

Behavioural biases in asset management: the case of Moroccan bank-affiliated asset managers

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Abstract

Purpose – The asset management industry has experienced a major evolution in Morocco. Since the mid-1990s, it has contributed to the financing of public spending in the country. At this time, the industry began to play an important role in financing the Moroccan economy and has since experienced constant growth. Today, with 582 undertakings for collective investment in transferable securities managed, it is a real vehicle for collecting savings and boosting financial markets, according to the president of the Association of Management Companies and Investment Funds (ASFIM). The objective of this research is to analyse the behavioural biases impacting the decisions of asset managers affiliated with Moroccan banks. This study aims to highlight these biases in light of the existing literature in behavioural finance.

Design/methodology/approach – The study employs an empirical approach, conducting semi-structured interviews with 14 asset managers from 7 different Moroccan banks. The research focuses on three main behavioural finance models. The first is related to the models of KAHENMAN and TVERSKY. The second relates to the model of the economist SHILLER, and finally, a proposal is in line with the models of SHEFRIN and STATMAN.

Findings – The results provide evidence of the presence of specific psychological biases in the decision-making processes of asset managers when buying and selling on the Casablanca Stock Exchange. In particular, the study shows that their investment decisions were significantly affected by loss aversion and overconfidence.

Originality/value – This research contributes to the understanding of how behavioural biases influence asset management decisions in the Moroccan context. It adds to the limited literature on behavioural finance in emerging markets, particularly focusing on the asset management industry in Morocco.

Keywords Asset management, Behavioural biases, Casablanca stock exchange, Institutional investors, Asset managers, Moroccan banks, Empirical research

Paper type Research article

1. Introduction

In financial markets, there are two types of investors: individual investors, also known as retail investors, who invest their own funds, and institutional investors, who invest clients' funds. Institutional investors *refer to those whose funds are managed by professional managers within an organization and who invest for the benefit of a group of individuals, another organization, or a group of organizations* (BRANCATO, 1997; cited by Brabet, 2002).

The rise of these investors initially took place in Anglo-Saxon countries, including the United States. According to estimates by the Organisation for Economic Co-operation and Development (OECD), the volume of financial assets managed by US institutional investors was nearly \$30 trillion in 1998. In Morocco, institutional investors have begun to dominate the Moroccan financial market alongside retail investors. According to the 2022 Profile of Investors on the Stock Exchange, “*the structure of investors on the Stock Exchange during the first quarter of 2022 remains marked by the weight of institutional investors.*”

JEL Classification — G4, G40, G41

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Moroccan institutional investors form a heterogeneous group generally including banks, insurance and reinsurance companies, UCITS, etc. Their behaviour at the time of investment decisions is similarly heterogeneous, influenced by a variety of factors, strategies and purposes. Our research objective is to analyse the different facets of behaviour, psychology and the decision-making process through which they pass.

For this research, we chose a multiple case study of Assets Managers affiliated with Moroccan banks. Asset Management is the administration of assets according to clients' objectives by asset managers or asset managers. These are professionals, conductors whose mission is to manage the assets of a large clientele whether individuals or institutions, in order to maximize the performance of their savings while minimizing risk.

This study focuses on Moroccan asset managers because they operate in an emerging market that is little explored by behavioural finance literature, where banks play a central role in asset management, which can foster specific biases. She thus fills a gap by providing contextual and empirical insight into decision-making behaviours that are still little documented.

Emerging markets such as Morocco exhibit specific characteristics that may amplify certain behavioural biases among institutional investors. Biases like overconfidence, herding, and the disposition effect are more common in these markets, according to a recent systematic analysis by [El Asri and Messaoudi \(2024\)](#).

Recent research validates the omnipresence of behavioural distortions in emerging markets, where their influence is amplified by structural dysfunctions. [Almansour, Elkrghli, and Almansour \(2023\)](#) highlight that loss aversion and herding tendencies are more pronounced in emerging stock markets than in developed markets. Similarly, [Suresh \(2021\)](#) highlights that overconfidence and other cognitive biases are strongly influenced by the level of financial literacy and the institutional framework. This is particularly relevant in the Moroccan context where bank-affiliated managers operate under the influence of both regulatory constraints and sociocultural influences.

The majority of behavioural finance research has ignored the unique characteristics of emerging markets in favour of developed nations, despite the fact that the field has grown. However, as [El Asri and Messaoudi \(2024\)](#) pointed out, due of their increased volatility, limited access to information, lack of better regulation, and distinct sociocultural context, emerging markets are a haven for behavioural biases.

Moreover, the founding models of [Kahneman and Tversky \(1979\)](#), especially the theory of perspectives, as well as the work of [Shiller \(2000\)](#) on excess confidence and excessive volatility are particularly relevant in the case of Morocco. Indeed, these models allow us to understand how, in an environment marked by high uncertainty, group dynamics, Cognitive biases such as overconfidence or loss aversion can affect investment choices for bank-affiliated professionals.

2. Overview of institutional investors in Morocco

2.1 Institutional investors and qualified investors in Morocco: what divergence?

"Institutional investor" is broadly defined worldwide, but it is almost synonymous with "qualified investor" in Morocco. This confusion has led us to the following reflections: What is a "qualified" investor in Morocco? Is the notion of "qualified" simply a connotation, or is there truly a distinction between the two concepts of "institutional" and "qualified"?

According to the Moroccan Capital Markets Authority (AMMC), institutional investors are "legal entities that regularly invest part of the funds raised in the financial markets". They collect savings and invest them on behalf of third parties. Conversely, a "qualified" investor is defined as "a legal person or an organization with the necessary skills and means to understand the risks inherent in financial transactions" (Article 3 of Law 44-12 on public offering of securities).

In other words, a “qualified” investor is any individual or entity capable of investing in the financial market. They can be individuals with the means to access the market, or they can be institutional investors, i.e. professionals.

“Institutional” investors may be considered “qualified” investors, but they must meet certain conditions set by the AMMC. On the other hand, “qualified” investors are not necessarily “institutional” investors. The status of a “qualified” investor in Morocco is granted by the AMMC after a prior assessment of the request and verification to ensure that the applicant meets the legal criteria and requirements ([Appendix A](#)).

