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Data *in* Qualitative Research in Financial Markets · July 2011

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An investigation of the role of technical analysis in Kuwait

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Received 16 March 2010
Revised 31 March 2011
30 May 2011
Accepted 31 May 2011

Abstract

Purpose – The purpose of this paper is to investigate the technical methods that investors in the Kuwait Stock Exchange use to evaluate ordinary shares. The research examines the extent of investors' use of technical analysis, and the technical indicators and the sources of technical information employed by investors. Further, it compares the valuation methods and the sources of information employed by Kuwaiti investors with those used by investors in other developed and emerging stock markets.

Design/methodology/approach – A semi-structured questionnaire guided the interviews with institutional investors, technical analysts and investment analysts in Kuwait.

Findings – Technical analysis is commonly used among research participants, particularly when timing their entry and exit points. The participants use a mixture of trend and pattern seeking; the Moving Average Rule was heavily used in the market but the Filter Rule Approach was not. Interviewees believed that investors did not have complete information about Kuwaiti quoted companies. Investors in Kuwait behave like their counterparts in other developed and emerging stock markets; fundamental analysis is considered the main valuation method among research participants, while technical and risk analyses were ranked second and third, respectively.

Practical implications – Interviewees in Kuwait paid more attention to technical analysis than did investors in developed countries; technical analysts looked at a company's fundamentals before they consulted graphs when deciding to purchase ordinary shares. Further, chartists followed trades of large investors to make profits. This topic needs to be investigated in emerging markets because these markets may be inefficient; trends and patterns may characterise the data from these markets and practitioners may use these techniques to exploit such patterns in returns. Further, the findings in this study may aid the regulators of these markets in their development of a framework that could improve efficiency by increasing the level of disclosure and transparency among listed firms.

Originality/value – This is one of the first studies in Kuwait to report the views of technical analysts and institutional investors about technical approaches to equity investment that are used in the market. Most studies on this topic have been conducted in developed stock markets. The current study considers the case for an emerging stock market, which is important in the Gulf and Middle East region. Further, access to technical analysts has been limited in prior research but this was not an issue in the current investigation.

Keywords Kuwait, Public companies, Disclosure, Investments, Technical analysis, Share valuation, Source of information, Emerging stock market

Paper type Research paper

1. Introduction

Recently, the Kuwait Stock Exchange (KSE) has witnessed significant changes in terms of regulations, market operations and the number of listed companies.

Acknowledgments to participants and discussants at BAA Scottish Division Annual Conference, August 2009 (Stirling), BAA, Cardiff, April 2010. The first author would like to thank the Kuwait Foundation for the Advancement of Sciences (KFAS) for the funds given to present at the BAA 2010 Annual Conference in Cardiff.

Qualitative Research in Financial Markets
Vol. 5 No. 1, 2013
pp. 43-64

1755-4179
DOI 10.1108/17554171311308959

Between 2002 and 2008, the number of quoted companies in the KSE increased from 89 to 214 (*Kuwait Stock Exchange Bulletins*, 2008). Further, the price index and the annual value of shares traded on the KSE witnessed incredible growth over the 17-year period ending in 2008 (*Central Bank of Kuwait Bulletins*, 2009). In the last two decades, the market has also experienced a privatisation programme and the introduction of new regulations such that international investors are now allowed to purchase, sell and own up 100.0 per cent of quoted KSE companies for the first time (KSE, 2000)[1].

The KSE has one physical location in Kuwait city with a main trading hall surrounded by 14 brokerage offices that provide services to investors (Almujamed, 2011)[2]. By contrast, stock market investors in developed countries like the USA and the UK are geographically diverse and transact with a large number of brokerage firms who do not operate in one location. Thus, one might expect that KSE investors would use different investment techniques from their Western counterparts since all market facilities are in one geographical location and informal communications as well as rumours circulate among market participants (Al-Loughani, 1995; Almujamed, 2011). In addition, family networks are possibly stronger in Kuwait than in developed countries which supports the argument that equity investors place less emphasis on annual reports and articles about companies in the financial press; information is obtained from informed family members rather than from other sources (Alshamali, 1989).

This paper explores the appraisal techniques used by investors in the KSE. In particular, this research presents the results of interviews with investors and analysts in the Kuwaiti stock market. The interviews focused on:

- the role of technical analysis in the KSE;
- the investment appraisal techniques used by Kuwaiti investors (technical, fundamental and risk analysis); and
- the source of information employed by research participants.

The reminder of this paper is structured as follows. The next section gives an overview of the KSE. Section 3 presents a review of the literature. Section 4 outlines the sample details and the research method. The results of the interviews are considered in Section 5 and the key findings are presented in the conclusion (Section 6).

2. An overview of the KSE

According to Al-Yaqout (2006), the first KSE was not formally established until 1977. However, share trading occurred long before the establishment of the KSE; it started in the early 1950s after an initial public offering (IPO) from the National Bank of Kuwait. This was the first Kuwaiti company to sell its shares to the public. It was followed by the National Cinema of Kuwait in 1954 and several financial services and insurance companies that joined the fledgling unofficial market in the 1960s, such as the Gulf Bank, the Kuwait Commercial Bank and the Kuwait Insurance Company (Alshamali, 1989; Al-Yaqout, 2006; *Kuwait Stock Exchange Bulletins*, 2008). With the shares of these companies owned by the public, mechanisms developed to facilitate the transfer of securities among Kuwaiti investors. Thus, Kuwait's unofficial stock market was born.

The environment of the country and the unofficial stock market's activity were driven by oil prices; both Al-Yaqout (2006) and Abumustafa (2007) highlighted that, as the government of Kuwait's revenue grew following increases in oil prices, domestic liquidity within the country improved and this led to a higher level of security

transactions among investors[3]. Not surprisingly therefore, a significant correlation existed between changes in oil prices and variations in gross domestic product and the stock market. Mahmoud (1986) reported that domestic liquidity increased during 1975-1976 from 24 to 37 per cent, primarily because of a rise in government spending. This rise increased upward pressures on share prices and led to a stock market crash at the end of 1976. The volume of shares traded in the market at the beginning of 1977 declined by 66.0 per cent. Associated with this decline was a fall in the capitalisation of the market to KD346 million from KD936 million, a drop of 64.0 per cent (Mahmoud, 1986). This crash was followed by one of the most serious recessions in Kuwait's history. The economy recovered and share trading resumed until the Almanakh Market Crisis of August 1982 (Alshamali, 1989).

