

Determinants of Individual Investment Decisions- Making for Iraqi Investors, The Role of Financial Literacy and Fundamental Market Anomalies

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To Link this Article: <http://dx.doi.org/10.6007/IJARBSS/v13-i10/19180>

DOI:10.6007/IJARBSS/v13-i10/19180

Published Date: 29 October, 2023

Abstract

Every investor strives to choose the best investments with an aim to reap greater future benefits. Behavioural finance argues that an investor's decision-making process for investments is influenced by a complex mixture of factors that have a role in an investor's decision-making process. The literature shows that, in general, the study of behavioural aspects in financial markets is somewhat of an emerging concept and the determinants are not considerably addressed; there are few studies on determinants of individuals' investment decision-making, which makes academic research in this area necessary to establish the determinants on individuals' investment decision-making. This conceptual study uses the contemporary behavioural finance theory to present a broader/ comprehensive model of determinants of investor behaviour, considering the moderating role of financial literacy and fundamental market anomalies on the relationship between such determinants and individual investment decision-making for Iraqi investors.

Keywords: Individual Decision Making, Financial Literacy, Fundamental Anomalies, Accounting Information, Self/Firm Image

Introduction

Individuals' involvement in financial markets through buy and sell stocks has increased significantly in recent years (Raut, 2020). Investment decision making is defined as "how investors analyse, predict, interpret, and evaluate decision-making procedures such as information collection, identification and comprehension, review, and analysis" (Xiao & Yue, 2018, p. 107). Every investor strives to choose the best investments (Ahmed and Shah, 2022). Advanced financial understanding is necessary for making optimal and reasonable investment selections (Xiao & Yue, 2018). Making the choice to invest in the stock market is a challenging endeavour that needs a clear perspective and a logical thinking (Ahmad & Shah, 2022). Individual investors need information with specialised content for the purchasing and selling procedure in stock markets (Naveed et al., 2020). Investment decision-making is still a fuzzy concept; despite extensive discussion of its many facets, no objective guidelines or theories have yet been developed (Ahmad & Shah, 2022). The economy and stock market are positively correlated; a decline in the stock market will hinder the expansion of the economy, and vice versa. Therefore, judgments made by individual investors on stock exchanges are crucial in determining market development, which then controls the economy (Tooranloo et al., 2020).

Behavioural finance looks at an investor's market behaviour and how they make judgments about whether to buy, sell, or hold onto their shares. Schools of contemporary thought in the context of behavioural finance, including bounded rationality (Simon, 1955), cognitive dissonance (Hardyck, 1965), prospect theory (Kahneman & Tversky, 1979), and heuristics (Tversky & Kahneman, 1974), are in contradiction with traditional finance and reveal that these hypotheses are incoherent and unable to explain why investors behave in such an unpredictable way. Furthermore, it claims that people hardly have enough information, free time, or incentive to come to a fully logical conclusion (Haritha & Uchil, 2020a). It is suggested that a number of factors, such as investment prospects, the patterns and behaviours of other market participants, market fluctuations, and benchmark performance, have an impact on investor behaviour in the market (Filip et al., 2015). This viewpoint contends that the process of decision-making by investors not only relies on quantitative and rational analysis, but also takes into account elements brought on by market expectations (Khawaja & Alharbi, 2021). Consequently, a complicated combination of market conditions, personal traits, and demography have a role in an investor's decision-making process (Sachdeva et al., 2022).

Studying direct relationship between determinants of investor behaviour and individual's investment decision making does not provide a whole picture of the determinants of individual's investment decision making (Ahmad & Shah, 2022). This is because, the moderating effects could alter the relationships between determinants of investor behaviour and investment decision-making of individuals' investors (Ahmad, 2022). In this context, it's argued that financial literacy has a statistically significant and favourable influence on investment decisions for both female and male investors. Financial literacy is "a combination of awareness, knowledge, skill, attitude and behaviour necessary to make sound financial decisions and ultimately achieve individual financial wellbeing" (Kishan & Alfian, 2019, p. 26). When it comes to influencing investing decisions, financial literacy is the most crucial aspect for both male and female investors (Adil et al., 2022a). As financial literacy significantly alters the relationship between individual's behavioural bias and investment decision, it can also be claimed that highly financially literate investors do not exhibit the behavioural bias impact when making an investment decision (M. Ahmad, 2022). Financial literacy improves investors'

ability to identify their personal financial needs and make wise investment decisions to buy or sell stocks that are in line with their objectives to maximise returns and minimise risks (Ahmad & Shah, 2022). Financial literacy also helps investors understand accounting information and follow up on other information in the media (Kishan & Alfian, 2019). Financial literacy can also assist investors in understanding the firm's position in the industry, becoming more knowledgeable about the firms' goods and services, and predicting the profitability of the firm (Siyanbola & Fregene, 2019). Additionally, financial literacy plays a significant role in the forecasting of investments (Adil et al., 2022b).

In the same context, anomaly is defined as any that is unusual, irregular, or deviates from the known natural order of things (Reisenzein et al., 2019). Anomalies in the securities markets are unmistakable evidence of market inefficiency. Such inefficiencies may be onetime occurrences or occur on a regular basis. Tversky and Kahneman (1986) explain that market anomalies occur when trading activities deviate significantly from the usual pattern of trading activities on a regular, widespread, and almost systemic basis, such that ignoring such deviations undermines the fundamental assumptions and violates the normative principles of the securities market. Finance theories have attempted to explain such anomalies as aberrant share price performance by pointing to deviations from the tested assumptions of the efficient market hypothesis (Raza et al., 2016). As a result, experts believe that stock market anomalies in the form of unusual price fluctuations are market behaviours that cannot be explained by the efficient market hypothesis (Khazali & Mirzaei, 2017). Market anomalies are certainly abnormal outcomes of market participants' aberrant behaviour. Previous research has consistently shown that both buyers' and sellers' behavioural biases combine to degenerate into market oddities, which strongly impact individual investors' decisions (Oehler et al., 2018; Salzman & Zwinkels, 2017). Based on the discussion above, this study seeks to achieve the following objectives:

- To identify the determinants of individual's investment decision-making of Iraqi investors; and
- To discuss the moderating role of financial literacy and fundamental market anomalies in the relationship between determinants of investor behaviour and individual investment decision-making of Iraqi investors.