“Institutional investor” remains a more academic definition and is not defined by Moroccan law, whereas the concept of a “qualified investor” is a legal notion governed by a set of regulatory texts and laws.

2.2 Profile of institutional or qualified investors in Morocco

They are considered qualified investors according to Article 3 of Law 44-12 relating to public offering of securities: ([Appendix A](#))

- (1) *Banks*: They act as institutional investors in financial markets through their specialized subsidiaries in asset management.
- (2) *Undertakings for collective investment in transferable securities (UCITS)*: According to the AMMC, these are financial organizations whose main objective is to collect savings from third parties and invest them in transferable securities according to well-defined criteria.

They are available in two legal forms [1]:

- (1) **Société d'Investissement à Capital Variable (SICAV)** [2]: Any investor who subscribes to a share becomes a shareholder and has the right to express an opinion on management at general meetings.
- (2) **And le Fonds Commun de Placement (FCP)**: This is a co-ownership of securities that does not have legal personality. Its management is handled by a management institution acting on behalf of the unit holders.
- (3) *Insurance and reinsurance companies*: These are financial entities governed by Law 17-99 on the Insurance Code. There are two main types of insurance: Damage insurance and personal insurance, which in Morocco is divided into personal accident and sickness/maternity insurance, **life insurance** and **capitalization insurance**. The latter two types are considered to be savings products, enabling these entities to play the role of an institutional investor. There are two main reinsurance companies, Société Centrale de Réassurance (SCR) and Société Centrale de Réassurance (SCR). This plays a crucial role in the management of catastrophic risks (floods, drought, etc.). It helps to protect people and property from catastrophic events. Its role as a local reinsurer enables it to support insurers in the market and to assume a significant share of the financial responsibility linked to catastrophes, thereby promoting the stability of the insurance system [3].
- (4) *Pension and retirement organizations*: In Morocco, these institutions play an important role as institutional investors. They collect employee and employer contributions and invest them in a variety of financial assets with the aim of generating returns and ensuring future pension and retirement payments.
- (5) *Caisse de dépôt et de gestion (CDG)*: is a public financial institution, considered to be one of the main institutional investors in Morocco. It delegates the management of third-party assets to its specialist subsidiary, « CDG CAPITAL GESTION ».

(6) *Venture capital investment funds (VCIFs)*: According to AMMC, a VCIF is considered to be an investment fund, the purpose of which is to finance SMEs [4], mainly Moroccan and unlisted, through the acquisition of equity securities, the acquisition of debt securities (whether or not convertible into equity securities) and the granting of advances on partners' current accounts. Like a UCITS, it is split into two legal forms:

- *Fonds Communs de Placement à Risque (FCPR)*: This is a co-ownership of assets issuing shares, with no legal personality;
- *And la société de capital-Risque (SCR)*: this is a joint stock company.

3. Research design

Moroccan banks have two types of funds to manage: The banks own funds and customer funds. In the first case, they manage them in existing trading rooms at the bank's head office. In other words, each bank has a large "open space" organized into different activities operating in the financial markets: The foreign exchange market (forex), the interbank market, interest rate products in foreign currencies and in MAD [5], the equity market, etc. The aim of the dealing room is to manage the bank's portfolio and therefore to operate in the various financial markets on behalf of the bank.

In the second case, the bank delegates the management of its customers' funds to subsidiaries specializing in asset management. These subsidiaries manage public savings and invest them in the various financial markets according to an investment policy defined in advance based on the customer's profile. The aim of these asset management subsidiaries is to grow customers' capital and manage risk.

This research focuses on the decision-making behaviour of various financial asset managers linked to Moroccan banks. To do this, our research problem is explanatory and descriptive. It is formulated as follows: How do asset managers affiliated to Moroccan banks behave when making decisions to buy and/or sell shares and/or bonds on the Casablanca Stock Exchange?

This research followed an interpretivist epistemological approach, opting for a qualitative research method, a "multiple case study" strategy, an abductive reasoning method and a semi-structured interview technique for greater reliability.

The use of semi-structured interviews is motivated by the desire to analyse in detail the logics and actions of managers faced with uncertainty. This approach, unlike a classic questionnaire, offers the possibility to capture personal dynamics, internal tensions and contextual factors; it often highlights cognitive distortions such as the anchoring effect, overconfidence and disposition bias. In addition, the interviews provide an opportunity to adjust questions based on the sensitivity of responses, which encourages nuanced and elaborate ideas. As Tamim (2020) emphasizes, "His great merit is this human and direct communicative relationship with the informant, which increases the spontaneity and credibility of the actions and the reasons for the actions".

3.1 Research sample

There are nineteen conventional banks in Morocco. Our research focused on seven asset management subsidiaries affiliated to the Moroccan banks listed below in Table 1:

This table presents the main Moroccan banks and their subsidiaries specialized in asset management. It illustrates the structuring of the financial sector where each banking group has an entity dedicated to portfolio and investment management, reflecting the diversification of their financial services.

Table 1. Moroccan banks and their asset management subsidiaries

Bank	Asset management subsidiaries
Attijariwafa Bank	Wafa Gestion
Banque Centrale Populaire	UPLINE Capital Management
Bank of AFRICA	BMCE Capital Gestion
CDG Capital	CDG Capital Gestion
CFG Bank	CFG Gestion
Société Générale Marocaine de banques	SOGE Capital Gestion
Crédit Agricole du Maroc	MAROGEST

Source(s): Authors

- (1) **Wafa Gestion:** Morocco's leading asset management company. It is affiliated not only to the Attijariwafa Bank group but also to Amundi, a shareholder with an international reputation in asset management. It has more than 25 years' experience, enabling it to offer customers a degree of flexibility in terms of liquidity. It is the leading asset management company in Morocco, with assets under management of almost 126 billion dirhams, according to the latest figures published on 23 June 2023 [6].
- (2) **UPLINE Capital Management:** It is the asset management subsidiary of the Banque Centrale Populaire (BCP) group through its merchant bank UPLINE group. It was created in 1999 and is considered to be the second largest asset management company in Morocco. It manages assets of almost 90 billion dirhams, with a market share of 16% according to the latest publications at the end of March 2021 [7].
- (3) **BMCE Capital Gestion:** It is the third largest asset management company in terms of assets under management, with assets of 76 billion dirhams and a 14% market share. It is backed by the Bank of Afrika group through the investment bank BMCE Capital.
- (4) **CDG Capital Gestion:** It is the management company of the CDG capital innate of a major actor in the Moroccan economy which is "CDG Group". It manages more than 70 UCITS funds with assets under management of 75 billion dirhams by the end of June 2022 [8].
- (5) **SOGE Capital Gestion:** Created in 1995, it is an asset management subsidiary of Société Générale Marocaine des Banques, with assets of 27.2 billion dirhams at the end of 2022 [9].
- (6) **CFG Gestion:** The CFG Bank group subsidiary.
- (7) **MAROGEST:** Created in 2001, it is a subsidiary of the Crédit Agricole du Maroc group.