Al-Yaqout (2006) stated that between 1977 and 1982 shares on Almanakh Market[4] were traded unofficially even before they had been assigned to IPO participants; the absence of a legal framework pushed security prices to more than ten times their face value. When shares prices collapsed in August 1982, most investors experienced sizeable losses. Salam (2002) reported that share prices on the KSE declined by 20.0-40.0 per cent during the Almanakh Crisis, while Gulf companies' securities suffered even more; some lost 80.0 per cent of their value. Butler and Malaikah (1992, p. 198) noted that:

> In September 1982, the government required that investors in both markets report their open forward positions. At that time, the value of outstanding post-dated cheques in both markets was $93 billion ($17 billion in the official market and $76 billion in the unofficial market) with settlement dates of up to 3 years.

After the Almanakh Crisis, the Kuwaiti Government intervened and an official stock market, the KSE, was launched (Butler and Malaikah, 1992). In September 1984, the KSE opened its new building to the public; this was the birth of the modern KSE as an independent financial organisation, controlled by an executive committee. Consequently, the Kuwait Clearing House was established in 1986.

Evidence suggests that the Kuwaiti stock market behaves differently from its counterparts in developed countries in the sense that share price movements are often the result of social interactions, competition among rival business groups, rumours, the political situation in the Gulf region and the size and distribution of government spending (Al-Loughani, 1995; Al-Loughani and Moosa, 1999; Al-Yaqout, 2006; Abumustafa, 2007; Almujamed, 2011). These differences are apparent from KSE statistics over the past two decades. For example, the KSE witnessed an incredible growth between 1985 and 2008; the annual value of shares traded on the KSE increased from KD115.7 million to KD35.74 billion in 2008 (*Central Bank of Kuwait Bulletins*, 2008). The price index of the KSE recorded a new high in 2007; it rose from 1365 in 1995 to 12558 in 2007. However, in 2008, it declined 38.0 per cent as a consequence of a downward trend among the world's stock markets (*Kuwait Stock Exchange Bulletins*, 2008). The Kuwait Investment Authority, which acts on behalf the Kuwaiti Government in the KSE, launched a privatisation programme between 1994 and 1999; 2,499 million shares in 30 companies were sold to the public for KD901.6 million (Abul, 2005). Further, new regulations were introduced to increase the transparency and protect the rights of shareholders[5]. In addition, the KSE allowed foreign nationals to own up to 100.0 per cent of any company listed on the KSE (2000). Moreover, the profits earned by foreign investors on transactions in the Kuwait stock market, either

directly via their own purchases and sales of shares or indirectly through investment funds, were not subject to taxation (*Kuwait Al-Youm Magazine*, 2008). Moreover, unlike the commission fees charged in most countries, transaction costs in Kuwait are small; the KSE imposes a very small brokerage fee to encourage Kuwaiti and foreign investors to invest in the market. Therefore, active traders who use technical analysis might not be disadvantaged when trading in Kuwait.

The KSE has attracted the attention of international investors (Mobius, 2008). For example, Mark Mobius, the founder of the Templeton Emerging Markets Fund, argued that the Kuwaiti economy had the potential for significant growth after 2007 (Mobius, 2008). In addition, Morgan Stanley Capital International Barra decided to reclassify the stock market in Kuwait from their Frontier grouping to their Emerging Market category (MSCI, 2008); this may attract more funds to the KSE from investors who only invest in emerging rather than the frontier markets.

The KSE now has 214 listed companies from eight sectors with a market capitalisation of around $123 billion (Aljoman Centre for Economic Consultancy, 2008). The KSE's clearing house system employs a one-day rolling settlement period (T + 1) and in 2008, it upgraded its automated trading system to handle 160,000 orders and to execute approximately 40,000 transactions daily (*Kuwait Stock Exchange Bulletins*, 2008). The KSE has five markets: official, parallel, odd lot, forward and option. In addition, there are a number of market-makers as well as 14 brokers registered in the country (*Kuwait Stock Exchange Bulletins*, 2008; Aljoman Centre for Economic Consultancy, 2008).

This paper adds to the literature on how practitioners invest and the information sources which influence their decisions; to the best of our knowledge, this is the first study to specifically investigate the extent to which technical analysis is used in Kuwait. It is also pioneering in ascertaining views about how investors trade in the market using technical analysis and other approaches when deciding to buy or sell equities. Perceptions about the sources of information used among different groups of stakeholders also supply a novel insight as well as facilitating a comparison with the results from similar investigations in other developed and emerging countries. Furthermore, access to the society of technical analysts in Kuwait is another contribution of this study since little is known about how chartists trade in the stock market – particularly in an emerging market country such as Kuwait.

3. Literature review

Technical analysis is one of the major decision-making methods to value shares in developed as well as in emerging stock markets; it is usually ranked second after fundamental analysis when investors are surveyed about their equity valuation practices (Arnold and Moizer, 1984; Arnold *et al.*, 1984; Pike *et al.*, 1993; Al-Abdulqader *et al.*, 2007; Wang *et al.*, 2007; Tijjani, 2008). Arnold *et al.* (1984) noted that technical analysis was "sometimes" used by 41.5 per cent of financial analysts in the USA and the UK while fundamental analysis was employed by 92.0 per cent of their sample. However, the use of technical analysis is not consistent across developed stock markets. Indeed, Pike *et al.* (1993) documented that German analysts gave more weight to technical analysis than their counterparts in the UK; technical analysis was ranked second in Germany but fifth in the UK, after P/E ratio, net asset, dividend growth and discount cash flow valuation methods. Lease *et al.* (1974) found that both technical and fundamental analysis were

equally popular (25.0 per cent) among US respondents. However, the authors still ranked technical analysis as the second method of equity valuation because they suggested that only 4.0 per cent of their respondents used technical analysis as their sole means of valuing shares.

