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Mirages in the Market

A study on how investment professionals perceive and mitigate cognitive biases in their information acquisition process

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Abstract

This thesis explores how active investment professionals perceive and mitigate cognitive biases, specifically confirmation and overconfidence, in their information acquisition process. In doing so, the study draws on 12 in-depth interviews with portfolio, fund and investment managers, across a range of smaller boutique investment funds to larger institutional banks. By employing Evans and Stanovich's (2013) articulation of Dual Process Theory, we found that investment professionals both perceive that the cognitive biases persist in their information acquisition process, indicating Type 1 processing, and seek to mitigate the effect of them, evoking Type 2 processing. Two contributions can be found in the tensions between the forms of processing. Firstly, confirmation bias is articulated and mitigated to a higher degree in the information sources compared to overconfidence bias. Secondly, bias is perceived and mitigated differently across the various information sources.

Keywords: Investment professionals, Cognitive bias, Information acquisition process, Dual Process Theory

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1. Introduction

1.1 Background

The Swedish fund management industry has grown dramatically over the past three decades, with total assets eight times larger compared to 30 years ago (Finansinspektionen, 2025). The growth in assets under management over time contextualises the increasing influence of investment professionals within the Swedish financial system (see Appendix 1). Consequently, individuals hold more assets in bank accounts, shares, and funds (Finansinspektionen, 2025). Thereby, increasing society's dependence on financial institutions. Across this landscape, there is a strong growth trend for "other financial intermediaries", such as insurance, pension, and fund management (Sveriges Riksbank, 2024, p. 6). Within these financial intermediaries, fund and portfolio managers play a central role as the decision makers responsible for allocating capital across financial instruments. For the purpose of this study the term "investment professionals" refers to buy side actors constituting fund, portfolio and investment managers. We will therefore use the term "investment professionals" even when earlier research utilised the term "fund managers".

As the scale and societal relevance has expanded, so has academic interest in understanding not only the decisions of investment professionals but also behavioural and interpretive dimensions of their work, including cognitive biases. These cognitive biases are defined as "systematic errors" that may arise from employment of heuristics to simplify complex judgement tasks (Tversky and Kahneman, 1974, p.1124). Two biases in particular, confirmation and overconfidence, have been found to lead to a distortion of earnings expectations and trading activity respectively (Thayer, 2011; Puetz and Ruenzi, 2011). In parallel, research has also examined how investment professionals interact with various information sources. Namely, accounting information, company meetings, sell-side analysts and consensus estimates (see e.g.; Abraham and Slack, 2023; Barker, 1998; Barker, 1999; Barker et al., 2012; Coleman, 2014; Graaf, 2021; Hellman, 2000; Millo et al., 2023; Spence et al., 2019). Combining the two, there are studies that point to the role of underlying confirmation or overconfidence bias as catalysts for how information is selected and interacted with (Abraham and Slack, 2023; Barker et al., 2012; Coleman, 2014; Millo et al., 2023).

1.2 Research Gap

Existing literature highlights the presence of various biases but missing is to what extent investment professionals are aware of cognitive bias in their information acquisition process and how they seek to mitigate them. Prior studies have exemplified where bias may appear, such as irrationality in company meetings, confirmation in the reading of accounting risk disclosures, and boldness in relation consensus estimates (see e.g., Abraham and Slack, 2023; Barker et al., 2012; Millo et al., 2023). Furthermore, while some research suggests that mitigation efforts are minimal (Coleman, 2015), others underscore the need for future research regarding mitigation techniques and how confirmation and overconfidence bias interact with each other (Camilli et al., 2025). Thus, despite the growing body of qualitative research on investment professionals' information acquisition process, much remains unknown about how they themselves perceive cognitive biases.

1.3 Research Question

To address this gap in the literature, the purpose of the study is to develop a deeper understanding of where in the investment professional's information acquisition process cognitive biases are present. Shedding light on their formal and informal techniques utilised to mitigate the impact of biases. Accordingly, the research question guiding the study is formulated as:

> *How are cognitive biases perceived and mitigated in the information acquisition process of investment professionals?*

In addressing the research question, we employ Dual Process Theory as our theoretical framework. The framework builds on the notion that intuitive, experience grounded, Type 1 processing, and analytical, deliberate, Type 2 processing are employed depending on context (Evans and Stanovich, 2013). Dual Process Theory therefore provides a suitable lens for examining how investment professionals both perceive and mitigate cognitive bias in their information acquisition process.

Guided by DPT, our study contributes to filling the gap in extant literature in two prominent ways. First, we show that investment professionals are aware of the influence of cognitive biases

on their information acquisition process. Albeit this awareness is uneven where confirmation bias is readily acknowledged and overconfidence to a large degree externalised. Second, the awareness and mitigation techniques vary systematically across the investigated information sources, depending on the extent to which each source triggers Type 1 or Type 2 processing.

1.4 Contributions

In addressing this research gap, we contribute to two bodies of qualitative capital market accounting literature. Firstly, we contribute to literature on the chosen information sources; accounting information, company meetings, sell-side analysts, and consensus estimates (see e.g.; Abraham and Slack, 2023; Barker et al., 2012; Coleman, 2014; Graaf, 2021; Millo et al., 2023; Spence et al., 2019). Secondly, we contribute to literature on cognitive bias and mitigation techniques of investment professionals (see e.g.; Abraham and Slack, 2023; Barker et al., 2012; Camilli et al., 2025; Coleman, 2015; Millo et al., 2023).