Banque Marocaine pour le Commerce et l'Industrie (BMCI) had an asset management subsidiary, BMCI Asset Management, which will manage assets totalling 10.5 billion dirhams by the end of December 2021. However, BMCI has sold its asset management subsidiary to **Crédit Immobilier et Hôtelier (CIH)**. This transfer agreement began in February 2023 and is due to be finalized in August 2023 by naming CIH as "CIH Asset Management" [10]. We were unable to interview the asset managers of the two banks because of this internal reorganization.

From these seven subsidiaries, we were able to select fourteen asset managers, including Fixed income and equity Asset managers.

3.2 Data collection

Data collection was based on semi-structured interviews with fourteen asset managers affiliated to Moroccan banks. The following [Table 2](#) summarizes all the information relating to each case.

This table summarizes the interviews conducted with Moroccan asset management companies. It specifies the number of participants, their gender, their functions (management actions or bonds) and the duration of the interviews, offering an overview of the diversity of profiles interviewed and the richness of the information collected.

3.3 Data processing

Once the interviews had been completed, we transcribed the responses of each asset manager into a Word file. These transcribed responses were then analysed and processed using NVIVO 12 software.

The decision to choose NVivo 12 for data analysis stems from its ability to systematically code and organize discursive themes. We checked the semantic saturation (Pearson correlation varying between 0.61 and 0.86) in order to ensure data adequacy. This approach improves the credibility of our results.

Importing the interviewees' responses into NVIVO 12 gave rise to the following phases:

- (1) The first phase consists of a similarity test between the different terms used by the interviewees, using Pearson's correlation coefficient. We found that the saturation threshold varied from 0.61 to 0.86, with interviewee 14 "**Fixed income Asset Manager- UPLINE Capital Management**" and 10 "**Fixed income Asset Manager- CFG Gestion**" the furthest apart, and interviewee 9 "**Fixed income Asset Manager- UPLINE Capital Management**" and 7 "**Equity Asset Manager- CFG Gestion**" the closest (see [Table 3](#)). On the basis of this analysis, we can conclude that we are dealing with semantic saturation, as the responses collected are sufficiently rich to respond to our research problem.

The saturation table is presented below in [Table 3](#):

This table compares two files using the Pearson correlation coefficient to show the saturation of the data. It assesses the degree of similarity or divergence between the information gathered, determining whether there is enough redundancy in the data to warrant a thorough examination.

Table 2. Summary of information on cases interviewed

Case	Interview participants	Genre	Interviewed (INT)	Interview duration
UPLINE capital Management	2	M	Fixed income Asset Manager	35 min 50 min
SOGE Capital Gestion	1	M	Fixed income Asset Manager	30 min
BMCE Capital Gestion	2	W	Equity Asset Manager	40 min
			Fixed income Asset Manager	27 min
Wafa Gestion	2	M	Equity Asset Manager	32 min
			Fixed income Asset Manager	39 min
CDG Capital Gestion	3	W	Equity Asset Manager	35 min
		M	Fixed income Asset Manager	40 min
		M	Fixed income Asset Manager	31 min
CFG Gestion	3	W	Equity Asset Manager	33 min
		M	Fixed income Asset Manager	48 min
		M	Fixed income Asset Manager	44 min
MAROGEST	1	M	Fixed income Asset Manager	41 min