Individual Investment in Iraq

Individual direct investment is the size of investments that individual investors make by providing capital funding in exchange for an equity interest in a company's stock (Ahmad, 2022). According to United Nations Conference on Trade and Development (UNCTAD) 2022, World Investment Report, individual direct investments for stock 2021 in Iraq according to the to the latest data available, stood at USD -2 613 billion in 2021. Since 2016 the individual direct investments for stock have been negative (Table 1). Table 1 also shows that individual direct investments for stock 2016-2012 were positive in Saudi Arabia, Jordan, UAE and Syria. Even when comparing to Syria which compatible with the conditions of Iraq, as a country with conflict, the individual direct investments for stock in Syria were positive between 2016 and 2021, while was negative in Iraq. Further, even when compared to Iran, which is subject to an international economic blockade, the individuals' investments in Iran were positive between 2016 and 2021. Thus, Table 2.3 shows that Iraq has the lowest individual investments of all its

neighbours (UNCTAD, 2022). Furthermore, Alyousfi (2021) stated the individuals' investments in Iraq were negative in 2020 and accounted for (-0.05) of the world's individuals' investments.

Table 1: Individual direct investments 2016-2022 in In Iraq and neighbour countries (Million USD)

Country	2016	2017	2018	2019	2020	2021
Iraq	-6 256	-5 032	-4 885	- 3 508	-2 859	-2 613
Saudi Arabia	7 453	1 419	4 247	4 563	5 399	19 286
Jordan	1 553	2 030	955	730	760	622
UAE	9 605	10 354	10 385	17 875	19 884	20 667
Syria	4 376b	5 570b	7 615b	9 939b	10 123b	10 743b
Iran	3 372	5 019	2 373	1 508	1 342	1 425b
Turkey	13 651	11 113	12 573	9 594	7 821	12 530

Source: UNCTAD, 2022, (b= Estimated)

International reports indicate that Iraq has had trouble attracting direct investments because of its substantial security problems, fragile institutions, and lack of governance (UNCTAD, 2018, 2022; World Bank, 2019). Iraq is also facing the daunting challenges of political upheaval and profound economic and humanitarian crises (UNCTAD, 2020). Furthermore, the COVID-19 pandemic and the subsequent sharp decline in global oil prices, which has resulted in a significant decline in oil export revenues, continue to reverberate in Iraq (US department of State, 2022). The Iraqi government has been covering a large fiscal deficit by borrowing domestically and drawing on its foreign reserves. In December 2020, the GOI devalued Iraq's dinar by 22% to forestall a liquidity crisis. This has raised domestic prices for food and other commodities in Iraq's import-dependent economy (US department of State, 2022). In the same context, the common individual investors in ISX are uncomfortable investing in the market due to the supremacy of big individual and institutional investors (Asad et al., 2018). For example, the total number of registered individual investors is almost 0.15 million, whereas there are almost 22.5 million fixed deposits in banks (ISX, 2022). This indicates that ISX is unsuccessful in attracting a major portion of the investor base.

Behavioural Finance Theory

A component of today's accounting and financial management concerns is behavioural finance, which takes a psychological approach to looking at how financial markets behave (Sachdeva et al., 2021). The theory of behavioural finance presented by Tversky and Kahneman (1974) has been used to discuss the individual's decision-making behaviour relating to investment, buying and selling in stock market. Academics, researchers, and financial specialists disagree on the behavioural component of the finance literature (Chauhan et al., 2020). According to behavioural finance theory, an investor's decision-making process for

investments is influenced by a complex mixture of demographics (Maxfield et al., 2010; Ozmen & Sumer, 2011); personal characteristics (Chitra & Ramya Sreedevi, 2011; Young et al., 2012); and market factors (Ferguson et al., 2011). The theory of behavioural finance is the most comprehensive, structured, and pertinent to individuals investors' decision-making attitude on stocks (Sachdeva et al., 2022). Behavioural finance theory contends that people do not always make rational decisions and that their decisions are influenced by factors such as economic conditions, opinions of firms/families, the firm's reputation, etc., behavioural finance theory thus considers the psychology and social context of individuals' decisionmaking (Sachdeva et al., 2021; Sachdeva et al., 2022). The goal of behavioural finance theory is to shed light on the use of psychological decision-making processes in the identification and forecasting of financial markets, not to disprove the validity of rational behaviour (Lee et al., 2008).

The behavioural finance theory contested with the traditional financial theories and proposed psychological and behavioural factors as key drivers for individuals' investment decisions. This is in contrast to conventional financial theories that have argued that investors are rational, their decisions are driven by the information available in the market, and these investors react rationally based on their own sets of information, regardless of how other investors act (Khawaja & Alharbi, 2021). The focus of investor decision-making research has recently switched from the conventional method to behavioural finance research (Adil et al., 2022a; Ahmad & Shah, 2022; Jain et al., 2021; Jain et al., 2022). Its argued that individual characteristics play a critical role in decision-making (Jain et al., 2022). Furthermore, both internal and external behavioural aspects have a significant impact on investors' financial decisions (Adil et al., 2022b; Patil & Bagodi, 2021); thus, studies on behavioural finance have been expanding quickly in recent years. The behavioural finance theory, therefore, constitutes the framework for the analysis conducted in this study.

Many contextual factors, such as stock brokers, financial consultants, and investment advisors, have been highlighted by contextual sources in previous studies as having the potential to affect individuals' investment decisions (Chandra & Kumar, 2012; Khawaja & Alharbi, 2021), Moreover, financial information about the entity, more recent, significant, and unbiased information referred to as neutral information, firm's reputation and track record, behavioural aspects of people and the extent to which their decisions are influenced by friends, family, and advisors, the relative importance they attach to the financial statements of the firm, recent changes in investment price, past performance of the investment, environmental and ethical concerns of the firm, etc. (Khawaja & Alharbi, 2021; Sachdeva et al., 2022). Such factors are contextual in nature, aim to shed light on a number of different characteristics, giving a thorough picture of investor behaviour by integrating several domains.