1.5 Disposition

The study consists of six sections. Following the introduction, previous literature is synthesized as well as a presentation of the theoretical framework, Dual Process Theory. Following, the research methodology highlights our research design, data collection, and data analysis presenting both the strengths of the research as well as its inherent limitations. Subsequently, we present our findings structured thematically in accordance with the chosen information sources. Building on, the findings are analysed through the defined theoretical framework. Lastly, we conclude and suggest areas for further research. Note, additional information central to the study is found in the Appendices.

2. Literature Review and Theory

2.1 Literature Review

This section synthesizes previous bodies of literature relevant to the aim of the study. It begins by outlining the decision-making process of investment professionals and how they construct their investment theses. The following subsection reviews the key information sources that constitute the investment professionals' information acquisition process. This is then complemented by

empirics on the two biases examined. Lastly, how our study contributes to qualitative accounting literature.

2.1.1 The Decision-Making Process of Investment Professionals

Investment professionals are the primary decision-makers responsible for allocating investors', both retail and institutional, capital across financial instruments such as equities, bonds, and derivatives (Barker et al., 2012). They act as intermediary shareholders as opposed to owners for the companies in which they invest. Given the large size of assets under management, their capital distribution decisions to buy, hold or sell securities, can constitute a material effect on individual firm share price (Hellman, 2000). Allocation decisions are grounded in financial logic based upon aspects of risk and expected return, where risk is the uncertainty of expected return. Accordingly, their role consists of constructing and managing portfolios in line with certain risk appetite and return objectives. To do so, Hellman (2000) proposes a decision-making process including identifying available alternatives, initiation of decision, information collection, evaluation of alternatives, and the action of a decision. This process can thus be understood as a set of various stages, each requiring information acquisition to varying degrees.

The information acquisition process is not confined to a single point in time but occurs repeatedly throughout the decision-making process. Importantly, the process consists of both quantitative and qualitative aspects. A foundational distinction in the literature concerns valuation theory versus valuation practice (Barker, 1999). In valuation theory, aligned with neoclassical economic theory, models such as the dividend discount model (DDM) and the discounted cash flow model (DCF) are used to value companies and determine their share prices. In valuation practice, however more "unsophisticated" models are typically employed, as well as more subjective judgement due to uncertainties in the forecasting future (Barker, 1999, p. 196). In addition, experience allows investment professionals to rely less on structured analysis and more on tacit and interpretive knowledge (Coleman, 2015). Consequently, factors such as perceived management quality becomes a central part of the information acquisition process (Barker, 1999). In this process, Barker (1998) ranked the different information sources based on investment professionals' preferences. Among the highest ranked sources were formal meetings with company management, annual and interim reports, analysts, and market news (Barker, 1998). Taken together the literature highlights the information acquisition as a continuous and

multifaceted process.

2.1.2 The Investment Professionals' Information Environment

Building on the notions about the most important sources of information, we chose to focus on the most common. Namely, accounting information, company meetings, sell-side analysts, and consensus estimates (see e.g.; Abraham and Slack, 2023; Barker, 1998; Barker, 1999; Barker et al., 2012; Coleman, 2014; Graaf, 2021; Hellman, 2000; Millo et al., 2023; Spence et al., 2019).

2.1.2.1 Accounting Information

Given its centrality to the investment decision making process, *accounting information* stands out to be one of the most fundamental. It serves as a primary input as historical figures are fed into valuation models (Barker, 1999). According to Barker (1999) accounting information also includes factors such as specifications and quality evaluation of financial statements. Moreover, in classifying the statements in terms of their usefulness, the income statement was perceived most important followed by the balance sheet and lastly the cash flow statement (Hellman, 2000). Other studies highlight that particular attention is drawn to the risk disclosure section (Abraham and Slack, 2023). Albeit accounting information comes with its limitations as according to Coleman (2014, p. 232):

> "[...] historical data has little forecasting ability and managers find no other practical way to populate the models".

This view is shared by Barker (1999) who noted that accounting information is difficult to accurately forecast into the future. Paired with the historical nature of accounting information, it is portrayed as suitable to assess the current situation of a company but may provide less meaningful insights into the future. These limitations help explain why investment professionals complement accounting information with other alternative sources, such as company meetings.

2.1.2.2 Company Meetings

Although the efficient market hypothesis stipulates that all information should be priced into an asset (Fama, 1970), prior research consistently repeats that investment professionals place substantial value on the information obtained through *company meetings* (see e.g.; Barker, 1998; Barker et al., 2012; Roberts et al., 2006). Barker et al., (2012) proposed explanations for this preference. First, neoclassical economic theory is suggested to be excessively stringent in its

definition of useful information. For instance, it does not account for the need for verbal knowledge transfer, nor for longer time periods required to assess future management performance (Barker, 2012). Second, investment professionals may not act fully rationally and engage in such meetings even when no price sensitive information is being disclosed (Barker, 2012).