Source(s): Authors

Table 3. Saturation table

Fichier A	Fichier B	Coefficient de corrélation de Pearson
Fichiers\\Int 9	Fichiers\\Int 7	0.861785
Fichiers\\Int 7	Fichiers\\Int 1	0.86083
Fichiers\\Int 7	Fichiers\\Int 5	0.849046
Fichiers\\Int 7	Fichiers\\Int 12	0.845405
Fichiers\\Int 5	Fichiers\\Int 13	0.84436
Fichiers\\Int 6	Fichiers\\Int 5	0.844121
Fichiers\\Int 4	Fichiers\\Int 13	0.843745
Fichiers\\Int 5	Fichiers\\Int 4	0.838152
Fichiers\\Int 13	Fichiers\\Int 12	0.837059
Fichiers\\Int 5	Fichiers\\Int 1	0.836832
Fichiers\\Int 4	Fichiers\\Int 1	0.836604
Fichiers\\Int 3	Fichiers\\Int 12	0.834557
Fichiers\\Int 9	Fichiers\\Int 1	0.831161
Fichiers\\Int 5	Fichiers\\Int 12	0.830585
Fichiers\\Int 7	Fichiers\\Int 13	0.827398
Fichiers\\Int14	Fichiers\\Int 13	0.826846
Fichiers\\Int 9	Fichiers\\Int 3	0.826361
Fichiers\\Int14	Fichiers\\Int 7	0.826081
Fichiers\\Int14	Fichiers\\Int 12	0.825875
Fichiers\\Int14	Fichiers\\Int 1	0.825543
Fichiers\\Int 3	Fichiers\\Int 1	0.825358
Fichiers\\Int 11	Fichiers\\Int 10	0.82515
Fichiers\\Int 4	Fichiers\\Int 3	0.824662
Fichiers\\Int 12	Fichiers\\Int 1	0.824473
Fichiers\\Int 5	Fichiers\\Int 2	0.823288
Fichiers\\Int 7	Fichiers\\Int 6	0.822442
Fichiers\\Int 4	Fichiers\\Int 2	0.8218
Fichiers\\Int 4	Fichiers\\Int 12	0.821635
Fichiers\\Int 5	Fichiers\\Int 3	0.820802
Fichiers\\Int 6	Fichiers\\Int 1	0.820309
Fichiers\\Int 6	Fichiers\\Int 12	0.818931
Fichiers\\Int 7	Fichiers\\Int 4	0.818892
Fichiers\\Int 9	Fichiers\\Int 4	0.818017
Fichiers\\Int 6	Fichiers\\Int 3	0.816726
Fichiers\\Int 9	Fichiers\\Int 12	0.814089
Fichiers\\Int 7	Fichiers\\Int 2	0.811097
Fichiers\\Int 2	Fichiers\\Int 13	0.811091
Fichiers\\Int 9	Fichiers\\Int 5	0.81041
Fichiers\\Int14	Fichiers\\Int 4	0.808777
Fichiers\\Int 7	Fichiers\\Int 3	0.808732
Fichiers\\Int 9	Fichiers\\Int 13	0.806568
Fichiers\\Int 9	Fichiers\\Int 6	0.803216
Fichiers\\Int 9	Fichiers\\Int 2	0.802899
Fichiers\\Int 6	Fichiers\\Int 2	0.802546
Fichiers\\Int 8	Fichiers\\Int 7	0.80142
Fichiers\\Int 9	Fichiers\\Int 8	0.800543
Fichiers\\Int 13	Fichiers\\Int 1	0.799273
Fichiers\\Int 6	Fichiers\\Int 13	0.799034
Fichiers\\Int 7	Fichiers\\Int 11	0.797794
Fichiers\\Int 8	Fichiers\\Int 13	0.794524
Fichiers\\Int 9	Fichiers\\Int 11	0.79356
Fichiers\\Int 8	Fichiers\\Int 5	0.793528
Fichiers\\Int14	Fichiers\\Int 9	0.792427

(continued)

Table 3. Continued

Fichier A	Fichier B	Coefficient de corrélation de Pearson
Fichiers\Int 3	Fichiers\Int 13	0.792197
Fichiers\Int 2	Fichiers\Int 12	0.790226
Fichiers\Int 6	Fichiers\Int 4	0.789693
Fichiers\Int14	Fichiers\Int 5	0.789182
Fichiers\Int14	Fichiers\Int 8	0.788875
Fichiers\Int 3	Fichiers\Int 2	0.784078
Fichiers\Int 8	Fichiers\Int 1	0.783409
Fichiers\Int 2	Fichiers\Int 11	0.781516
Fichiers\Int 8	Fichiers\Int 12	0.780729
Fichiers\Int 2	Fichiers\Int 1	0.780254
Fichiers\Int 8	Fichiers\Int 6	0.779128
Fichiers\Int 8	Fichiers\Int 2	0.776434
Fichiers\Int 5	Fichiers\Int 11	0.776172
Fichiers\Int 8	Fichiers\Int 3	0.775177
Fichiers\Int14	Fichiers\Int 6	0.763993
Fichiers\Int 11	Fichiers\Int 1	0.763267
Fichiers\Int14	Fichiers\Int 2	0.760393
Fichiers\Int 13	Fichiers\Int 11	0.753319
Fichiers\Int 6	Fichiers\Int 11	0.743549
Fichiers\Int 4	Fichiers\Int 11	0.742271
Fichiers\Int 9	Fichiers\Int 10	0.738843
Fichiers\Int 3	Fichiers\Int 11	0.738185
Fichiers\Int 12	Fichiers\Int 11	0.735904
Fichiers\Int 2	Fichiers\Int 10	0.733726
Fichiers\Int14	Fichiers\Int 11	0.732255
Fichiers\Int 5	Fichiers\Int 10	0.726081
Fichiers\Int 7	Fichiers\Int 10	0.720584
Fichiers\Int 8	Fichiers\Int 11	0.707223
Fichiers\Int 6	Fichiers\Int 10	0.689113
Fichiers\Int 13	Fichiers\Int 10	0.665007
Fichiers\Int 10	Fichiers\Int 1	0.664587
Fichiers\Int 8	Fichiers\Int 10	0.646958
Fichiers\Int 4	Fichiers\Int 10	0.643187
Fichiers\Int 12	Fichiers\Int 10	0.64181
Fichiers\Int 3	Fichiers\Int 10	0.635072
Fichiers\Int14	Fichiers\Int 10	0.611018

Source(s): Authors, compiled using Nvivo 12

The saturation diagram for our analysis is presented in [Figure 1](#):

The saturation diagram, represented here in the form of a hierarchical dendrogram, makes it possible to visualize the thematic proximity between the different interviews. It is constructed from Pearson correlation coefficients. This diagram thus reveals the overall structure of participants' responses and identifies groups of interviews that addressed similar content. For example, the interviews Int 7, Int 9, Int 6, Int 12 and Int 3 form a particularly dense and homogeneous group, which confirms what the high Pearson coefficients (often greater than 0.82) suggest. This means that the interviewees provided similar responses in terms of the themes addressed. This repetition of ideas is a strong sign of saturation: the same information is now recurring, and new interviews no longer provide qualitatively new data.

On the other hand, the interviews Int 10 and Int 11 appear very distant from the others — both in the dendrogram and in the correlation scores (often less than 0.75). This suggests that their responses deviate from the dominant trends due to particular profiles.