Determinants of Investor Behaviour

Investment decision making is how investors analyse, predict, interpret, and evaluate decision-making procedures such as information collection, identification and comprehension, review, and analysis (Xiao & Yue, 2018). Choosing to invest in the stock market is a difficult task that requires reasoning and a clear perspective (Ahmad & Shah, 2022). Schools of contemporary thought in the context of behavioural finance focuses at an investor's market behaviour and how they make decisions about whether to buy, sell, or keep onto their shares. The theory of behavioural finance provides the broadest, most organised understanding of the variables

affecting individual investors' decision-making (Sachdeva et al., 2022). The theory suggests that individual investment decisions may be influenced by a variety of variables, including investment prospects, other market players' patterns and behaviours, market changes, and benchmark performance (Filip et al., 2015). Furthermore, the theory contends that a person's investment choices are also influenced by the economy, attitudes of businesses and families, a company's reputation, etc (Sachdeva et al., 2021; Sachdeva et al., 2022). According to this argument, investors' decision-making process include factors resulting from market expectations in addition to quantitative and rational analyses (Khawaja & Alharbi, 2021). Consequently, an investor's decision-making is influenced by a complex interplay between market conditions, personal characteristics, and demography (Sachdeva et al., 2022).

Using the contemporary behavioural finance theory, In their studies, Sultana and Pardhasaradhi (2012), Khawaja and Alharbi (2021) and Sachdeva et al. (2022), respectively, identified five key factors that could affect individual's investment decisions: (i) selfimage/firm-image coincidence; (ii) accounting information; (iii) neutral information; (iv) advocate recommendation; and (v) personal financial needs. These chosen factors have a contextual nature, and considers determinants of investor behaviour as a set of these five main factors. According to this study, these five factors can shed light on a wide range of subjects and provide a comprehensive view of investor behaviour by taking into account a variety of domains. In the following, this study describes the five determinants of investor behaviour in details.

Self-Image/Firm-Image coincidence

Self-Image/Firm-Image coincidence is defined as "investors' concerns toward firm status in the industry, perceived ethics of firm, community involvement, feelings for products of firm, firm's reputation, product safety, and quality, and the firm's environmental activities" (Sachdeva et al., 2022, p. 5). Studies cited in earlier literature show that investor risk and return evaluation is significantly influenced by the firm's image (Sastry and Thompson, 2019). For instance, Khawaja and Alharbi (2021) report that investor behaviour in the stock market is significantly influenced by knowledge about the product and service, expectations of becoming wealthy rapidly, shareholders, the firm's reputation in the industry, and the firm's status. According to Ameer et al. (2019), the firm's environmental disclosure quality has a sizable impact on the quality of its profitability. This is because investors want to direct their money toward worthwhile initiatives that will benefit society and the environment and avoid engaging in harmful externalities (Siyambola & Fregene, 2019).

Accounting Information

Accounting information is defined as "all factors ranges from financial statements, marketability of stock, earnings and affordability of investment to expected corporate earnings, the volume of shares and market value of shares (Sachdeva et al., 2022, p. 4). Past Studies demonstrate that accounting information has a substantial impact on investor investing decisions. For instance, decision-makers discuss accounting information, possibilities generated from it, and the reasoning applied to the development of information (Saukkonen et al., 2018). Investors will encourage to invest where there is trustworthy, timely, and accurate financial information (Bui et al., 2020). Financial statements provide accounting information that is value relevant, which enables one to determine a firm's value (Kishan & Alfani, 2019).

The most crucial sources of information for determining a company's value are annual reports (Jain et al., 2021). Similar to this, research indicates that investors are most impacted by elements including the stock's past performance, expected corporate earnings, and financial statements, and that investors devote a significant amount of time to analysing such data (Patil & Bagodi, 2021). Therefore, it's crucial that all accounting information be disclosed so that investors can make informed investment decisions (Siyabola & Fregene, 2019).

Neutral Information

Neutral information is defined as "outside sources of information that is perceived to be unbiased such as recent price movements, changes in economic indicators, government holdings in investment, statements from government officials, information from the internet etc." (Sachdeva et al., 2022, p. 5). According to literature, individual investors value stocks without using valuation models, instead considering current economic indicators like the GDP, inflation rates, and others (Haritha & Uchil, 2020b). According to Khawaja and Alharbi (2021), neutral information has the greatest influence on investor behaviour. They are, however, given less weight than the company's management or recent price changes for the shares (Sachdeva et al., 2022). Stock exchanges, brokerage firms, banks, and investment businesses might use media postings as sources of information regarding their financial products (Sachdeva et al., 2021). Additionally, previous research showed that investors' decisions are influenced by the inflation rate's impact on nominal interest rates and stock returns in the stock market (Naveed et al., 2020). Previous research has also shown that economic indicators have shown to be a more important element in investment decisionmaking (Sultana & Pardhasaradhi, 2012).

Advocate Recommendations

Advocates recommendations is defined as "recommendations from financial advisors, recommendations from family members and recommendations from friends or co-workers, which reduces the possibility of losses (Sachdeva et al., 2022, p. 6). Investors seek social interaction to get advices and recommendations from others to lessen uncertainty because personal knowledge and experience aren't always enough to make the best judgments (Adil et al., 2022b). These advices or recommendations allow individual investors to generate returns that are above average (Sachdeva et al., 2022). Therefore, past studies suggests that investors have to seek advices and recommendation from investing professionals (Patil & Bagodi, 2021). According to Haritha and Uchil (2020b), among the sources of awareness, advocate recommendations and social interaction have the most sway. Similar to this, Haritha and Uchil (2020a) claim that investor sentiment can be influenced by advocate recommendations. Advocates' recommendations have significantly influenced equity selections and investing choices (Sachdeva et al., 2021). Additionally, social interaction has a big impact on what investors do (Haritha & Uchil, 2020b).