Furthermore, Roberts et al. (2006) specified that investment professionals mainly sought information regarding strategy but also complemented with technical questions. As such, the informational role of company meetings appears to vary depending on the specific information required. When investment professionals require clarification of technical details (Roberts et al., 2006), meetings facilitate knowledge transfer and ascertaining correct information is gathered (Barker et al., 2012). When the objective is to evaluate strategy (Roberts et al., 2006), meetings function more as means to consider whether the company will be able to compete in their industry (Barker, 1999).

In complement, Roberts et al. (2006) presents yet an alternative view, that the meetings could be held to enable investment professionals to exert power over company managers, to pursue their agenda even in their absence:

> "The purpose of the meetings is to remind managers that they are accountable, that they are being judged" (Roberts et al., 2006, p. 291)

Collectively, company meetings serve multiple roles within the information acquisition process, reflecting both informational and interpretive needs as well as power dynamics between management and investment professionals.

2.1.2.3 Sell-Side Analysts and Consensus Estimates

A similar dynamic of information and interpretation is presented in the buy side's use of *sell-side analysts* and *consensus estimates.* Primarily, sell-side analysts provide investment professionals with forecasts, target prices, and buy, sell, or hold recommendations as well as industry and company analyses (Spence et al., 2019). They do so both through their reports and through informal conversations. However, studies have investigated various forms of scepticism towards interacting with sell-side analysts. These include distribution of non-exclusive information,

investment professionals rather deciding the quality of management themselves, and a fear of losing privileged access (Barker, 1998). This fear has led to a decreasing quality of analysts' research and overly positive reports on poor performing companies (Spence et al., 2019). Despite this diminished informational role, Millo et al. (2023) highlights their social importance through relationships built with buy side actors, leading investment professionals to favour certain analysts. Spence et al. (2019) similarly refers to that an analyst's value lies in facilitating verbal communication and interaction with the buy side, while their written reports serve more as conversation-starters. This view is strengthened, by Graaf (2021, p.161) who emphasizes that investment professionals value analysts that are good "speaking partners".

Beyond individual analyst interaction, investment professionals also rely on sell-side analysts to assert a market consensus in the form of consensus estimates (Millo et al., 2023). Consensus estimates are an aggregate of individual analysts' recommendations and are articulated as "coordination devices", perceived to represent the market's belief (Millo et al., 2023, p.461). Thus, while the direct informational role of analysts has diminished, their value persists mostly through conversation and in the aggregated form of consensus estimates.

2.1.3 Cognitive Biases in the Information Acquisition Process

From a neoclassical economic perspective, investment professionals are theorized as rational agents who maximize expected returns based on all available information (Fama, 1970). Within this view, market prices are theorised to reflect fundamental values, implying that no individual can systematically outperform the market. Yet these assumptions stand in contrast to how decisions unfold in practice. Decision-making is embedded in social and cognitive contexts and are often characterized by ambiguity, where emotional and psychological factors play a role alongside analytical reasoning (Eshraghi and Taffler, 2015). Moreover, professionals' might not decide to act irrationally but simply recognise that theory may not function in practice (Coleman, 2014). It is within this discrepancy between economic theory and theory in use that cognitive biases exist. As aforementioned, cognitive bias can be defined as "systematic errors" that may arise from employment of heuristics to simplify complex judgement tasks (Tversky and Kahneman, 1974, p.1124). Guided by their relevance to the investment professionals' information acquisition process, the study focuses on confirmation and overconfidence bias.

Confirmation bias captures the tendency in "favouring information that supports pre-existing beliefs" (Camilli et al., 2025, p. 12). To exemplify its impact, Thayer (2011) conducted a study among non-professional investors which found that earnings expectations became biased based on the information they selected. Investors initially presented with unfavourable information were more prone to continue to look for sources consistent with their preferences, even at the expense of credibility (Thayer, 2011). Similarly, confirmation bias has also been indicated in investment professionals' engagement with accounting information. For instance, Abraham and Slack (2023) investigated the readership of annual report risk disclosures. Despite investment professionals expressing scepticism about the usefulness of the disclosures, their reading practices were nevertheless shaped by "senses of comfort" (Abraham and Slack, 2023, p. 169). In one of which risk reporting readership served as a "checking mechanism" wherein disclosures confirmed already held knowledge (Abraham and Slack, 2023, p.170).

Proceeding to overconfidence bias, which can be defined as "overestimating one's knowledge, abilities or control over a situation" (Camilli et al., 2025, p.30). For instance, Puetz and Ruenzi (2011) examined rationality amongst investment professionals, by studying whether past success drives overconfidence bias. They found support for a presence of overconfidence proxied by a high trading activity (Puetz and Ruenzi, 2011). Furthermore, investment professionals may "act on the basis of irrational bias" and display an excessive confidence in the importance of company meetings (Barker et al., 2012, p. 210). Moreover, by comparing the phenomenon to responses like excessive trading volumes, Barker et al. (2012) points to mechanisms similar to the evidence of overconfidence bias by Puetz and Ruenzi (2011). Related insights emerge from the investigation of herding and boldness in sell-side analysts' use of consensus numbers by Millo et al. (2023). They distinguished between two groups of analysts, one group that used the estimates to comply with them, herding, and the other group that used the estimates to differ from them, boldness (Millo et al., 2023). These findings enable a study of similar biases employed by buy side actors.