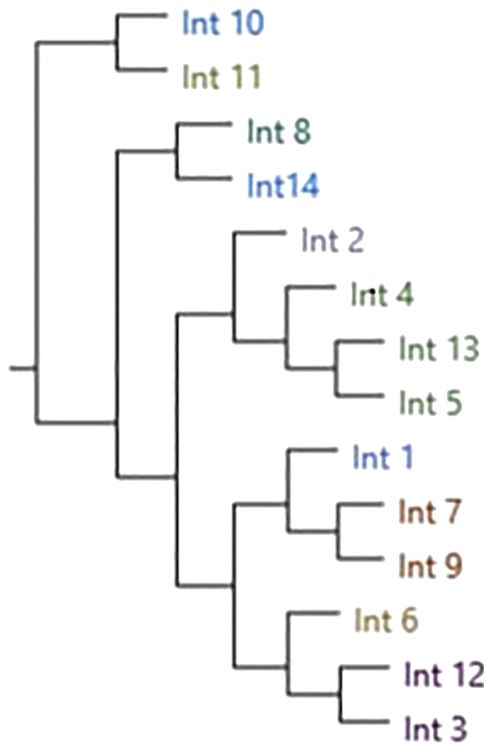


Figure 1. Saturation diagram. Source: Authors, compiled using Nvivo 12

This diagram is essential in a qualitative research because it allows to objectively justify that the saturation has been reached. Additionally, it aids in identifying anomalous or divergent interviews, which can call for a distinct contextualization or a particular analysis. Lastly, it is a useful tool for classifying respondents according to discursive logics or profiles, which makes it easier to interpret themes and present findings.

- (1) In the second phase, the characteristics were created using Nvivo 12 software. Each interviewee was assigned his or her own information. In fact, we opted for a “thematic analysis” consisting of systematically identifying, grouping and, subsidiarily, examining the discursive themes addressed in a corpus (Paillé and Mucchielli, 2010) [11]. The aim of the third phase was to carry out “thematic coding” by creating nodes using the Nvivo 12 software.

3.4 Limits of semi-structured method

Although semi-structured interviews provide valuable insights into the cognitive and behavioural dimensions of asset managers, several methodological limitations should be noted. As highlighted by TAMIM (2020), interviews as research tools may be constrained by the context in which they are conducted and by the researcher’s own approach. A major limitation is the interview guide’s possible rigidity, which might cause the interviewer to concentrate more on going over predetermined topics than paying close attention to the interviewee’s natural replies. This may impede the development of fresh, empirically supported theories and lessen the openness of the discussion.

Moreover, the interview may shift toward an interrogative tone if not carefully managed, thereby creating discomfort and affecting the authenticity of responses. When the interviewer

continually reframes the conversation to fit a pre-established grid, the freedom of the interviewee is restricted, potentially suppressing insightful or unexpected contributions. This issue is particularly relevant in behavioural finance, where subtle cues and nuanced expressions can reveal significant psychological patterns. Finally, the small sample size (14 participants) restricts the generalizability of the findings and calls for complementary quantitative validation.

4. Behaviour of asset managers in Morocco

The asset management industry in Morocco dates back to 1995. Today, it is a real vector for collecting savings and boosting financial markets.

The distinctive feature of the asset management business in Morocco lies in the ability to manage the savings of different profiles by assessing past performance and forecasting future market trends. The profession is still in its infancy in Morocco, due to its lack of diversification in terms of products offered, as well as its highly psychological nature.

Assets Managers in Morocco have a variety of missions involving a continuous process of investment decision-making. These include:

- (1) Analysing available market information (macroeconomic, monetary, etc.);
- (2) Maintaining good relations with other market players (brokers and brokerage firms on the market side and analysts on the fundamental side);
- (3) Prepare and present the investment strategy to the investment committee;
- (4) Implement investment strategies for UCITS in compliance with regulatory and statutory constraints and internal procedures;
- (5) Monitor and achieve the performance targets set for all UCITS managed by the management company.

In order to find out more about this job, we began with a job description of an asset manager in Morocco, based on five main determinants presented and supported below by a verbatim report from the interviewees, as summarized in [Table 4](#).

Table 4. Job file asset manager in Morocco

Job file	Verbatim
Job motivation	«Since forever, I've been interested in the dynamics of financial markets, a profession that seems stimulating to me, calling for thoughtful consideration». <i>Equity Asset Manager – BMCE CAPITAL GESTION</i> The main motivations of the interviewees were dynamism, passion, and a sense of reflection
Experience level	2009, 2021, and 2019 are the most recurring years
Investment preferences	The choice of UCITS is conditioned by the return objectives as well as the client's risk level
Risk orientation in investment	« We are less aggressive in terms of risk. However, risk is relative depending on the client; for example, we organize a committee with the client and tell them, "Here, are you prepared to lose or gain x amount ?" and this obviously influences my decisions ». <i>Fixed income Asset Manager – UPLINE CAPITAL MANAGEMENT</i> The higher the return, the higher the risk
Management orientation in investment	«We are more inclined towards active management due to liquidity reasons.» <i>Fixed income Asset Manager – UPLINE CAPITAL MANAGEMENT</i> In Morocco, asset managers outperform the market by employing active and dynamic management

Source(s): Authors, results of the qualitative study

This table provides an overview of Moroccan asset managers' professional profiles, emphasizing their investment preferences, experience level, and driving forces. Adapting risk management and strategic thinking to the goals and characteristics of clients shows a strong interest.

Indeed, asset managers are subject to behavioural biases because, in many situations, the investment decisions they make can be influenced by cognitive or emotional biases, which can have a significant impact on portfolio performance. The results of our study on the impact of behavioural biases on the investment decisions of asset managers in Morocco, obtained through semi-structured interviews, are presented in three sub-results that are linked to the theories used.

4.1 Investment decisions of asset managers in the presence of judgment and loss aversion heuristics

Judgement heuristics are cognitive biases empirically interviewed in our research. According to [Otuteye and Siddiquee \(2015\)](#), heuristics are cognitive shortcuts to simplify decision making in a complex environment due to uncertainty, limited information and bounded rationality.

To this end, our first research proposal is formulated as follows:

P1. Asset Managers use judgemental heuristics in their investment decision-making process.

The [Table 5](#) summarizes the findings on the effects of judgement heuristics on the investment decisions of asset managers in Morocco.

This table links the heuristics of judgment and their impacts on the investment decisions of Moroccan asset managers. It illustrates how certain cognitive shortcuts influence strategic choices, supported by verbatims of the professionals interviewed.