The literature suggests that the use of technical analysis in the emerging markets is much greater than in counterparts in developed countries (Lovell-Green *et al.*, 1986; Al-Abdulqader *et al.*, 2007; Wang *et al.*, 2007; Tijjani, 2008). Lovell-Green *et al.* (1986) replicated the work of Arnold *et al.* (1984) in South Africa and found that technical analysis was used more in that country than in the developed markets of the USA and the UK (55.4 per cent vs 41.5 per cent). A similar finding was documented by Al-Abdulqader *et al.* (2007) for Saudi Arabia (67.0 per cent vs 41.5 per cent), Wang *et al.* (2007) for China (44.0 per cent vs 41.5 per cent); and Tijjani (2008) for Nigeria (77.8 per cent vs 41.5 per cent). In addition, all these previous studies suggested that technical analysis was a useful technique when valuating ordinary shares in emerging markets.

Al-Abdulqader *et al.* (2007) argued that charts might help investors in emerging markets to select shares because the level of disclosure and transparency in these countries is low; thus, investors can study the charts of prices and volume because such information is more readily available and possibly more reliable than financial information supplied in annual reports. Arnold and Moizer (1984) indicated that technical analysis may help analysts who have already examined a company's fundamentals as a mechanism for timing the purchase of a share. In other words, they suggest that technical analysis complemented fundamental analysis. In addition, Tijjani *et al.* (2009, p. 22) explained why technical analysis was used more than developed countries in Nigeria:

> Most participants suggested that trends existed in prices which could be studied using a chart or a graph. In addition, most participants agreed that the stock market was influenced by rumours which helped impart patterns into equity prices. Further, trends in prices were explained by some interviewees in terms of the slow dissemination of private information into the public domain as managers selectively divulged details to certain investors who contacted them; as a result, share prices only responded gradually to news as the dissemination of private information took time to percolate through the market.

Thus, the presumed inefficiency of emerging markets among investors could explain the popularity of technical analysis as a valuation method in these markets (Lovell-Green *et al.*, 1986).

In a questionnaire survey of Nigerian investors, Tijjani (2008) discussed the time horizons of those who practiced technical analysis; a majority (69.0 per cent) of participants studied past returns data over five years while a minority (10.0 per cent) only examined past prices for less than one year when valuating shares. Tijjani (2008) also investigated the factors that the respondents to his survey employed when using technical analysis. He found that respondents studied:

- the previous high and low values for a share;
- the volatility of past prices; and
- historic trends.

He stated that these factors were highly rated by the research participants in his survey.

4. Sample details and research method

Face-to-face interviews were conducted using a semi-structured questionnaire instrument which contained 34 questions that were drawn from the literature. These questions:

- sought background details about the research participants;
- ascertained the level of technical analysis adopted in the KSE and other share valuation methods used by the interviewees;
- asked about the type of information studied when valuing shares; and
- sought details about the sources of any information used.

Each interview was recorded with the permission of the interviewee; the tapes were later transcribed and used to write up the results[6].

In total, 16 interviews were conducted between May and July 2008 across Kuwait City[7]. Kuwait City was chosen because it is the capital of the country and the vast majority of banks, investment funds, insurance firms, real estate organisations, brokerage firms and other quoted companies are located there. The interviewees were selected through personal and other contacts because no database of analysts' names and addresses was available[8]. These interviewees possessed expertise in this area, were highly educated, and were knowledgeable about both the investment environment and the share valuation techniques used in the KSE[9]. The questions asked were open-ended in nature to allow the interviewees to talk about the issues being examined in relaxed fashion (McCluskey *et al.*, 2010). Each interviewee was provided with the same series of questions without any interruption from the interviewer but the sequence in which the questions were answered varied from one interviewee to another; it depended on priorities of the interviewee and the direction of the interview.

All of the interviewees were given codes to preserve their anonymity. One of the researchers conducted all of the interviews; each lasted for approximately one hour. After the interviews, tapes were listened to and transcribed; transcriptions were supplemented with notes taken by the researcher who was present. A spreadsheet was then constructed where each interviewee was given a row and responses to different questions noted in different columns. The responses were then compared and summarised across each question by adding together the number of respondents who agreed with a certain point of view; these summary data were then reported in the paper.

The vast majority of the interviews were conducted after the stock market had closed in order to enable the interviewees to discuss the issues without feeling any time pressure. All the interviewees were happy to discuss the development of the KSE; some showed the programmes that they used when conducting their technical analysis while others discussed the processes that they used when valuating shares in the KSE.

Two stakeholder groups were interviewed about equity investment in Kuwait. The interviewees were eight institutional investors and eight individual analysts. Of the eight institutional investors, three were financial analysts and five were fund managers. All of them had an academic background in finance; three had a master's degree and the rest held bachelor's degrees. Three had graduated from UK universities and one had an MBA from The Netherlands. In addition, a majority also had a professional qualification; two were certified financial analysts (CFA) and one was a chartered market analyst (CMA) and a chartered portfolio manager. Another was a certified risk analyst

(CRA) and one was a certified financial technician (CFT) with an Australian Technical Analyst Diploma (ATAD). There was a wide range of experience among the research participants; their involvement with financial markets varied from two to 12 years. Four of these investors interviewed were under 30 years of age; one was over 40.

Out of the eight individual analysts interviewed, six were technical analysts while two described themselves as investment analysts. Of these, only one had a master's degree, five held a bachelor's degree and two had been awarded diplomas. Only four of these had an education in the business area. Of these four, two had a degree in accounting from Kuwait University while the other two held business and economics degrees from UK institutions. The two investment analysts worked as general managers of well-known investment research centres in Kuwait and had over 22 years of experience. One of these investment analysts was a charter public accountant (CPA). In general, technical analysts had a great deal of practical experience in the KSE and internationally; some had traded in the other Gulf markets while others had transacted in US securities and were Forex traders. One of these technical analysts had been trained in CAN SLIM by William J. O'Neil[10]. The technical analysts' experience ranged from five to 13 years, suggesting that they should be able to offer valuable insights about the valuation approaches used and information sources employed by Kuwaiti investors (Table I).