Elaborating on the broader information environment, Coleman (2015) suggested that investment professionals routinely rely on heuristics, social cues and qualitative methods. Meanwhile, quantitative tools, such as the discounted cash flow model, were often utilized more for their

conformity to traditional finance theory even if they provided little value added. Despite this heuristic driven environment, he suggested that investment professionals had "rationalised away" such a phenomenon as an outdated concept and made little effort to mitigate it (Coleman, 2015, p.128). This juxtaposition of a reliance on heuristics while dismissing bias highlights the need for an examination of how investment professionals explicitly recognise biases and which methods are employed to mitigate them.

More recent contributions further highlight the significance of cognitive biases in accounting tasks. Exemplified by, Camilli et al. (2025) who demonstrated that biases had effects on financial accounting tasks, such as earnings forecasting. Wherein, overconfidence was exemplified to influence accounting estimates and could result in inflated firm value. Additionally, the paper proposes some bias mitigation strategies, including enhancing collective decision making, that specified to mitigate confirmation bias. They further observe that multiple cognitive biases may interact or conflict with one another, prompting suggestions for future research (Camilli et al., 2025). On this note, effective bias mitigation requires both identifying which biases exert the strongest influence within a specific process and then exploring bias mitigation techniques in relation (Camilli et al., 2025).

2.1.4 Research Gap

Thus far, research has established that investment professionals rely on a range of information sources including accounting information, company meetings, sell-side analysts, and consensus estimates (see e.g; Abraham and Slack, 2023; Barker, 1998; Barker, 1999; Barker et al., 2012; Coleman, 2014; Coleman, 2015; Graaf, 2021; Hellman, 2000; Millo et al., 2023; Roberts et al., 2006; Spence et al., 2019).

In parallel, prior quantitative literature has indicated a prevalence of confirmation and overconfidence bias as a measured deviation from a rational benchmark (Thayer, 2011; Puetz and Ruenzi, 2011). There is also an increased body of qualitative literature that has implied an influence of the biases on the information acquisition process (Abraham and Slack, 2023; Barker et al., 2012; Camilli et al., 2025; Coleman, 2015; Millo et al., 2023). Moreover, studies on sell-side actors have suggested boldness in the use of consensus estimates (Millo et al., 2023). While some research suggests that investment professionals engage in limited mitigation (Coleman,

2015), others expressed it as lacking in current literature, especially in studies regarding multiple biases (Camilli et al., 2025).

Despite increased sociological and qualitative research, missing is to what extent investment professionals are aware of cognitive bias in their information acquisition process and how they seek to mitigate it. In addressing this research gap, our contributions to qualitative capital market accounting literature are twofold. Firstly, we contribute to literature on the chosen information sources; accounting information, company meetings, sell-side analysts, and consensus estimates (see e.g.; Barker et al., 2012; Coleman, 2014; Graaf, 2021; Spence et al., 2019). Secondly, we contribute to literature on cognitive bias and mitigation in the information acquisition process of investment professionals (see e.g.; Abraham and Slack, 2023; Barker et al., 2012; Camilli et al., 2025; Coleman, 2015; Millo et al., 2023). In doing so we also make an indirect contribution to the quantitative literature on the two biases, overconfidence and confirmation (see e.g.; Puetz and Ruenzi, 2011; Thayer, 2011).

2.2 Theoretical Framework

2.2.1 Overview of Dual Process Theory

We draw upon Dual Process Theory (hereinafter referred to as DPT), specifically the formulation proposed by Evans and Stanovich (2013) as our theoretical framework. DPT is relevant for analysing the research question due to its focus on judgement and decision-making wherein it acknowledges the role of cognitive processes and biases (Evans and Stanovich, 2013). DPT is grounded in a broader body of empirical research within cognitive psychology and behavioural decision-making. Although its origin cannot be attributed to a single study, the earliest works can be traced back to the 1970s (see e.g., Wason and Evans, 1974). The theory is popularly characterized by Nobel prize winner Daniel Kahneman and his formulation: Dual Systems Theory (Kahneman, 2011). However, this theory has been increasingly criticized for the terms System 1 and System 2 thinking, as it suggests that there are only two distinct cognitive processes, located in separate cognitive systems (Evans and Stanovich, 2013). In contrast, DPT revised by Evans and Stanovich (2013) offers a response to critiques by retracting to the earlier formulations of Type 1 and 2 processes. Thus, we limit the theoretical framework to their

formulation as to not mix the multitude of dual processing accounts and theories (Evans and Stanovich, 2013).

2.2.2 Type 1 Processing

The underlying assumption highlighted regarding DPT is that "cognitive tasks evoke two forms of processing that contribute to observed behaviour" (Evans and Stanovich, 2013, p.225), namely intuitive Type 1 and reflective Type 2 processing.