Personal Financial Needs

Personal financial needs is defined as "the needs of individuals such as the need to diversify the funds, risk minimization and ease of obtaining borrowed funds, risk aversion, wealth maximization and financial expectation" (Sultana & Pardhasaradhi, 2012). Past studies provide evidence regarding the immediate consumption needs of investors as investors' need for getting immediate returns turns out to be one of the most influencing factors in equity

selections (Sachdeva et al., 2022). The preference of the cumulative level of risk by the investor is considered important to make investment decision, and it depends mostly upon the ability of the investor to calculate and manage the risk (Adil et al., 2022a). The loss aversion enhance investor tendency toward diversification of investment, this is because diversification needs help investors avoid losses, and as a result, diversification needs have an impact on how investors make investment decisions (Tooranloo et al., 2020). Some studies give emphasis to attractiveness of non-stock investment as driver of investment decision (Gunathilaka, 2014; Khawaja & Alharbi, 2021; Sachdeva et al., 2022). Easy of obtaining borrowed fund is also a key factor in encouraging investment choices and enabling investors to profit from investment opportunities (Khawaja & Alharbi, 2021).

Financial Literacy as a moderator

Financial literacy is defined as “a person’s ability to understand and make use of financial concepts” (Ahmad & Shah, 2022, p. 67). Financial literacy also defined as “a combination of awareness, knowledge, skill, attitude and behaviour necessary to make sound financial decisions and ultimately achieve individual financial wellbeing” (Kishan & Alfian, 2019, p. 26). Financial literacy is not just related to knowledge, but it is also important to understand individuals' self-confidence. According to Ahmad and Shah (2022), financial literacy includes two key components: first, comprehension or knowledge of personal finance, and second, application of that knowledge. Poor investment choices and bad financial behaviour have been attributed to financial illiteracy (Ahmad, 2022). Individual investors can maximise their earnings and allocate their resources more wisely by being financially literate (Dinç Aydemir & Aren, 2017). Financial knowledge influences investment decisions favourably and helps people get the most out of their assets (Aren & Aydemir, 2015).

According to the findings of Adil et al. (2022a) financial literacy is the most important factor influencing investment decisions for all investors at the time of making an investment, because financial literacy can strengthen investor knowledge and skills to understand financial statements, marketability of stock, expected corporate earnings, and market value of shares. It can also be said that highly financially literate investors reduce the behavioural bias effect while making an investment decision; thus, financial literacy considerably reduce the negative relationship between people's behavioural bias and investment decision (Ahmad, 2022). Financial literacy also strengthens investors ability to follow up other information in the media, recent price movements, changes in economic indicators, government holdings in investment, statements from government officials (Ahmad & Shah, 2022). Similarly, financial literacy strengthens investors ability to identify their personal financial needs and make sound investment decision-making to buy or sell stocks, which fit their goals in maximise returns and minimise risks (Kishan & Alfian, 2019). Additionally, financial literacy can strengthens investors understand the firm's status in the industry, be more knowledge about the firms' products and services, thus predict the firm's profitability (Siyanbola & Fregene, 2019). According to Bui et al. (2020), high financial literacy investors will encourage to invest where there is trustworthy, timely, and accurate financial information from trusty sources such annual reports, accounting information, stock's past performance, and expected corporate earnings rather than social interaction information from friend, family etc., in such way investors avoid engaging in harmful externalities and strengthens their ability to make informed investment decisions (Haritha & Uchil, 2020b).

Fundamental Market Anomalies as a moderator

Anomaly is described by Zain ul Abdin et al. (2019) as a phenomenon that deviates from the common or typical order of things in human perception. An anomaly is defined as something that is unusual, irregular, or deviates from the known natural order of things. As a result, the phrase has come to apply to unusual events, startling developments, unexpected outcomes, and anything that deviates dramatically from known theories, models, or hypotheses (Reisenzein et al., 2019). Anomalies in the securities markets are unmistakable evidence of market inefficiency. Such inefficiencies may be one-time occurrences or occur on a regular basis. Tversky and Kahneman (1986) explain that market anomalies occur when trading activities deviate significantly from the usual pattern of trading activities on a regular, widespread, and almost systemic basis, such that ignoring such deviations undermines the fundamental assumptions and violates the normative principles of the securities market. Finance theories have attempted to explain such anomalies as aberrant share price performance by pointing to deviations from the tested assumptions of the efficient market hypothesis (Mallick, 2015). As a result, experts believe that stock market anomalies in the form of unusual price fluctuations are market behaviours that cannot be explained by the efficient market hypothesis (Khazali & Mirzaei, 2017). Market anomalies are certainly abnormal outcomes of market participants' aberrant behaviour. Previous research has consistently shown that both buyers' and sellers' behavioural biases combine to degenerate into market oddities, which strongly impact individual investors' decisions (Oehler et al., 2018; Salzman & Zwinkels, 2017).

Past studies argued that investors' actions in the market are driven more by psychological issues than by intentional decision-making and rational thought (Chandra & Kumar, 2012; Frantz et al., 2022). As a result, decisions are made based on investors' cognition and are impacted by fundamental anomalies analysis. This shows that even while investor cognition directly impacts judgement, such a process is dependent or susceptible to market anomalies (i.e., fundamental analysis). In this context, Abo El-Soud (2021) found that fundamental anomalies statistically and significantly impact investment decisions. The study of Zain ul Abdin et al. (2020) examined the effect of behavioural components on market anomalies in Pakistan; found that all behavioural components have a statistically significant effect on fundamental anomalies; thus, they suggest that market anomalies may lead to reduce the relationship between behavioural biases and individual decision making. Lazuarni and Asri (2019) mentioned that individual decision-making could be impacted when considering market anomalies while making investment decisions. Similarly, prior studies argued that stock market anomalies significantly increase the financial risk of investors (Abo El-Soud, 2021). This suggests that stock market anomalies may moderate the impact of some determinants of investor behaviour on their investment decision. Under this logic, many scholars called to consider adding market anomalies as moderators between determinants of investor behaviour and investment decisions (Parveen et al., 2020). This moderating role can provide better insights into the relationship between prevalent heuristic biases and financial decisions (Mehmood et al., 2019), and help explicate the influence of psychological factors on investment choices (Frantz et al., 2022; Shah et al., 2018).