5. Results of the interviews

5.1 The role of technical analysis

An analysis of the interviews revealed that technical analysis was commonly used by the research participants. All of the interviewees considered some aspect of technical analysis for their investment decisions; however, technical analysis was not the principle valuation method used to value shares; the vast majority of interviewees regarded it as secondary to fundamental analysis.

(a) The use of charts. All interviewees used charts to analyse securities for investment decision making. They reported that these graphs helped to track the history of a security's price, identify previous highs and lows, highlight trading volume and identify patterns. As in Roscoe and Howorth (2009), a majority of the interviewees believed that chartists viewed graphs as a logical tool that helped share traders to visualise their decisions. Most participants argued that charts helped to select shares because the amount of disclosure and level of transparency was relatively low on the KSE; Al-Abdulqader *et al.* (2007) found a similar result for Saudi Arabia. Some interviewees used charts to identify entry and exit points for all investment decisions. Others believed that charts helped them understand the psychology of stock market traders and to explain why share prices moved in a particular direction. For example, Interviewee INS1 said:

> We read charts to understand the behaviour of traders such as regular investors and large shareholders. Also, they lead us to realise the underlying share price changes. For example, if the owners of share A also own shares B, C and D, the behaviour of their prices would normally be the same. In other words, studying a graph for share A would guide me to understand the movements of all shares in that group. The chart exposes the similarity in the movement.

Interviewees believed that graphs of indicators helped them to anticipate both the psychology of investors and the liquidity of the market. Therefore, they believed that they could develop a trading strategy based upon their graphs to make profits. Interviewee INS6 studied charts of individual securities' prices and weighted indices

Table I.
Summary details of the interviewees

Interviewee	Age	Highest qualification	Academic background	Country of education	Professional qualification[a]	Experience	Position
Panel A: institutional investors							
INS1	31-40	Bachelor	Marketing	Kuwait	CMA/CPM	9	Executive vice president Asset Management Division
INS2	21-30	Master	MBA	The Netherlands	CFA	2	Financial analyst
INS3	21-30	Bachelor	Finance	Kuwait	N/A	3	Assistant manager investment
INS4	21-30	Master	Finance	UK	CFA	2	Local and GCC portfolio manager
INS5	41-50	Bachelor	Accounting	UK	N/A	12	Financial analyst
INS6	31-40	Bachelor	Finance	Kuwait	N/A	12	Vice president of the direct investment
INS7	21-30	Bachelor	Finance	Kuwait	CRA	7	Local fund manager
INS8	31-40	Master	Finance	UK	CFT/ATAD	12	Financial analyst
Panel B: individual analysts							
TA1	31-40	Bachelor	Sociology	Kuwait	N/A	5	Technical analyst
TA2	41-50	Bachelor	Accounting	Kuwait	N/A	13	Technical analyst
TA3	41-50	Diploma	Engineering	Kuwait	N/A	7	Technical analyst
TA4	41-50	Master	Military science	UK	Certificate	9	Technical analyst
TA5	41-50	Bachelor	Business	UK	N/A	10	Technical analyst
TA6	31-40	Diploma	Chemical	Kuwait	N/A	12	Technical analyst
IA7	41-50	Bachelor	Accounting	Kuwait	CPA	22	Manager of Investment Research Centre
IA8	Over 50	Bachelor	Economics	UK	N/A	32	Manager of Investment Research Centre

Notes: [a]The acronyms used to explain the professional qualifications are as follows: CMA, CPM and CRA indicate chartered market analyst, chartered portfolio manager and certified risk analysis, respectively; those are associate members of the American Academy of Financial Management, CFA stands for chartered financial analyst, CFT indicates certified financial technician and membership of the International Federation of Technical Analysts; ATAD stands for Australian Technical Analyst Diploma, the certificate of CAN SLIM Masters Programme, and CPA means chartered public accountant; the table shows summary background details about the interviewees; panel A reports background information on the institutional investors while panel B displays for individual analysts; all research participants were given codes in order to keep their identities anonymous; these codes are reported in the interviewee column; the codes used express the category of the participant; for example, INS describes the institutional investors while TA and IA express technical analysts and investment analysts; other background information in the table includes details about the age group of these respondents, highest qualification, academic background, country of education, professional qualification, work experience and position held; all research participants are male and are located in Kuwait City

to identify entry and exit points for his portfolio trading strategy, while interviewee TA2 looked at pictures for indices to gauge the general trend of the market and to determine whether a market correction was expected; if it was, he aimed to be out of the market and therefore avoid losses.

All interviewees looked for chart patterns when they valued shares because they believed that the market was inefficient. Thus, they hunted for a trading opportunity to generate capital gains. They claimed that several well-known patterns such as "support and resistance", "head and shoulders", "double tops", "double bottoms", "upward and downward trends", "ascending and descending triangles", "cup with handle", "gaps and flags" frequently appeared in their technical charts. A similar finding was documented by Roscoe and Howorth (2009), who noted that the "pattern seekers" searched the market visually or using an automated programme to detect patterns in share price changes when making forecasts. It appeared that these interviewees studied previous chart patterns to predict future share price changes because they argued that chart patterns repeated themselves frequently. Therefore, the chartists sought to forecast future share price changes based on estimates from previous prices movements. Interviewee TA5 said that:

> I always study share price graphs at the end of the last trading day of the week. I search for any investment opportunity in the KSE for the next week using this method. I investigate the charts of all shares' one by one; this is possible in Kuwait as there are only about 200 quoted companies in the market. I use my expertise to identify chart patterns such as an uptrend, a double bottom or any breakout for a new high or a resistance level.

Most research participants had studied charts over the last five years because they believe that a long time period of historical data offered better predictions than a short data set. However, all interviewees used technical analysis to trade for a short time period rather than for a long time frame. For example, interviewee TA3 said that: "[he did not] use technical analysis to trade stocks daily, but mainly employ them when speculating from three days up to three months." Table II shows the extent to which the interviewees used charts in their investment decisions. Candlestick charts[11] were shown to be the most popular graphs amongst the interviewees since such charts show the highest, the lowest, the open and the close prices of a selected equity for each particular time frame selected. Computer programmes were used to draw these graphs. Some interviewees used Metastock while others used Tickerchart[12]; a number without specialist software relied on the charts offered by various investment web sites.