Type 1 is described as a cognitive, autonomous process that does not require the activation of working memory (Evans and Stanovich, 2013). It can be summarized as "fast, intuitive, high capacity" (Evans, 2010, p. 313). Consequently, it enables for digestion of information at a quicker pace compared to Type 2 processing (Evans, 2011). Moreover, Evans (2010) suggest Type 1 processing is often assumed to coincide with cognitive biases. He recognises this risk of Type 1 processing when individuals are faced with new or difficult situations. In such cases, Type 2 thinking should be activated to mitigate bias (Evans, 2010). In contrast, he suggests the opposite is true in known environments. Under those circumstances, intuitive processing is likely to result in correct judgement (Evans, 2010). For instance, experienced doctors have developed the knowledge necessary to rely on their instincts (Hamilton and Winchel, 2019). Although they likely complement the initial judgement with further assessment it does not render their intuition obsolete (Hamilton and Winchel, 2019).

In the context of investment professionals, Type 1 processing can be exemplified in impulsively relying on the recommendations of an analyst they favour (Hamilton and Winchel, 2019). Hamilton and Winchel (2019) further explain why forming accurate intuition remain difficult despite extensive expertise. For instance, there can be a significant time lag between earnings forecasts and actual earnings, making it difficult to correct themselves and develop a tuned Type 1 processing. Although experience should have made them develop accurate intuition in response to their environment, the uncertain nature of investment decision-making implies that intuitive responses might not always be accurate, denoting a continued sensitivity for bias (Hamilton and Winchel, 2019).

2.2.3 Type 2 Processing

On the contrary Type 2 processing is "slow, low capacity, heavily dependent on working memory and related to individual differences in cognitive ability" (Evans, 2011, pg. 87). As working memory has low capacity, it cannot focus on multiple tasks simultaneously and individuals become more restrictive in the use of it (Evans, 2010). This is a contributing factor to why individuals commonly reside to intuition through routine (Evans and Stanovich, 2013). Further, a defining feature of Type 2 is cognitive decoupling, referring to the ability to separate reasoning from beliefs "and to aid rational choices by running thought experiments" (Evans and Stanovich, 2013, p. 236). This enables professionals to evaluate alternatives without interference from prior expectations, and thus avoid potential bias (Stanovich et al., 2011). Another defining feature is hypothetical thinking, which refers to the capacity to engage in structured reasoning such as comparing scenarios, evaluating facts, and assessing competing interpretations (Evans, 2011). To illustrate, Type 2 processing can be exemplified in activities such as calculating financial ratios (Hamilton and Winchel, 2019).

Despite Type 1 processing being more associated with cognitive bias, Type 2 processing can also become biased, by both overconfidence and confirmation bias (Hamilton and Winchel, 2019). In the case of overconfidence bias, investment professionals perceive that their own experience makes them less prone to bias as they have learnt from earlier mistakes (Hamilton and Winchel, 2019). However, these professionals have a larger collected pool of assumptions and can pose the risk of retracting to Type 1 processing (Stanovich, 2011). Type 2 processing can also become biased by confirmation, when investors favour a certain outcome (Hamilton and Winchel, 2019). This prompts investors to search for information sources that confirms an initial stance, although the source is less credible (see e.g., Thayer, 2011). These Type 2 processing biases and techniques to mitigate it remain relatively underexplored in accounting literature (Hamilton and Winchel, 2019). See Figure 1 for an overview of Type 1 and Type 2 processing, their overlaps, and their characteristics.