Examining market anomalies as moderators between behavioural biases and individual decision-making is justified in light of the situation in Iraq (Rashid et al., 2022). For instance,

according to the report of the FEAS 27th Annual General Assembly, which was held on June 13, 2020, the number of shares exchanged fell precipitously from 832630 million in 2019 to 460097 in 2020. These unusual share size fluctuations are a reflection of market actions that the efficient market hypothesis is unable to account for (Khazali & Mirzaei, 2017). Researchers discovered considerable behavioural variation among Iraq equities investors (Altman, Policy Consequences Of Multiple Equilibria And The Indeterminacy Of Economic Outcomes In A Boundedly Rational World: Closing The System With Non-Economic Variables¹; Anuradhasamal & Dasmohapatra, 2020). This heterogeneity's cause has been attributed to the market's dearth of reliable information (AL-salihy, 2018). Also, according to experts in Iraq, buyer and seller behavioural biases combine to create market anomalies, which have a significant influence on the choices made by individual investors (Oehler et al., 2018; Salzman & Zwinkels, 2017).

Conclusions

Choosing to invest in the stock market is a difficult task that requires reasoning and a clear perspective (Ahmad & Shah, 2022). Schools of contemporary thought in the context of behavioural finance focuses at an investor's market behaviour and how they make decisions about whether to buy, sell, or keep onto their shares. The theory of behavioural finance argues that an investor's decision-making is influenced by a complex interplay between market conditions, personal characteristics, and demography (Sachdeva et al., 2022). Numerous factors have been identified in the literature as influencing factors for individual investors' investment decisions. However, there is no consensus regarding the nature of the determinants of investor behaviour that influence an individual's investment decisionmaking, despite the fact that there have been several attempts to conceptualise and operationalize those determinants of investor behaviour (Sachdeva et al., 2021; Sachdeva et al., 2022). Accordingly, it's argued that to understand the influence of determinants of investor behaviour on individual investment decisions, and to secure more rational investment decisions by individuals, determinants of investor behaviour must first be identified and recognised (Khawaja & Alharbi, 2021; Sachdeva et al., 2022). The study of determinants of investor behaviour in financial markets is somewhat an emerging concept and the behavioural determinants are not considerably addressed, there are few studies on the role of determinants of investor behaviour on individuals' investment decision-making, which need more academic research in this area necessary to establish the significance of the determinants of investor behaviour on individuals' investment decision-making (Ahmad & Shah, 2022; Sachdeva et al., 2022). It is critical for future research to examine the determinants of investor behaviour that affect the actual investment behaviour of the individuals (Adil et al., 2022a).

According to the findings of Adil et al. (2022a) financial literacy is the most important factor influencing investment decisions for all investors at the time of making an investment, because financial literacy can strengthen investor knowledge and skills to understand financial statements, marketability of stock, expected corporate earnings, and market value of shares. However, past studies neglect to examine the moderation effect of financial literacy in relationship between determinants of investor behaviour and individual's investment decision in stock market (Adil et al., 2022b). knowing how financial literacy works as a moderation mechanism can help finance professionals make better investment decisions. In the same

context; investment decision-making is a cognitive process in which investors select from a range of available investment options based on the outcomes of market analysis (Antony, 2020). Empirical investigations have strongly suggested that investors' behaviours in the market were motivated more by psychological concerns than by rational thinking and deliberate choices (Cuandra & Tan, 2021). Therefore, decision-making is a process influenced/motivated by investors' cognition and based on market analysis (Frantz et al., 2022). This indicates that although investor behaviour directly influences decision-making, such a process is contingent or subject to market anomalies. Under this logic, many scholars called to consider adding market anomalies (i.e., fundamental anomalies) as moderators between determinants of investor behaviour and investment decisions (Parveen et al., 2020). This moderating role can provide better insights into the relationship between prevalent determinants of investor behaviour and investment decisions (Cuandra & Tan, 2021; Mehmood et al., 2019), and help explicate the influence of psychological factors on investment choices (Frantz et al., 2022; Shah et al., 2018). Based on these arguments, the determinants of individual investment decision-making can be conceptualised as shown in figure 1.