(b) Other indicators studied. Most of the interviewees (13 out of the 16) looked at market statistics when appraising shares; for instance, they examined the direction of markets indices as recommended by Dow Theory (Brown *et al.*, 1998); interviewees argued that the overall trend of the market index had a direct impact on the prices of individual shares in both the short and long run. As Table II indicates, only a minority of research participants (seven out of the 16) did not consider rumours when investing in the KSE. However, they believed that information gave rise to a trend in a share's price before the media picked up on any news. Others (nine out of the 16) followed rumours for speculative purposes. For instance, interviewee INS4 said that:

> I take rumours into consideration because small investors in Kuwait buy based on rumours. They commonly say in the KSE "buy based on rumours and sell when the news talks." In other words, buy based on rumours and sell when the company announces the news.

Table II.
Technical analysis: points considered by the interviewees

Interviewee	Charts or graphs	Market index	Rumours	Previous highs and lows	Trading volume	Moving averages	MACD	RSI	Chart patterns	Filters	Support and resistance levels	Breakouts	Stochastic oscillator
INS1	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	No	No
INS2	Yes	Yes	No	Yes	Yes	Yes	No	No	Yes	No	Yes	Yes	No
INS3	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No	No	No
INS4	Yes	No	Yes	Yes	Yes	No	No	No	Yes	No	No	No	No
INS5	Yes	Yes	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
INS6	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	No	Yes	Yes	No
INS7	Yes	Yes	No	Yes	Yes	No	No	No	Yes	No	No	No	No
INS8	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
TA1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No
TA2	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No
TA3	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
TA4	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
TA5	Yes	No	No	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No
TA6	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
IA7	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No	Yes	No	No
IA8	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes

Notes: The table summarises the items considered by the research participants when valuating shares in the KSE by using technical analysis for their investment decisions; the interviewees were given codes to keep their identities anonymous; these codes are reported in the interviewee column

All research participants looked at previous highs and lows for shares prices when making buy and sell decisions; a share price that reached a new high, sent a positive signal but a new low was a negative one. Interviewee INS4 claimed that he worried whenever a share price breached a 52-week previous low; it usually indicated that some bad news was about to be published or that a large loss was expected.

The research showed that trading volume was an essential part of technical analysis. All interviewees believed that trading volume provided information about liquidity. For instance, interviewee INS4 always consulted trading volume data before taking any investment decision. He did not buy shares with a low level of trading volume since they might be difficult to sell in the future. Other interviewees saw volume as an indicator that prices would soon change because of demand and supply. Interviewee TA1 said:

> I use trading volume as a signal to confirm whether a share price increase or decrease is important or insignificant. Trading volume is the fuel that pushes prices to change. Otherwise, any changes might be just random.

Interviewees IA7 and TA1 claimed that technical analysis only worked with liquid securities. In other words, technical indicators were only important for shares with a sizeable trading volume; where trading volume was low, price changes could not be taken as credible signals.

(c) The techniques employed. Responses indicated that the research participants frequently calculated moving averages (MAs). A majority of interviewees (12 out of the 16) used moving average indicators for all their investment decisions; interviewees employed a moving average strategy because they believed that the market was inefficient and trends were present in share prices. Further, they argued that such a technique was successful in predicting future share price changes. These findings are consistent with the results from the substantive literature which suggest that the moving average technique can forecast future share price changes (Brock *et al.*, 1992; Fifield *et al.*, 2005, 2008; Al-Abdulqader *et al.*, 2007; Xu, 2010). According to Table II, all technical and investment analysts factored moving average calculations into their decisions, while only half of the institutional investors (four out of the eight) did so. A variety of different moving averages were employed by the research participants. A majority of the interviewees bought shares when a short-run moving average crossed the long-run moving average from below[13] (INS1, INS2, INS3, INS8, TA3, TA4 and TA6); others purchased securities when the current share price was higher than its moving average of past values (TA1, IA7 and IA8)[14]. For example, interviewee TA1 reported that he bought securities when the share price crossed its five-, nine- and 20-day moving average values, and claimed that his strategy was mostly profitable in the Kuwaiti stock market. An analysis of the interviews reveals that all interviewees who used moving average values bought (sold) shares based on a visual inspection of graphs; they also confirmed buy (sell) signals by consulting other indicators such as trading volume data, a moving average convergence/divergence (MACD) statistic, a relative strength index (RSI) and a stochastic oscillator output measure[15]; interviewees suggested that consulting these indicators added credibility to the moving average signal. Most (nine out of the 16) used a MACD while seven of the 16 interviewees employed a RSI and only a minority (five out of the 16) factored stochastic oscillator analysis into their investment decisions. Surprisingly, none used filter rules despite the fact that they are analysed

comprehensively in the previous literature (Alexander, 1964; Fama and Blume, 1966; Fifield *et al.*, 2005; Alshamali, 1989; Al-Abdulqader *et al.*, 2007; Tijjani, 2008; Xu, 2010). However, this result may be due to the sample of interviewees consulted. The results of this study indicated that the interviewees studied several chart patterns and technical indicators when they evaluated securities for investment decisions making.

Most identified support and resistance levels among share prices. They argued that some share prices rebounded from previous support and resistance levels. Thus, a strategy of following such rebounds could generate profits. For instance, a majority of the research participants (13 out of the 16) determined the support and the resistance levels for each security. According to interviewee TA2:

> I use the easiest strategy like that based on the support and the resistance levels because you can watch the chart and specify the support and resistance levels; then you can buy (sell) a share after the first or the second rebound from the support (resistance) level for sell (buy) transactions.

This breakout strategy was common. More than half of the interviewees (nine out of the 16) used it, especially when there was a breakout from a previous resistance or support level. Interviewee TA5 stated that he bought shares when their prices established a new high or exceeded a previous resistance level, provided that these change were associated with sizeable trading volume.

5.2 Other valuation methods employed by interviewees

While technical analysis was mainly for short-term decisions, other variables were considered for mid- to long-term decisions. Table III summarises the non-technical items that the research participants considered when making long-term investment decisions.