Figure 1

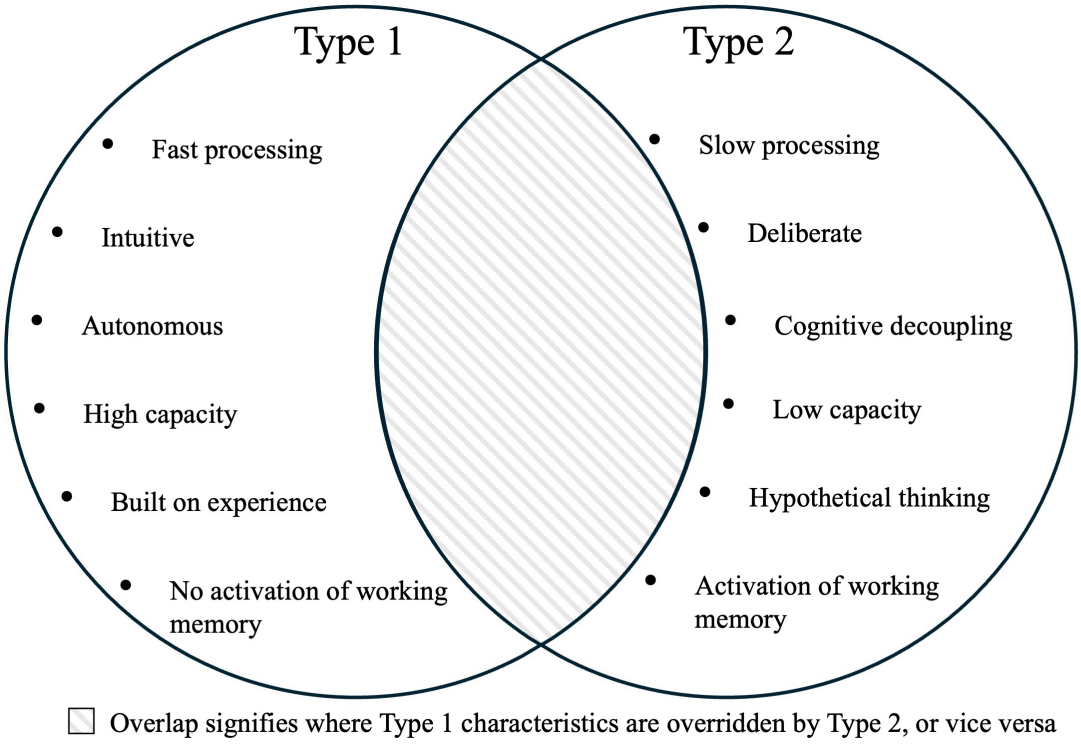


Figure 1: Properties and characteristics of Type 1 and Type 2 processing

3. Research Methodology

This section features the decisions made to effectively address the research question. First, we present design choices that enable us to study and capture the nature of cognitive biases. Second, we elaborate on how data was collected to reap the benefits of the design. Finally, we outline how the data was analysed based on the emergent themes.

3.1 Research Design

To capture the dynamics of investment professionals' information acquisition process this thesis follows a qualitative cross-sectional research design. Qualitative accounting research contributes more to the expression of a subjective rather than an objective reality (Ahrens and Chapman, 2006). Likewise, cognitive biases are deviations from rationality that although occasionally effective, pose the risk of distorting decision making (Tversky and Kahneman, 1974). These

notions make a qualitative accounting method suitable for addressing our research question regarding the subjective aspects of cognitive bias.

Furthermore, the study employs a cross-sectional interview-based study. This format allows for the comparison across different contexts to reveal both common patterns and differences, without sacrificing the level of depth in analysis (Lillis and Mundy, 2005). Thus, a cross-sectional design is appropriate as the aim is to understand the variation in how investment professionals deal with bias in their information acquisition process, rather than the unfolding process in a specific organisation. Consequently, this format ensures alignment with the research question. While cross sectional interviews risked being seen as too objectively structured relative to single case studies, this limitation was actively mitigated (Lillis and Mundy, 2005). One example was by embracing the iterative nature of the process and updating the interview guide with emerging topics (see Appendix 2). The research design is also compatible with the study's theoretical framework, DPT, as the interview-format allows the investment professionals themselves to articulate how they reason in regard to bias. By interpreting these articulations in terms of intuitive, Type 1, and analytical, Type 2, processing, bias and their mitigation techniques can be analysed.

Expanding on our view of knowledge, we recognise the inherent difficulty of studying bias as it is often subtle, context dependent, and not always consciously acknowledged by those who hold it. To ensure that our analysis captures this complexity and does not make implausible claims we focus on the explicit mentioning of bias as well as the implicit expressions through mitigation techniques. This approach allows us to make grounded evaluations to meaningfully address the research question, while avoiding speculative interpretations of investment professionals' thought processes. A natural limitation of this study thus becomes the presence of unconscious bias held by the investment professionals.

3.2 Data Collection

The interview subjects consisted of fund, portfolio, and investment managers ranging from family office investment funds to institutional banks. Investment professionals were selected through purposive sampling, guided by two criteria designed to ensure relevance to the research

question. First, interviewees had to actively manage a fund or portfolio, either individually or together with another investment professional. Secondly, they needed to hold a formal decision-making mandate. These criteria ensured participants themselves select which information sources they engage with.

Access to such senior investment professionals is known to be challenging, as they are often limited on time, and selective about granting interviews (Conti and O'Neil, 2007). To overcome these barriers, we conducted direct outreach via our Stockholm School of Economics email addresses. In the initial contact, we presented ourselves as student researchers, described our research domain, and ensured confidentiality in any forward communication, in accordance with the General Data Protection Regulation (GDPR). Out of the 232 emails sent we received 12 interviews (a 5% success rate).

The interview guide was refined along with the development of the study. Our first interview guide investigated a wider part of the investment decision process as well as more forms of cognitive biases, including overconfidence bias, confirmation bias, loss aversion and herding bias. However, regarding the findings in interviews held early in the process, this changed. We decided that the investment decision process was too broad and consequently narrowed it down to the information acquisition process. Herding and loss aversion were perceived to influence the investment decision process, but could not be readily tied to the information acquisition. Subsequently, to obtain more depth and study bias with most relevance to this process, two biases were selected to be further studied: overconfidence and confirmation bias. Furthermore, in order to avoid having an accusatory tone when asking about the biases, later interview guides were updated with the definition of each bias in reference to them as commonly found in literature (see Appendix 2).

In the early stages we prioritized conducting the interviews in person, as this enabled stronger rapport, provided access to non-verbal signals, and visual cues. However, as time progressed, we realized that the majority of investment professionals wanted to schedule online meetings instead due to time constraints. Therefore, four interviews were ultimately held in person and the remaining eight held online via Microsoft Teams. The duration of an interview ranged between

40-60 minutes (see Table 1). In addition, all interviews were recorded, to focus on emotional and physical rapport and to be able to ask relevant follow-up questions rather than focusing on notetaking. Transcription occurred no more than 48 hours prior to the next interview to have the possibility to reflect upon how the interview guide could be altered to further capture emerging themes.