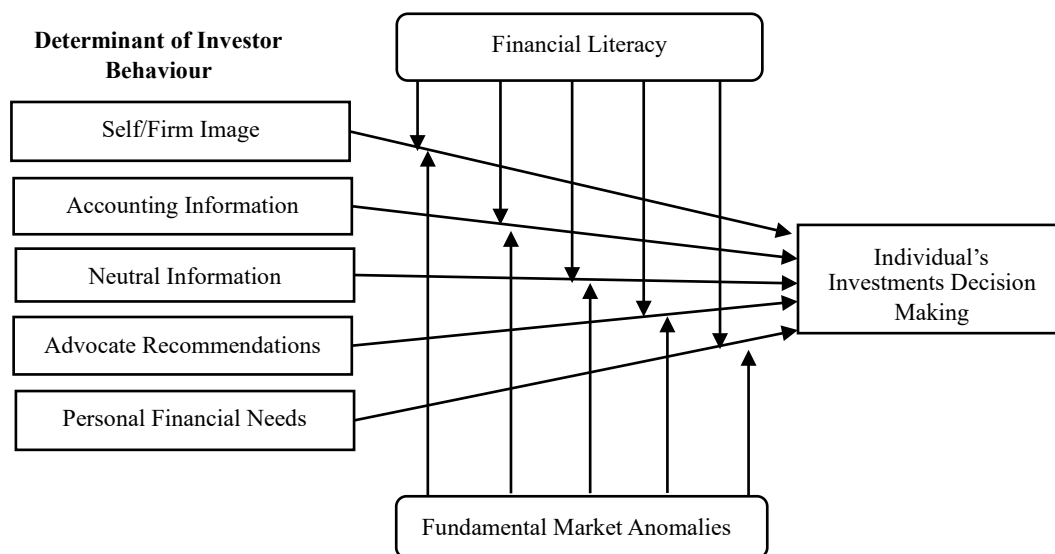


Figure 1: The proposed Conceptual Framework

Future Research

In general; it's clear that there is a comprehensive model of the determinants of investor behaviour in the current literature is lacking (Adil et al., 2022a). Using the contemporary behavioural finance theory, five key factors could affect an individual's investment decisions: (i) self-image/firm-image coincidence; (ii) accounting information; (iii) neutral information; (iv) advocate recommendation; and (v) personal financial needs. These chosen factors have a contextual nature. However, these studies did not follow with an empirical examination of this wider/ comprehensive model of determinants of investor behaviour. Accordingly, there is a

need to develop a more clear framework and comprehensive view of what determinants of investor behaviour constitute and how they affect an individual's investment decision (Adil et al., 2022b; Khawaja & Alharbi, 2021; Sachdeva et al., 2021). This is crucial to empirically demonstrating the behavioural finance theory's theoretical claims and to clarifying the relationship between determinants of investor behaviour and individual decision-making better (Ahmad & Shah, 2022). In the same vein, the vast majority of studies in this area have relied on empirical research based on secondary data, which does not accurately reflect individual's actual behaviour. Therefore, using primary data-based empirical research, future studies should examine determinants of investor behaviour that influence investors' behaviour when making investment decisions (Ahmad, 2022). Past studies neglect to examine the moderation effect of financial literacy in relationship between determinants of investor behaviour and individual's investment decision in stock market (Adil et al., 2022b). Furthermore, few researchers have shed light on the moderating role of market anomalies between determinants of investors' behaviour and investment decisions (Frantz et al., 2022). Such studies considering market anomalies in investment decisions are scarce (Abo El-Soud, 2021; Lazuarni & Asri, 2019).

In the same vein, even in developed countries, the study of behavioural finance is in its early stages, and little has been done in developing countries in terms of the importance of behavioural finance in investment decision-making (Ahmad & Shah, 2022; Haritha & Uchil, 2020a, 2020b). Yet the economies of developing nations are still expanding, there are few research on how investors make decisions and how determinants of investor behaviour influences investment decisions; therefore, future research should concentrate on developing stock markets, as these markets have more unpredictable conditions than developed markets do, the uncertainty is manifested in the form of more sparse informational settings, fewer analysts following, and lower accounting disclosure.

References

- Abo El-Soud, S. Z. M. (2021). The Impact of Market Anomalies on Investment Decision in Egyptian Stock of Exchange. *Journal of modern trade studies*, 7(11), 85-106.
- Adil, M., Singh, Y., & Ansari, M. S. (2022a). How financial literacy moderate the association between behaviour biases and investment decision? *Asian Journal of Accounting Research*, 7(1), 17-30. <https://doi.org/10.1108/AJAR-09-2020-0086>
- Adil, M., Singh, Y., & Ansari, M. S. (2022b). Does financial literacy affect investor's planned behavior as a moderator? *Managerial Finance, ahead-of-print*(ahead-of-print). <https://doi.org/10.1108/MF-03-2021-0130>
- Ahmad, M. (2022). The role of cognitive heuristic-driven biases in investment management activities and market efficiency: a research synthesis. *International Journal of Emerging Markets, ahead-of-print*(ahead-of-print). <https://doi.org/10.1108/IJOEM07-2020-0749>
- Ahmad, M., & Shah, S. Z. (2022). Overconfidence heuristic-driven bias in investment decisionmaking and performance: mediating effects of risk perception and moderating effects of financial literacy. *Journal of Economic and Administrative Sciences*, 38(1), 60-90. <https://doi.org/10.1108/JEAS-07-2020-0116>

- AL-salihi, E. H. M. (2018). The Available Options For The Privatization Of The Iraq Economy (1980-2012). *Journal of kirkuk University For Administrative and Economic Sciences*, 8(2), 376-412.
- Altman, M. (Policy Consequences Of Multiple Equilibria And The Indeterminacy Of Economic Outcomes In A Boundedly Rational World: Closing The System With Non-Economic Variables1). *Forum For Social Economics*. *Forum For Social Economics*, 46(3), 234–251.
- Alyousfi, A. Y. H. (2021). FDI inflows and bank deposits: evidence from 18 MENA economies. *Competitiveness Review. An International Business Journal*.
<https://doi.org/10.1108/CR-05-2020-0078>
- Ameur, H. B., Boujelbene, M., Prigent, J. L., & Triki, E. (2019). Optimal portfolio positioning on multiple assets under ambiguity. *Computational Economics*, 5(4), 1-37.
- Antony, A. (2020). Behavioral Finance And Portfolio Management: Review Of Theory And Literature. *Journal of Public Affairs*, 20(1), 106-121.
- Anuradhasamal, & Dasmohapatra, A. K. (2020). Impact Of Behavioral Biases On Investment Decisions: A Study On Selected Risk Averse Investors In India. *International Journal Of Advanced Science And Technology*, 29(6e), 2408-2425.
- Aren, S., & Aydemir, S. D. (2015). The moderation of financial literacy on the relationship between individual factors and risky investment intention. *International Business Research*, 8(6), 17-28.
- Asad, H., Khan, A. A. T., & Faiz, R. (2018). Behavioral Biases Across The Stock Market Investors: Evidence From Pakistan. *Pakistan Economic and Social Review*, 56(1), 185-209.
- Bui, N. T., Le, O. T. T., & Dao, H. M. (2020). Roadmap for the implementation of IFRS in Vietnam: Benefits and challenges. *Accounting*, 6(4), 533-552.
<https://doi.org/10.5267/j.ac.2020.4.005>
- Chandra, A., & Kumar, R. (2012). Factors influencing Indian individual investor behaviour: survey evidence. *Decision*, 39(3), 141-167.
- Chauhan, Y., Ahmad, N., Aggarwal, V., & Chandra, A. (2020). Herd behaviour and asset pricing in the Indian stock market. *IIMB Management Review*, 32(2), 143-152.
- Chitra, K., & Ramya Sreedevi, V. (2011). Does personality traits influence the choice of investment? *IUP Journal of Behavioral Finance*, 8(2), 47-57.
- Cuandra, F., & Tan, H. (2021). Analysis of factors that are considered by investors in stocks investment decision making in Batam city. *Jurnal ilmiah manajemen bisnis dan inovasi universitas sam ratulangi*, 8(1), 1-31.
- Dinç Aydemir, S., & Aren, S. (2017). Do the effects of individual factors on financial risk-taking behavior diversify with financial literacy? *Kybernetes*, 46(10), 1706-1734.
<https://doi.org/10.1108/K-10-2016-0281>.
- Ferguson, E., Heckman, J., & Corr, P. (2011). Personality and economics: overview and proposed framework. *Personality and Individual Differences*, 51(3), 201-209.
- Filip, A., Pochea, M., & Pece, A. (2015). The Herding Behaviour Of Investors In The CEE Stocks Markets. *Procedia Economics and Finance*, 32(1), 307-315.
- Frantz, A., Olivo, R. L. d. F., Sales, G. A. W., & Silva, F. (2022). Toward Enhanced Excellence in Brazilian Investment Firms: The Role of Investors' Personality Assessment Tools. *Benchmarking: An International Journal*, 29(3), 856-877.
<https://doi.org/doi:10.1108/bij-09-2020-0488>