Interviewee	Reputation of director/and large shareholders	Balance sheet	Profit and loss account	Cash flow statement	Ratios
INS1	Yes	Yes	Yes	Yes	Yes
INS2	Yes	Yes	Yes	Yes	Yes
INS3	Yes	Yes	Yes	Yes	Yes
INS4	Yes	Yes	Yes	Yes	Yes
INS5	Yes	Yes	Yes	Yes	Yes
INS6	Yes	Yes	Yes	Yes	Yes
INS7	Yes	Yes	Yes	Yes	Yes
INS8	Yes	Yes	Yes	Yes	Yes
TA1	No	No	Yes	No	Yes
TA2	Yes	Yes	Yes	Yes	Yes
TA3	Yes	No	Yes	No	No
TA4	Yes	Yes	Yes	No	Yes
TA5	No	No	No	No	Yes
TA6	Yes	Yes	Yes	Yes	Yes
IA7	Yes	Yes	Yes	Yes	Yes
IA8	Yes	Yes	Yes	Yes	Yes

Table III.
Fundamental analysis: points considered by the interviewees

Notes: The table summarises the items considered by the research participants when valuating shares in the KSE by using fundamental analysis in their investment decisions; the interviewees were given codes to keep their identities anonymous; these codes are reported in the interviewee column

According to this table, the composition of the board of directors and the presence of prominent shareholders played a role in interviewees' decisions to invest in the KSE. Indeed, the majority of the interviewees (14 out of the 16) believed that the reputation of the board of directors and the status of the shareholder base drove the investment decisions of stock market participants.

An analysis of members of the board of directors and of which shareholders owned a company's shares was usually undertaken by institutional investors and investment analysts; technical analysts were less concerned with these issues. Institutional investors and investment analysts considered the reputation of members of the board of directors and the status of major shareholders as part of their fundamental analysis for mid- and long-term investments; these issues were less important for short-term investments where technical indicators and company profitability were analysed. Several large shareholders had an unimpressive track record in attempting to select undervalued shares on the KSE. Most research participants avoided investing in companies owned by these shareholders. Other shareholders strengthened investors' confidence about investing their money. Interviewee INS5 said that:

> We look first at the Board of Director and its main shareholders and their reputation in the stock market when evaluating an ordinary share. We feel confident if a well-known big shareholder with a good track record owns shares in the company. Some shareholders have a poor reputation. We never invest in companies owned by them.

All institutional investors and analysts predicted a company's share price three days to five years into the future. Thus, they conducted fundamental analysis for up to five years, while technical analysis typically involved shorter time horizons of three months or less. Their predictions were based on trends in earnings, future investment projects, expected cash inflows, company news, insider information and technical charts.

All institutional investors and investment analysts indicated that they studied the financial statements of investee firms; few of the technical analysts admitted to consulting annual reports. Institutional investors and investment analysts investigated financial statements in depth while technical analysts used these documents only for their initial screening. Different analysts assigned different weights to financial statements. Most of the research participants considered profit and loss account and the balance sheet as the first and second most important sources of information, and ranked the cash flow statement third. Indeed, 15 out of the 16 research participants studied the profit and loss account, while 13 of the interviewees looked at the balance sheet; only 12 of the 16 participants considered the cash flow statement. The analysis showed that the majority of technical analysts did not consult financial statements, although most reported that they looked at the quarterly earnings per share (EPS) and at the realised and unrealised earnings data. Indeed, five of the six technical analysts paid attention to the profitability number disclosed in the profit and loss account.

The vast majority of the research participants (15 out of the 16) studied financial ratios. All institutional investors and investment analysts examined company financial statements by studying a wide range of financial ratios, while most technical analysts concentrated on both the P/E and P/B ratios. The institutional investors and investment analysts calculated the profitability, liquidity and gearing ratios of quoted companies on the KSE. However, the weighting attached to these different ratio categories differed among the groups of investors. Institutional investors and

investment analysts were more analytical than technical analysts. They looked at the profitability, assets, equity, cash flow and financial ratios of their investee companies. They also decomposed earnings into its operational and non-operational components and calculated profit margin, liquidity, gearing and return on equity ratios. They studied the sources of cash received and paid out by the firms; thus, they looked at the ability of a company to pay its liabilities as they fell due. Some interviewees such as INS2, INS5 and IA7, read all of the annual report. Interviewee INS2 stated that:

> We investigate the annual report from cover to cover. We believe that the most important ratios relate to profitability and operating efficiency. We calculate the P/E, P/B and P/S and do a comparison with [of the values implied by these multiplier] that suggested by the Discount Cash Flow method to come out with a fair price for the stocks.

Unlike technical analysts in more developed stock markets, chartists in Kuwait usually scanned the financial numbers by looking at realised and unrealised earnings, the quality of earnings, and the P/E ratio. Interviewee TA4 stated that he always looked at a company's earnings before making any investment decision. He suggested that technical analysts always sought to complement their technical indicators with insight from accounting numbers when deciding to purchase shares. Interviewee TA5, however, did not consider the financial statements in his valuation calculations; he based his investment decisions on technical charts and moving averages.

All institutional investors and investment analysts indicated that they had discussions with companies about their financial statements, their operations and any current and future projects. Pike *et al.* (1993) and Arnold and Moizer (1984) found similar findings for the UK. In contrast, very few of technical analysts met with company executives. One exception was interviewee TA6, who asserted that he sometimes discussed a company's financial position with its management if he had access to the management team or knew some of the executives. Most of the institutional investors visited their investee companies and discussed issues with these firms' management teams if they wanted to take a large stake in the equity.

While technical and fundamental analyses were popular techniques in the stock market, only a minority (three out of the 16) of interviewees calculated risk in a systematic fashion; similar results were found in the literature for Nigeria (Tijjani *et al.*, 2009) and Saudi Arabia (Al-Abdulqader *et al.*, 2007). Some interviewees[16] (INS2, INS8 and IA7) predicted and computed risk measures such as β, standard deviation, tracking error and Sharpe ratios as part of their Investment Policy Statement (INS2 and INS8); interviewee IA7 only calculated the β of shares. However, all of the other interviewees stated that fund managers did not factor risk calculations into their analyses when making their investment deliberations.