Indeed, we found that the presence of heuristics in the investment decisions of Moroccan asset managers is more significant for anchoring heuristics. The investment decisions of Moroccan asset managers depend on their first impressions or the first information available on a given asset. This anchoring heuristic correlates with loss aversion bias because a Moroccan asset manager may hold on to a losing asset in the hope that it will bounce back and compensate for its losses. This behaviour can be explained by their risk aversion. The question asked during the interviews was as follows: **After a previous gain, are you more risk-averse or risk seeking? And after a previous loss, are you more risk-averse or risk-seeking?**

Table 5. Judgement heuristics and investment decisions of asset managers in Morocco

Judgement heuristics	Impact on investment decisions by asset managers in Morocco	Verbatim
Availability heuristic	Négative	«No procedural memory; there are cases that do not repeat.» Fixed income Asset Manager – UPLINE CAPITAL MANAGEMEMENT
Representativeness heuristic	Positive	« Generally, anchoring and representation play a crucial role in investment decision-making.» Fixed income Asset Manager- Wafa Gestion
Anchoring heuristics	Positive	«We rely on trust and experience. For example, based on my forecasts, a stock is worth 240 DH, so I'll wait for it to reach that price before selling.» Equity Asset Manager- Wafa Gestion "Hope," "confidence," and sometimes "experience" are the three factors highlighting the anchoring bias among asset managers in Morocco during investment decision-making

Source(s): Authors, results of the qualitative study

affiliated to Moroccan banks. It highlights the direct link between these heuristics and the management strategy adopted.

4.2 Investment decisions of asset managers in case of excessive confidence

Confidence is an important element in the asset management business. However, overconfidence leads to excessive trading, causing volatile movements in the stock market. Overconfident managers wrongly attribute their valuation skills to past market performance, believing that they possess unique information.

This overconfidence can be influenced by a number of factors, including the availability of market information, the managers' training and their level of experience.

Our research proposal is therefore as follows:

- P3. The combination of academic expertise and ample experience in financial markets increases the confidence of asset managers in making investment decisions.

Overconfidence is one of the behavioural biases explained by SHILLER. Our results are in line with the study by Chakravarty and Ray, conducted in the United States (2017). These authors found no evidence of overconfidence among institutional investors.

We also found that asset managers affiliated to banks in Morocco are not overly confident in their investment decisions. They are confident in their analyses and interpretations, but they always try to leave a probability of error or non-execution due to unforeseen circumstances and market uncertainty. This confidence increases with the availability and reliability of market information, as well as with the level of experience in the asset management business (+2 years of experience).

- (1) **Interviewee 1** – Fixed income Asset Manager, SOGE Capital Gestion: “Not too confident, there is always a probability of risk”.
- (2) **Interviewee 10** – Fixed income Asset Manager, CFG Gestion: “*As far as the availability of information is concerned, asset managers can be more confident in their investment decisions if they have quality data and information on which to base their decisions. In terms of experience, Assets Managers who have worked in the industry for many years may be more confident in their investment decisions because of their previous experience and understanding of the financial markets. They may have acquired a better understanding of market trends, patterns of investor behaviour and economic cycles*”.

The overconfidence bias is fuelled by other behavioural biases such as the illusion of control bias, the optimism of asset managers and the self-control bias.

The illusion of control bias is often linked to the “**hot hand error**” [12] phenomenon. It can lead asset managers to under-diversify their investments due to a strong overestimation of their belief in control, as well as a poor analysis of the information available on the market.

The majority of interviewees proved that the illusion of control bias influences the investment decisions of asset managers in Morocco, and that it is linked to their level of experience.

- (1) **Interviewee 7 is an equity Asset Manager** with fourteen years' experience in financial asset management. In her view, the illusion of control bias is “*a sign of inexperience, there are many things you can't change, so you have to always be vigilant*”.
- (2) **Interviewee 13 is a fixed income Asset manager** with thirteen years' experience of managing financial assets. In his view, the illusion of control bias “*can be influenced by factors such as experience and self-confidence*”.

In the same line, we found that feedback from experience and expertise have an impact on the presence of optimism bias in the decisions of asset managers in Morocco.

Investing in the stock market is emotional, which is why asset managers with a higher degree of self-control generally tend to be more successful than others. In the event of unforeseen events or new information on the market, self-control is important in order to pull back and maintain a cold position.

However, self-control bias can be seen as a flaw due to impulsivity and non-reflection. According to the interviews, Moroccan asset managers are not biased. They take their investment decisions as a team, which mitigates the negative impact of this bias.

- (1) **Interviewee 12** - Equity Asset Manager, BMCE Capital Gestion: “*Investment decisions are collegial; it’s a team that makes the decision, not individuals*”.

The [Figure 4](#) summarizes the conclusions reached:

In our study, Moroccan asset managers declare a reasoned trust, modulated by their experience and access to information. However, some external factors may accentuate or, on the contrary, limit this excessive confidence. On the one hand, the volatility of financial markets, by creating increased uncertainty and unpredictable price movements, can push some professionals to abandon rigorous analysis to rely more on their intuition or internal models. During periods of strong fluctuations, they may believe that their experience or tools allow them to better anticipate market changes, which fuels the overconfidence bias.

On the other hand, the strict regulations imposed by the Moroccan regulator (AMMC) constitute a brake on excessive trust. Through reporting, internal control protocols, and frequent audits, it places accountability and justification requirements on asset managers for every investment choice. Decisions made purely out of personal conviction or overconfidence are limited by these restrictions, which also limit individual freedom of action and necessitate cross-checking.

4.3 Assets Managers’ investment decisions and stock market anomalies

Before investing in the stock market, an Asset Manager must monitor and follow new information published on the market on an ongoing basis. This includes economic, financial and political information, both national and international. Continuous access to this information enables them to make informed investment decisions, react immediately to opportunities and risks, and manage emotions and impulsive behaviour.

- (1) **Interviewee 8** – Fixed income Asset manager, CFG Gestion: “*For example, a rise in the key interest rate, you have to see how the market reacts to the news*”.
- (2) **Interviewee 13** – Fixed income Asset manager, MAROGEST: “*The reaction is different, more euphoric for good news and more shocked for bad news, bad reactions are more intense*”.