- Gunathilaka, C. (2014). *actors influencing stock selection decision the case of retail investors in Colombo Stock Exchange* the 11th International Conference on Business Management, Hardyck, J. A. (1965). When prophecy fails. *Review of Religious Research*, 6(2), 117-164.
- Haritha, P. H., & Uchil, R. (2020a). Influence of investor sentiment and its antecedent on investment decision-making using partial least square technique. *Management Research Review*, 43(11), 1441-1459. <https://doi.org/10.1108/MRR-06-2019-0254>
- Haritha, P. H., & Uchil, R. (2020b). Impact of investor sentiment on decision-making in Indian stock market: an empirical analysis. *Journal of Advances in Management Research*, 17(1), 66-83. <https://doi.org/10.1108/JAMR-03-2019-0041>
- ISX. (2022). *Market reports*. Iraq Stock Exchange. Retrieved June, 28 from <http://www.isxiq.net/isxportal/portal/uploadedFilesList.html>
- Jain, J., Walia, N., Gupta, S., Aggarwal, K., & Singh, S. (2021). A fuzzy analytical hierarchy process framework for stock selection in the Indian stock market. *Journal of Public Affairs*, n/a(n/a), e2710. <https://doi.org/https://doi.org/10.1002/pa.2710>
- Jain, R., Sharma, D., Behl, A., & Tiwari, A. K. (2022). Investor personality as a predictor of investment intention – mediating role of overconfidence bias and financial literacy. *International Journal of Emerging Markets*, ahead-of-print(ahead-of-print). <https://doi.org/10.1108/IJOEM-12-2021-1885>
- Kahneman, D., & Tversky, A. (1979). Prospect theory: an analysis of decision under risk. *Econometrica*, 47(1), 363-391.
- Khawaja, M. J., & Alharbi, Z. N. (2021). Factors influencing investor behavior: an empirical study of Saudi Stock Market. *International Journal of Social Economics*, 48(4), 587-601. <https://doi.org/10.1108/IJSE-07-2020-0496>
- Khazali, O., & Mirzaei, A. (2017). Stock Market Anomalies, Market Efficiency And The Adaptive Market Hypothesis: Evidence From Islamic Stock Indices. *Journal Of International Financial Markets, Institutions And Money*, 51, 190–208.
- Kishan, K., & Alfian, E. (2019). Malaysian individual investors: what are the factors that influence their financial statement usage? *Asian Journal of Accounting Perspectives*, 12(1), 22-48.
- Lazuarni, S., & Asri, M. (2019). Does heuristic behavior leave anomalies in the capital market. *Journal of Indonesian Economy and Business*, 34(3), 217 – 228. <https://doi.org/http://journal.ugm.ac.id/jieb>
- Lee, C. K., Lucas, A. R., & Paas, L. (2008). A dynamic model of investor decision-making: how adaptation to losses affects future selling decisions. *Tinbergen Institute Discussion Papers* 8(112/2), 97-117.
- Mallick, L. R. (2015). Biases In Behavioral Finance: A Review Of Literature. *Journal Of Advances In Business Management*, 1(3), 100-104.
- Maxfield, S., Shapiro, M., Gupta, V., & Hass, S. (2010). Gender and risk: women, risk taking and risk aversion. *Gender in Management: An International Journal*, 25(7), 586-604.
- Mehmood, F., Bashir, T., & Khan, A. (2019). Financial Literacy as a Life-Saver: Moderating the Contribution of Behavioral Biases towards Investment Decisions. *Global Social Sciences Review (GSSR)*, IV(III), 106 – 114. <https://doi.org/10.31703/gssr.2019>
- Naveed, M., Ali, S., Iqbal, K., & Sohail, M. K. (2020). Role of financial and non-financial information in determining individual investor investment decision: a signaling