Table 1

Interviews				
Interview	**Date of interview**	**Position**	**Company**	**Duration (min)**
1	2025-09-30	Investment Manager	Investment Company	65
2	2025-10-02	Portfolio Manager & Partner	Investment Fund	60
3	2025-10-10	Fund Manager & CIO	Investment Fund	45
4	2025-10-10	Portfolio Manager	Investment Fund	60
5	2025-10-13	Portfolio Manager & CIO	Investment Fund	45
6	2025-10-16	Head of Portfolio Management	Investment Fund	40
7	2025-10-27	Portfolio Manager	Investment Fund	45
8	2025-10-29	Portfolio Manager & Partner	Investment Fund	45
9	2025-10-30	Fund Manager	Investment Company	45
10	2025-10-30	Fund Manager	Investment Company	45
11	2025-11-04	Fund Manager	Institutional Bank	60
12	2025-11-05	Portfolio Manager	Institutional Bank	45

Table 1: Overview of interview sample

3.3 Data Analysis

The analysis of the empirics followed an abductive research strategy, allowing for revision of the theory and data during the three-month long process (Parker, 2012). Rather than remaining confined to earlier findings we reformulated the process multiple times when encountering new insights, and theoretical concepts. For instance, narrowing down to the information acquisition process, rather than the whole decision-making process and two cognitive biases as opposed to four. This abductive approach allowed the data analysis to remain open to new inputs while ensuring that findings were grounded in theory.

The coding process was thematic and divided into three categories: (1) type of information source, (2) cognitive bias in the information source and (3) bias mitigation techniques. When reviewing the recordings from the interviews in detail afterwards, data in all three categories were collected. Researcher A began transcribing an interview, while researcher B proofread and highlighted sequences which had to be formally discussed between the two parties. Following Lochmiller (2021) this process was repeated until we had thematized the above forementioned categories and divergents between the empirics. First, mapping which of the information sources the investment professionals used in their information acquisition process. Secondly, we looked for cognitive bias expressed in relation to the information sources. Thirdly, we noted bias mitigation techniques (see Table 2). The initial five information sources were narrowed down to three as no cognitive bias or mitigation technique was discussed in relation to buy-side analysts or news. The empirical material was then analysed using the Dual Process Theory framework. As a starting point, detected cognitive biases in an information source were assigned to Type 1 processing while bias mitigation techniques were assigned to Type 2 processing. However, given the iterative nature of the qualitative process, new ideas emerged when revising literature using DPT. For instance, we discovered that both overconfidence and confirmation bias could also constitute flaws in Type 2 processing (Hamilton and Winchel, 2019). This prompted a distinction between a biased and a more deliberate use of Type 2 processing.

Table 2

	Information sources		
Cognitive bias	**Accounting info.**	**Company meetings**	**Sell-side analysts**
Confirmation bias	Presence & mitigation	Presence & mitigation	Presence & mitigation
Overconfidence bias	Presence & mitigation	Presence & mitigation	Presence & mitigation

Table 2: Investigated type of cognitive bias and mitigation techniques in the information sources

4. Findings

The following section presents the empirical findings from the interviews. For clarity when referencing contrarian investors, we refer to investment professionals that seek relative outperformance by deviating from consensus when they perceive assets as over or undervalued (Coleman, 2015).

4.1 Overview of Information Environment

Overall investment professionals had similar interpretations of the information environment in which they operate in. Firstly, the information acquisition process was described as continuous, in which there is no natural order in which sources are collected:

> "But as a matter of fact, everything happens all the time. Like in a circle. I look at my screens continuously, meet companies continuously, evaluate companies continuously, all the time. It's like a wheel rather than one, two, three".
>
> (investment professional 7)

In addition, several investment professionals reflected that the issue lies not in the volume of information but in determining its quality, as real signals are often obscured by surrounding market noise. Something that posed a challenge was thereby sifting through sources and determining relevance:

> "You never know, it's a lot. It is very complex [...] and this is why I also think the market has behaved like it has. It's a lot of noise."
>
> (investment professional 2)

This information heavy environment forms the basis for how each investigated information source is evaluated and where biases emerge in the process. Moreover, on a general level, investment professionals are aware that biases exist somewhere in the investment decision-making process and view them as an inherent part of how the markets function:

> “Bias is a prerequisite for even having a market in the first place and if everyone thought the exact same way then you wouldn't be able to buy or sell anything.”
>
> (investment professional 5)

Given the notions about the complexity in the information environment and presence of bias therein, we move on to the source-specific findings. Each of the sources in which confirmation and, or, overconfidence bias was perceived by investment professionals will be presented below, as well as the stated mitigation techniques.