The reaction of Moroccan asset managers to new information is influenced by market behaviour, i.e. by the reaction and interpretations of other investors. This leads us to formulate our fourth research proposal as follows:

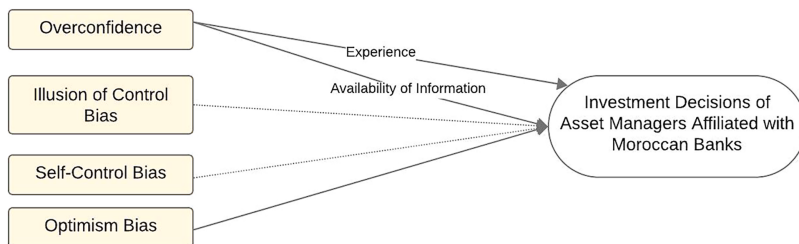


Figure 4. Behaviour of asset managers in Morocco in case of overconfidence. Source: Authors, results of the qualitative study

P4. The investment decisions of Moroccan asset managers are influenced by the decisions of other investors.

In our study, we found that the asset managers of Moroccan banks exhibit herding behaviour [13]. The responses collected led us to refer to a classification of this bias established by Devenow and Welch (1996).

According to these researchers, herding behaviour can be classified into three perspectives, namely:

- (1) *The irrational perspective*, which occurs when some investors blindly follow the actions of other investors without any reason;
 - **Interviewee 3** - Equity Asset Manager, Wafa Gestion: *“Of course, the decisions of others have an impact.”*
 - **Interviewee 6** – Fixed income Asset Manager, CDG Capital: *“5%, maybe the small managers do this, following the decisions of others.”*
- (2) *The quasi-rational perspective*, which refers to how investors acquire and process information, leading to similar decisions;
 - **Interviewee 1** - Fixed Income Asset Manager, SOGE Capital Gestion: *“Yes, adjusting decisions based on the decisions of others.”*
 - **Interviewee 4** – Fixed income Asset Manager, CDG Capital Gestion: *“Yes, it impacts the price and market performance.”*
 - **Interviewee 9** – Fixed income Asset Manager, UPLINE Capital Management: *“Partially yes, the decisions of others partially influence ours.”*
 - **Interviewee 11**- Fixed income Asset Manager, Wafa Gestion: *“Yes, the decisions prompt me either to consider this investment or to revisit my investment logic.”*
- (3) *The rational perspective*, in which investors consciously replicate the actions of other investors due to lack of information or expertise. This behaviour likely arises from information requirements and more costly access to information in the markets.
 - **Interviewee 5** - Equity Asset Manager, CDG Capital: *“It depends, because in the Moroccan market, there is herd behaviour, the extent of signals depends on the major shareholders.”*
 - **Interviewee 7**- Equity Asset Manager, CFG Gestion: *“It could be, for example, if they have missed information.”*
 - **Interviewee 10** – Fixed income Asset Manager, CFG Gestion: *“The decisions of other institutional investors can influence investment decisions, especially in the case of investors who seek to follow market trends.”*

The presence of herding behaviour is observed not only during periods of stability in the Moroccan stock market, but also during the COVID-19 crisis. Moroccan asset managers find themselves confronted with a lack of information and guidance to navigate the market. Their objectives involve waiting for the reactions of early investors and blindly following suit. While this behaviour may be seen as a defence against underperformance in the bond market, it can also signify irrational behaviour among Moroccan asset managers, contributing to heightened volatility in the stock market.

Other Moroccan asset managers proved their optimism at the time of the COVID-19 crisis. While some sought to sell assets under management quickly, they tried to remain calm and take advantage of the panic of others in order to strengthen their market position. This behaviour

may be due to the maturity and level of experience (+7 years) in asset management in Morocco. The investors displaying this behaviour were mainly bond UCITS managers, which explains their role in stabilizing the bond market during this period of volatility.

Indeed, the herding behaviour during the COVID-19 crisis aligns with a set of behavioural biases such as the disposition effect.

Hence the following research proposal:

P5. Asset managers tend to quickly sell winning assets in times of stress and hold onto losing assets for longer periods during times of joy and optimism.

The results of our study showed the existence of the disposition effect among asset managers affiliated to Moroccan banks during the COVID-19 crisis, in contrast to the non-crisis period.

In periods of stability, we found that the disposition effect is not present in the investment decisions of asset managers affiliated to Moroccan banks. In other words, they hold winning assets for a long time and quickly sell losing assets. This trend can be explained by the high level of experience and expertise of asset managers in Morocco (+2 years of experience in asset management) as well as their higher level of academic training in market finance.

(1) **Interviewee 12**- Equity Asset manager, BMCE Capital Gestion: “No, you should keep a winning share to earn more”. This manager advocates holding on to winning shares rather than selling them. This behaviour reflects her optimism and overconfidence in the potential rebound of winning shares, perhaps due to her 14 years of experience in asset management.

These results show a high degree of loss aversion among asset managers in Morocco: “sell the losers quickly”, and a high degree of experience in the asset management industry: “keep the winners for a long time”.

In times of crisis, two main factors exacerbate the disposition effect: loss aversion and risk aversion. In Morocco, asset managers tended to react by selling assets quickly as soon as COVID-19 events were announced. This behaviour aligns with herding, as uncertainty and panic can trigger crowd selling, thus illustrating the phenomenon of “panic selling.”

The conclusions reached are summarized in the [Figure 5](#):

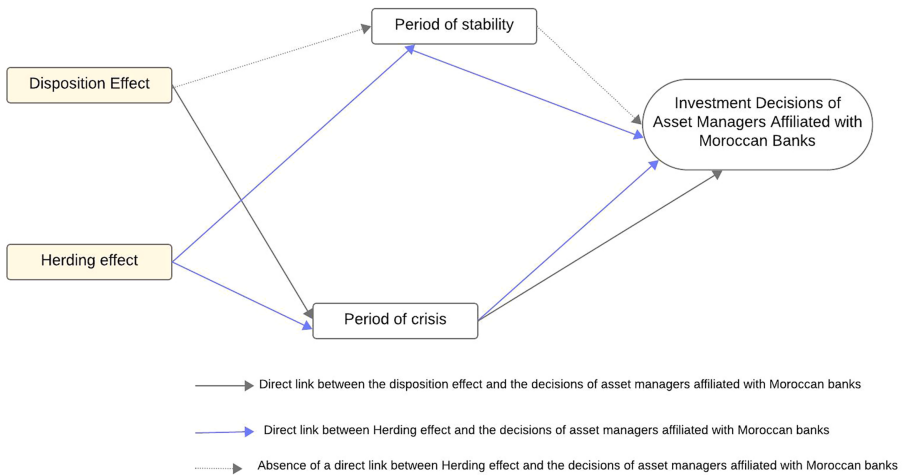


Figure 5. Behaviour of asset managers in Morocco during periods of stability and the COVID-19 crisis. Source: Authors, results of the qualitative study

This figure illustrates the links between behavioural biases (disposition effect and herding effect) and investment decisions of Moroccan asset managers, depending on the stability or crisis contexts. It highlights that the crisis amplifies certain biases, influencing management choices more strongly.