5.3 Source of information used by Kuwaiti investors

Most interviewees (11 out of the 16) believed that not all of the information that they needed to appraise ordinary shares about Kuwaiti quoted companies was available to investors in a timely fashion. They claimed that disclosure levels were low and transparency was limited among Kuwaiti firms. They argued that firms did not disclose information unless compelled to do so by law. In addition, they stated that the level of disclosure was not uniform across all companies; it was much higher and more detailed for "blue chip" firms listed on the KSE such as banks, the National Industrial Holding Company and Zain Telecommunication. Disclosure also varied by sector; interviewees

stated that firms in the banking industry supplied the most information while companies in the investment sector disclosed very little. Overall, participants believed that KSE could do more to increase the level of disclosure and transparency among listed firms.

The majority of institutional investors based some of their investment decisions on insider information that they gleaned from these company visits (14 out of the 16). However, none of the technical analysts claimed that they exploited insider knowledge when they traded; they believed that trends and technical indicators underpinned their trades. Nevertheless, all technical analysts did admit that they followed other large investors in the KSE; they tracked the uptrend for share prices created by large investors to make profits. Interviewees TA1, TA4, TA5 and TA6 stated that they bought shares when large investors purchased a sizeable stake in a quoted company on the KSE. All of the interviewees stated that news about quoted companies was essential for the use of fundamental and technical analysis. All of them monitored the news when making investment decisions. For instance, IA7 said that he consulted newspaper archives of information when he analysed a company.

The main point that emerged from an analysis of the interviews was that most research participants used all public and non-public information for their investment decisions. Interviewee INS1 highlighted that he used all available information to evaluate shares such as companies' financial reports, news, charts, insider information and discussion with the companies; such information was gathered and analysed in order to arrive at one decision of whether to buy, hold or sell a share.

6. Conclusion

The key finding of the paper is that technical analysis seemed to be more widely used among the Kuwaiti research participants than among their counterparts in more developed stock markets; the interviewees appeared to consider technical analysis in all of their short-term investment decisions, particularly when timing entry and exit points; the type of technical analysis employed involved a mixture of trend and pattern seeking. The moving average rule was commonly used in the market but the filter rule approach was not.

Several similarities and differences were noted between the interviewees' comments and the results in the literature. Investors in the Kuwait were like those in developed and emerging stock markets; although the interviewees often used technical analysis, fundamental analysis was still regarded as the principal valuation method; risk analysis was ranked last. In contrast, technical analysts in Kuwait were different from those in more developed stock markets; they initially scanned firms' profitability before looking at their charts. Further, it appeared that technical analysts followed large investors' movements when they traded in the KSE.

Several differences also emerged among the responses from institutional investors and analysts. Institutional investors and investment analysts tended to look at a five-year summary of past performance information, while technical analysts tended to examine many years of data to predict future prices. Institutional investors and investment analysts appeared to discuss accounting information and their current and future operations with company executives; technical analysts did not. Further, insider information was widely used among institutional investors, but none of the investment and technical analysts based their investment decisions on such a source.

This paper offers some insights on a subject that needs to be studied in emerging markets; these markets may be inefficient since trends and patterns appear to present in share price data and technical analysis may identify profitable trading strategies for investors in these countries. Further, it may help the regulators to improve the efficiency of these stock markets by increasing the level of disclosure mandated and enhancing transparency among quoted companies on the KSE. These views, however, are only based on a small number of interviews. Therefore, further work is needed in the area.

Notes

1. Law No. 20 for year 2000 allows non-Kuwaitis to own shares in Kuwaiti shareholding companies.
2. According to Almujamed (2011), only a minority of Kuwaiti investors use online trading; he argued that the regulators of the KSE did not like the current location of the trading hall in the exchange as rumors circulate among investors.
3. In the early 1970s, the price of oil rose from $2.29 to $10.73, an increase of 368.6 per cent; over the same period, the GDP of Kuwait rose by 175.7 per cent (Almujamed, 2011).
4. Alshamali (1989) and Al-Yaqout (2006) stated that "Almanakh Market" is a building was originally for real estate broker offices but trading in the shares of Gulf companies soon dominated. The building became the main market for those who wanted to purchase or sell these unquoted firms' shares.
5. The KSE obligated all listed companies to publish financial statements on a quarterly basis and compels quoted companies to hold their annual general meeting (AGM) within 45 days from the date of approval of its annual reports by the KSE. Quoted companies must also distribute cash and/or share dividends within ten days from the date of the approval of such disbursements by the AGM (KSE, 2008, Market Committee, Decision No. 4 for year 2007).
6. The researcher who conducted interviews also took notes on key points made by the interviewees. Both tapes and the notes were analysed using Excel spread sheets and tables to extract and quotes the key points highlighted by the interviewees. These points were gathered together when writing up the results in order to identify common themes among the response (Hussey and Hussey, 1997).
7. The results present the views of 16 interviewees at a time when a bear market had just started; different views might have been expressed if the economy was at a different stage of business cycle (Antweiler and Frank, 2006).
8. There is some bias on the data because interviewees were not randomly selected. However, in the absent of any database of analysts in Kuwait, a decision was made to use personal and other contacts to make this research possible.
9. Indeed, the findings of the current interviewees may be biased; they represent the views of highly educated participants, with professional qualifications as well as accounting and finance backgrounds. Also, most of the interviewees were educated internationally. In fact, a large-scale questionnaire might have allowed perceptions from a bigger group to have been considered and reached different conclusions. However, the purpose of the interviews was to investigate the extent to which technical analysis was used in Kuwaiti and to analyse how investors employ technical indicators when buying and selling ordinary shares. Such interviews allowed the researchers to explorer these issues with a knowledgeable group of investors some of whom were experienced technical analysts.

