.757	3	0.252		
Purpose of investment	Within Groups	26.376	80	0.330	0.765	0.517
	Total	27.133	83			
	Between Groups	0.317	4	0.079		
No. of companies	Within Groups	26.816	79	0.339	0.233	0.919
	Total	27.133	83			
	Between Groups	0.667	4	0.167		
Trading frequency	Within Groups	26.467	79	0.335	0.497	0.738
	Total	27.133	83			

Table 6. Chi-Square statistical result for the secondary hypothesis

Competence	Chi-Square Value	df	Sig.	Effect on trading frequency
Sex	10.837	4	0.028	Affect
Age	23.155	16	0.110	Don't Affect
Marital status	1.614	4	0.806	Don't Affect
Education level	12.150	16	0.734	Don't Affect
University major	2.015	4	0.733	Don't Affect
Current work	7.416	12	0.829	Don't Affect
Portfolio size	35.975	16	0.003	Affect
Monthly income	32.005	12	0.001	Affect

Table 7. One Sample T-test results for the other factors affecting investment decisions

Rank	Factor	Mean	Std. Dev.	t	Sig.	95% Confidence Interval of the Difference	
						Lower	Upper
1	Trading volume.	4.1190	0.79766	47.328	0.000	3.9459	4.2922
2	Key investors.	4.1071	0.83620	45.016	0.000	3.9257	4.2886
3	Company reputation.	4.0952	0.75441	49.752	0.000	3.9315	4.2590
4	Stability of stock price.	3.8571	0.99569	35.504	0.000	3.6411	4.0732
5	Company management.	3.8333	1.01594	34.582	0.000	3.6129	4.0538
6	Non-financial information.	3.7500	0.80473	42.709	0.000	3.5754	3.9246
7	Financial brokers' advice.	3.5357	1.11341	29.105	0.000	3.2941	3.7773
8	Economic conditions.	3.4881	1.06978	29.884	0.000	3.2559	3.7203
9	Company age.	3.3214	1.08839	27.969	0.000	3.0852	3.5576

5. Conclusion and Limitation

This study emphasizes the value relevance of accounting information for investment decisions in stock markets, as well as it examines whether investors` demographic and behavior factors affect this value relevance. The factors tested were: sex, marital status, university major, nature of investment, tendency, and result in stock market, age, education level, current work, investment period, preferred sector, portfolio size income, purpose of investment, number of companies, and trading frequency. A sample of individual investors was drawn from ASE. As it was expected, the primary results indicated that individual investors perceived the accounting information to be value relevant to the investment decisions regardless of demographic and behavior factors. In addition, the study investigated if investors' competences affect trading frequency. The results indicated that the competences of sex, portfolio size, and monthly income affect trading frequency, while the competences of age, marital status, education level, university major and current work do not affect trading frequency. The results also indicated that there are other influencing factors on investors' decisions. These are the trading volume, key investors, company reputation, stability of stock price, company management, non-financial information, brokers' advice, economic conditions and company age. The study documented that in ASE there are biases in providing individual investors with information, which lead them to rely on private sources of information. In addition, individual investors feel themselves more competent due to overconfidence. So they rely, to a great extent, on personal judgment and estimate. The fact of investors' preference to gamble in the stock market is reflected on the willing to invest in companies that achieved the highest increase in stock price last day. Finally, the results of the study support previous studies in Jordan indicating the presence of behavior by individual investors.

Table 8. One Sample T-test results concerning investors' behavior bias and opinion

Behavior	Mean	Std. Dev.	t	Sig.	95% Confidence Interval of the Difference	
					Lower	Upper
Rely to great extant on personal judgment and estimate.	4.2500	0.61849	62.979	0.000	4.1158	4.3842
Having private sources of information.	3.4762	1.16656	27.311	0.000	3.2230	3.7294
Preferring gambling in stock market.	3.3214	1.06602	28.556	0.000	3.0901	3.5528
Herding (imitating other investors).	3.7024	1.01530	33.421	0.000	3.4820	3.9227
Having competences allow you to invest better than other investors.	3.6429	0.92675	36.026	0.000	3.4417	3.8440
Having overconfidence.	3.7857	0.85124	40.760	0.000	3.6010	3.9704
Preferring companies that achieved highest increase in stock price last day.	3.6905	1.11912	30.223	0.000	3.4476	3.9333
Opinion						
There is bias in providing investors with information.	3.9286	1.02717	35.054	0.000	3.92857	4.1515
Stock prices reflect companies' financial conditions.	3.0595	1.32947	21.092	0.000	2.7710	3.3480
Investing in stock market resemble gambling.	4.1071	0.87836	42.856	0.000	3.9165	4.2978

This study is subject to some limitations; the first limitation comes from the small number of respondents. Although the researcher did his best to increase the response rate, a considerable percentage of individual investors refused to cooperate with the researcher because they were pessimistic about their investment and were unwilling to answer the questionnaire; the second limitation comes from the fact that this study did not address the political factors that may affect investors' decisions, especially because Jordanian economy is affected by Syrians seeking refuge and finally, this study did not address in details the value relevance of accounting information variables (e.g., Earning, Cash flows, Dividends). Therefore, the researcher recommends further studies to address the value relevance of accounting information in details and to address the political factors that affect investors' decisions.

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