5. Discussion and conclusion

After the analysis and interpretation of empirical data collected from asset managers affiliated to Moroccan banks, it is relevant to confront the behavioural biases identified in our study with those observed in other geographical and cultural contexts, in the light of the founding works in behavioural finance.

Our results confirm that biases such as loss aversion, anchoring heuristic, overconfidence, disposition effect and mimicry are present in investment behaviours in Morocco. These observations join several international studies, while highlighting certain contextual specificities.

The aversion to losses, marked especially among female managers, is in line with the conclusions of [Toshino and Suto \(2004\)](#) in Japan. This bias, correlated with a strong risk aversion, seems to transcend markets, but its intensity can vary depending on the profiles and gender of managers. In Morocco, this aversion is constant, regardless of the previous performance, reflecting structural prudence in decisions.

Our findings confirm that Moroccan asset managers exhibit strong loss aversion, consistent with [Gupta and Ahmed \(2016\)](#), but diverge from [Barber, Lee, Liu, and Odean \(2007\)](#) who observed stronger disposition effects in Asian markets. This suggests that professionalization and collective decision-making structures in Moroccan banks mitigate certain irrational tendencies.

Regarding the anchoring heuristic, our results indicate a moderate dependence on historical price benchmarks, often compensated by rational analysis. This contrasts with the results of a study conducted in Sri Lanka (2021), which highlights an increased sensitivity to framing effects depending on the market phase (bullish vs bearish). Conversely, as shown by [Schwaiger et al. \(2018\)](#), Moroccan professionals seem less affected by framing biases, favouring an independent analysis of market narrative fluctuations.

Overconfidence, although partially present, is expressed in Morocco in a nuanced form. Some managers show an illusion of control especially after a gain, but without falling into speculative hyperactivity. This diverges from the results of [Glaser and Weber \(2009\)](#) or [Chuang and Lee \(2006\)](#) which show, particularly in Germany and Asia, that overconfidence fuels aggressive trading behaviours, sources of excessive volatility. Our data nevertheless corroborate the literature on the link between past earnings, increased confidence, and risk exposure, without however leading to a generalization of irrational behaviours.

The disposition effect appears to be less pronounced among our respondents. Unlike the results observed in Taiwan ([Barber et al., 2007](#); [Sun et al., 2013](#)) or in Germany ([Menkhoff et al., 2010](#)), Moroccan managers tend to keep their winning assets and quickly liquidate losing positions. This ability to avoid dispositional bias can be explained by a high level of professionalization (training in finance, experience of more than two years). However, our study does not allow us to link this absence to an excess of confidence, as suggested by [Sun et al. \(2013\)](#) in the case of bull markets.

Finally, the herding behaviour identified in our sample reflects that described in other contexts, notably by [Suto and Toshino \(2005\)](#) in Japan, [Chang et al. \(2012\)](#) in Taiwan, or even [Gavriilidis et al. \(2013\)](#) in Spain. As in these studies, Moroccan managers tend to follow majority decisions during episodes of high uncertainty (e.g. the COVID-19 pandemic), often to preserve their professional reputation or due to a lack of visibility on fundamentals, reinforcing defensive herding.

This research enriches the literature in behavioural finance applied to emerging markets. It confirms the applicability of the original concepts in a Moroccan framework, while revealing contextual specificities: moderate biases, influence of professional experience and market

structure. Unlike some developed markets where the biases are more exacerbated, our results show a partial rationality in decision-making.

From our research, we found that some investors are not aware of the presence of certain psychological biases, which can negatively affect their investment decision-making. To do this, we recommend to the officials of the Association of Moroccan Management Companies and Investment Funds (ASFIM) the following points:

- (1) Financial education of Asset Managers on the main behavioural biases such as overconfidence, loss aversion, risk aversion, optimism etc., so that they can succeed in their decision-making;
- (2) Closely monitoring the investment decisions of Asset Managers, educating them on how to manage their emotions, take a step back and avoid impulsive decisions especially in stressful times such as the COVID-19 crisis;
- (3) Education in the proper evaluation of available or new information on the market, in order to minimize the asymmetry of information on the market and therefore mitigate the effect of psychological biases generated by it on their decisions.

This study, essentially qualitative, constitutes an exploratory basis. She now calls for quantitative research to validate and deepen the results obtained. For example: Exploitation of UCITS performance and transaction data to analyse [1, 2, 8, 9, 10, 11, 12 and 13], via data mining techniques (clustering, regression, and PLS-SEM), the links between behavioural biases and investment results.

Notes

1. Documentation AMMC Morocco.
2. Investment company with variable capital (ICVC) in the UK.
3. Documentation SCR Morocco.
4. Small and Medium-sized Enterprises.
5. Moroccan Dirham.
6. Documentation of Wafa Gestion.
7. Documentation of Upline Capital Management.
8. Documentation of CDG Capital Gestion.
9. Documentation sur la notation du SOGE CAPITAL Gestion, site Eco Actu.
10. Documentation sur l'acquisition du BMCE Capital Gestion par CIH.
11. Cited by [Plard and Martineau \(2019\)](#).
12. The tendency to believe that previous success is a reliable predictor of future success.
13. According to [Shiller \(2005\)](#), it is defined as “collective action by irrational investors leading to deviations from fundamental prices”. Quoted by ES-SANOUN Mohamed & al, 2023.

Supplementary material

The supplementary material for this article can be found online.

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