- perspective. *South Asian Journal of Business Studies*, 9(2), 261-278. <https://doi.org/10.1108/SAJBS-09-2019-0168>
- Oehler, A., Wendt, S., Wedlich, F., & Horn, M. (2018). Investors' Personality Influences Investment Decisions: Experimental Evidence On Extraversion And Neuroticism. *Journal Of Behavioral Finance*, 19(1), 30-48.
- Ozmen, O., & Sumer, Z. H. (2011). Predictors of risk-taking behaviors among Turkish adolescents. *Personality and Individual Differences*, 50(1), 4-9.
- Parveen, S., Satti, Z. W., Abdul Subhan, Q., & Jamil. (2020). Exploring market overreaction, investors' sentiments and investment decisions in an emerging stock market. *Borsa Istanbul Review*, 20(3), 224-235. <http://www.elsevier.com/journals/borsa-istanbulreview/2214-8450>
- Patil, S., & Bagodi, V. (2021, 2021/12/01/). "A study of factors affecting investment decisions in India: The KANO way". *Asia Pacific Management Review*, 26(4), 197-214. <https://doi.org/https://doi.org/10.1016/j.apmr.2021.02.004>
- Rashid, K., Tariq, Y. B., & Rehman, M. U. (2022). Behavioural Errors and Stock Market Investment Decisions: Recent Evidence from Pakistan. *Asian Journal of Accounting Research*, 7(2), 129-145. <https://doi.org/10.1108/ajar-07-2020-0065>
- Raut, R. K. (2020). Past behaviour, financial literacy and investment decision-making process of individual investors. *International Journal of Emerging Markets*, 15(6), 1243-1263.
- Raza, N., Shahzad, S. J. H., Tiwari, A. K., & Shahbaz, M. (2016). Asymmetric Impact Of Gold, Oil Prices And Their Volatilities On Stock Prices Of Emerging Markets. *Resources Policy*, 49, 290-301.
- Reisenzein, R., Horstmann, G., & Schützwohl, A. (2019). The Cognitive-Evolutionary Model Of Surprise: A Review Of The Evidence. *Topics In Cognitive Science*, 11(1), 50-74.
- Sachdeva, M., Lehal, R., Gupta, S., & Garg, A. (2021). What make investors herd while investing in the Indian stock market? A hybrid approach. *Review of Behavioral Finance*, ahead-of-print(ahead-of-print). <https://doi.org/10.1108/RBF-04-2021-0070>
- Sachdeva, M., Lehal, R., Gupta, S., & Gupta, S. (2022). Influence of contextual factors on investment decision-making: a fuzzy-AHP approach. *Journal of Asia Business Studies*, ahead-of-print(ahead-of-print). <https://doi.org/10.1108/JABS-09-2021-0376>
- Salzman, D., & Zwinkels, R. C. (2017). Behavioral Real Estate. *Journal Of Real Estate Literature*, 25(1), 77-106.
- Saukkonen, N., Laine, T., & Suomala, P. (2018). Utilizing management accounting information for decision-making: Limitations stemming from the process structure and the actors involved. *Qualitative Research in Accounting & Management*, 15(2), 181-205. <https://doi.org/https://doi-org.ezproxy.utm.my/10.1108/QRAM-01-2017-0007>
- Shah, S. Z. A., Ahmad, M., & Mahmood, F. (2018). Heuristic Biases In Investment Decision Making And Perceived Market Efficiency: A Survey At The Pakistan Stock Exchange. *Qualitative Research In Financial Markets*, 10(1), 85-110.
- Simon, H. A. (1955). A behavioral model of rational choice. *The Quarterly Journal of Economics*, 69(1), 99-118.
- Siyabolola, T. T., & Fregene, O. O. (2019). THE RELATIONSHIP BETWEEN ACCOUNTING INFORMATION DISCLOSURES AND INVESTMENT DECISIONS OF LISTED FIRMS IN NIGERIA.

- Sultana, S. T., & Pardhasaradhi, S. (2012). An empirical analysis of factors influencing Indian individual equity investors' decision making and behavior. *European Journal of Business and Management*, 4(18), 50-61.
- Tooranloo, S. H., Azizi, P., & Sayyahpoor, A. (2020). Analyzing causal relationships of effective factors on the decision making of individual investors to purchase shares. *International Journal of Ethics and Systems*, 36(1), 12-41. <https://doi.org/10.1108/IJOES-03-2019-0053>
- Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: heuristics and biases. *Science*, 185(4157), 1124-1131.
- Tversky, A., & Kahneman, D. (1986). The framing of decisions and the evaluation of prospects. *Studies in Logic and the Foundations of Mathematics*, 114, 503-520.
- UNCTAD. (2018). World Investment Report 2018: investment and new industrial policies, 30th anniversary edition, United Nation, 22-26 October, Geneva, Switzerland. https://unctad.org/system/files/official-document/wir2018_en.pdf
- UNCTAD. (2020). *World Investment Report 2020: international production beyond the pandemic, 30th anniversary edition*, United Nation, Geneva, Switzerland. https://unctad.org/system/files/official-document/wir2020_en.pdf
- UNCTAD. (2022). World Investment Report 2020: International tax reforms and sustainable investment 2022, 32nd edition, United Nation, Geneva, Switzerland. https://unctad.org/system/files/official-document/wir2022_en.pdf
- US department of State. (2022). *2021 Investment Climate Statements: Iraq*. <https://www.state.gov/reports/2021-investment-climate-statements/iraq/>
- World Bank. (2019). *World development indicators*. <https://databank.worldbank.org/data/source/world-development-indicators>
- Xiao, S., & Yue, Q. (2018). Investors' Inertia Behavior And Their Repeated Decision-Making In Online Reward-Based Crowdfunding Market. *Decision Support Systems*, 111, 101-112.
- Young, S., Gudjonsson, G. H., Carter, P., Terry, R., & Morris, R. (2012). Simulation of risk-taking and it relationship with personality. *Personality and Individual Differences*, 53(3), 294-299.
- Zain ul Abdin, S., Muhammad Usman Islam, M. U., Ahmed, M., & Hanif, H. (2020). The Role of Heuristics Toward Stock Market Anomalies (Finding at Individual Investors). *Abasyn Journal of Social Sciences*, 13(1). <https://doi.org/10.34091/AJSS.13.1.32>
- Zain ul Abdin, S., Waqas, M., & Ahmad, M. (2019). A Test Of Market Efficiency Using Stock Market Anomalies: A Behavioral Approach. *Middle East Journal Of Management*, 6(5), 551-568.