10. A programme prepared by William J. O'Neil, Chairman and Founder of *Investor's Business Daily*, developed the CAN SLIM™ Investment Research Tool. This programme combines fundamental and technical analysis.
11. According to John (2004), candlestick charts describe share price movements; they are like bar-charts of a share price over time. It combines elements of a line-chart and a bar-chart, in that each bar represents the range of price movements over a given time interval. It is most often used in the analysis of currency and equity price patterns.
12. According to interviewees INS8, TA1, TA2, TA3, TA4, TA5, TA6, IA7 and IA8, Tickerchart and Metastock are computer programmes commonly used among technical analysts on the KSE; these models are fed with historical shares prices to draw graphs that able chartists to analyse shares on the KSE.
13. Brock *et al.* (1992) examined two of the simplest technical rules: moving average-oscillator and trading-range breakout rules (resistance and support levels) to test the possibility of predicting future returns based on past returns using the Dow Jones Industrial Average (DJIA) index for 90 years from 1897 to 1986. According to their moving average rule, buy and sell signals occur when the short-period moving average crosses the long-period moving average.
14. On the other hand, some used moving average values to identify support and resistance levels (TA4 and TA5). In addition, some used a computer programme to identify trends or patterns in moving average values (INS8 and TA6). They examined how sensitive the moving averages were to share prices. In other words, they ran the programme to identify which moving averages were working best for the current share; this step would improve their trading.
15. According to www.investorwords.com web site, RSI is "a technical analysis indicator which measures the magnitude of gains over a given time period against the magnitude of losses over that period" while the stochastic oscillator is "a momentum indicator that shows the location of the current close relative to the high/low range over a set number of periods. Closing levels that are consistently near the top of the range indicate accumulation (buying pressure) and those near the bottom of the range indicate distribution (selling pressure)" whereas, MACD is a trend-following momentum indicator that shows the relationship between two moving averages of prices; John (2004) defined it as "indicator that shows when a short-term moving average crosses over a long-term moving average."
16. Interviewees INS2 and INS2 work as financial analysts in a research department for an investment companies; they require calculating β, standard deviation, tracking error, and Sharpe ration for their clients as part of Investment Policy Statement. Interviewee IA7 works as investment analyst in an investment research centre. He computes β for every stock they analyse as part of his job.

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Appendix

Semi Structured Questionnaire about the Kuwaiti Investment Environment and Share Valuation in the Kuwait Stock Exchange

Part A: General Information

1. Name

2. Firm

3. Position

4. Educational qualification:

- Less than Bachelors Degree ..... ☐
- Bachelors Degree ..... ☐
- Masters Degree ..... ☐
- Doctorate ..... ☐
- Professional qualification ..... ☐
- Others ..... ☐

5. Age:
   - Less than 21 years ..... ☐
   - 21-30 years ..... ☐
   - 31-40 years ..... ☐
   - 41-50 years ..... ☐
   - Over 50 years ..... ☐

6. Gender:
   - Male ..... ☐
   - Female ..... ☐

Part B: The Kuwaiti Investment Environment

1. What is your opinion about the current state of the Kuwaitiinvestment environment?

2. Do you invest for yourself or others, or do you give advice to others?

3. What are the major influences on the regulation of security dealing in the Kuwait?

4. Is the environment for security trading in Kuwait well regulated?

5. How important is equity investment for Kuwaiti investors?

6. How important is the stock market as a source of funds for Kuwaiti companies?

7. What is your opinion about the level of commission currently charged for equity transactions in the KSE? How much is it?

(*continued*)

8. Describe the procedures that you follow when appraising an ordinary share which you want to buy or sell?

9. Do you feel that all relevant information about Kuwaiti firms is available to investors in a timely fashion to enable them to appraise ordinary shares? If not, why not?

10. What are the main sources of information that you use when appraising ordinary shares?

Part C: Fundamental Analysis

11. Outline the extent to which you use fundamental analysis when appraising shares.

12. What is your opinion onthe financial statement information disclosed by Kuwaiti firms in terms of the following?

    1. Relevance ….……
    2. Reliability ...…….……
    3. Timeliness ...……..……..
    4. Consistency ….…….……
    5. Adequacy ….……

13. What is your opinion on the information disclosed by the Kuwait Stock Exchange (KSE) in terms of the following?

    1. Price data (Bid/Ask) ……..……..
    2. Changes of ownership …….……
    3. News……...……..
    4. Interim/annual reports …..…….……
    5. Financial ratios ……..……..

14. What is your opinion on the information disclosed by the KSE in terms of the following?

    1. Reliability ……..……
    2. Timeliness ……..……...……..
    3. Consistency ……..……..……
    4. Adequacy ……..……

15. Do you try to predict a company's share price at some point in the future? If yes, how do you go about predicting the future price of a shareand what horizon do you forecast over?

16. Do you study a company's financial statements? If yes, what statements do you look at and what items do you look for?

    1. Balance Sheet? ……..……
    2. Income statement? ...……...
    3. Cash flows? ……..
    4. Dividends? ……..
    5. EPS? ……..
    6. Other? ……..

17. Do you look at company ratios? If yes, what ratios do you study and how do you use them?

18. Do you use a computer model to value shares? If yes, what is the model for and what type of information is employed in the model?

(*continued*)

Part D: Technical Analysis

19. Outline the extent to which you use technical analysis when appraising shares.

20. Do you examine charts or graphs of past share price movements when assessing a share's performance? If so, why? How?

21. Do you look at previous highs and lows of share prices when valuing shares?

22. Do you look at trading volume data when evaluating the performance of a share?

23. Do you look at trends in prices or volume by studying averages of past data? If so, how?

24. Do you look at market statistics when appraising shares such as the direction of the index and the number of buyers and sellers in the market?

25. To what extent do you pay attention to rumours about a company?

26. Do you contact company executives? If yes, what issues do you discuss with them?

Part E: Risk Analysis

27. Outline the extent to which you use riskanalysis when appraising shares.

28. Do you feel that investment in the KSE isriskier than investment in other markets? What typesofrisks are there?

29. Do you considerthese risks in your investment decisions?

30. Do you predict and calculate these risks?

31. Do you consider both the risk and return of a sharethat you want to buy or sell? If yes, how do you consider these factors inyour decision?

32. Do you consider the return earned by the marketindex or by the sector in which the company operates when appraising shares? If yes, what do you use it for?

33. Do you consider the overall risk of a portfolio or do you consider the risk of each share individually?

34. Are there any questions that I should have asked but have not?

Thank you for taking part in this interview. If you would like a copy of the results from this study please let me know.

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