4.2 Accounting Information

4.2.1 Accounting Information: Reports and Valuation-Guidance

In examining the use of accounting information most investment professionals highlighted the importance of financial reports, both annual and quarterly. The numbers from the reports were most frequently derived from sources like the market data program Bloomberg, while the report itself got a brief read-through. When asked what is most important to look at in the reports, one professional specified the income statement:

> “To be totally honest, the P&L is the most important, even if most fund managers claim that the cash flow statement is. So, we always start with the P&L and then we move on to the cash flow statement, and the balance sheet becomes a function of both.”
>
> (investment professional 9)

Others emphasized a more thorough reading of the reports, including elements like the footnotes:

> “Annual reports are not many who read anymore, however, foot notes, they are super interesting. We read annual reports, and happily footnotes.”
>
> (investment professional 4)

Fundamental investment professionals used accounting information to feed into valuation models, primarily the discounted cash flow model, and then complemented with qualitative analysis as a separate component:

> "We always start with the same foundation for every company we invest in, which is just a standard DCF analysis. […] Then on top of that you add the qualitative analysis."
>
> (investment professional 3)

On the other hand, screening-based fund managers used accounting information to sift through the universe of available equities to construct their portfolios:

> "After the screenings, we put together a portfolio of around 40 companies which we think have the highest probability to deliver profit growth and that gives the most attractive valuation. We also see that the portfolio construction fits together so that you can have good diversification."
>
> (investment professional 7)

Although most investment professionals have long term investment horizons, many still highlighted the role of the quarterly reports and that they sometimes traded on their release dates, dependent on if information was seen to be of significant value. This mainly included either taking a new position, or changing the weighting of an already incurred position:

> "We can trim the position and reduce it a bit. We might be very fond of, let me just throw out a name, Ericsson, for example. But if the stock has gone up 10%, we might sell a little even though we still like the case. On reporting days, we are fairly active."
>
> (investment professional 9)

While the accounting information serves as a fundamental input in valuations of investment theses, the interviews revealed that investment professionals' preferences regarding accounting information differed. This could either be due to strategic differences, or the presence of a subjective judgement component. The next section therefore examines where biases arise in relation to accounting information.

4.2.2 Bias in Accounting Information: When Numbers Are Not Neutral

Building on the conflicting uses, a common theme was to ascribe overconfidence bias to other investment strategies. For instance, a bottom-up investment professional ascribed overconfidence bias to contrarian investing, and their view on financial modelling:

> "We're probably not sitting here thinking that we are better at building models than the entire market, so we should be right, like they are."
>
> (investment professional 8)

Further reiterated by another investment professional that considered contrarian investors to be susceptible to overconfidence bias in their use of accounting information:

> "Contrarian investors are usually extremely outspoken, at least extremely confident about how they believe the future will play out. Their view is basically that everyone else is an idiot. Whereas my view is that the market is very often right."
>
> (investment professional 7)

In comparison to overconfidence bias, when asked if they tend to search for information that accords with their prior beliefs, confirmation bias, more professionals agreed. One investment professional who found themself susceptible to confirmation bias exemplified it in a case in which they had a preference for a company and consequently tended to seek more positive information about it than their colleague:

> "Sometimes we have a case where I really like the company and have liked it for a long time, that my colleague doesn't like as much, and I tend to look for more positive things than negative ones."
>
> (investment professional 8)

Another pattern was that investment professionals pointed to the fact that cognitive biases are everywhere in society. Two gave examples of the political scene in which different parties choose to look at information that confirms their worldview:

> "Yes, I think confirmation bias is something that is incredibly strong in all contexts. It doesn't matter whether it's investments, life choices or politics, [...] You believe something and then you look for ways to prove it in the data."
>
> (investment professional 7)

Both biases were thus found in the use of accounting information, either indirectly or directly. Confirmation bias was found directly, in the tendency to seek positive information and strive to

confirm perceptions in data. Overconfidence bias on the other hand was detected indirectly, in the investment professionals' descriptions of contrarian investors' use of accounting information.

4.2.3 Bias Mitigation in Accounting Information: Protected by Numerical Objectivity

In terms of bias mitigation, quantitative investment professionals claimed that the almost exclusive use of numbers makes their investment strategy less biased. This group includes investment professionals who wholly rely on screening-based processes and time series driven investors. When asked if they mitigate bias by using quantitative data, a professional replied:

> "Well, yes, definitely. People are far more influenced by meeting other people than by looking at numbers."
>
> (investment professional 5)

Building onto the perception of numerical objectivity, one investment professional indicated that accounting information could be used to mitigate bias, specifically confirmation:

> "You still have to rely on your financial numbers. Just because someone gives you a reassuring impression or things feel good doesn't say anything about the revenue or where profits are headed."
>
> (Investment professional 2)

Another mitigation technique was to limit the size of holdings, ensuring that individual convictions, or what investment professionals informally refer to as "darlings" do not dominate the portfolio:

> "It is important that both the business and stock case work. We are quite good at managing risk in our portfolios, and that also helps to avoid getting carried away by a company you happen to like. That kind of company could never make up 10% of the fund, because then we'd be completely unreasonable from a risk-taking perspective."
>
> (investment professional 8)

For larger institutional investment professionals, several bias mitigation measures were also implemented, as part of the organisation's formal risk policies. At the individual level, it was exemplified by anonymizing portfolio holdings and discussing companies with colleagues solely based on their numbers, to minimize the impact of prior knowledge:

> "Sometimes I extract data on a company but choose not to say which company it is, and then I present it to my colleagues so we can discuss it purely based on the numbers. It's a way to eliminate the bias you might have toward that specific company from past experience or previous meetings with them, specifically if you hear the name, it might confirm what the numbers are saying."
>
> (investment professional 11)

Whereas on company level, quarterly meetings were employed in which each portfolio is evaluated from the point of view of another valuation system:

> "We have a risk department that looks at all portfolios from both a liquidity and tracking error perspective and a bunch more. We also have quarterly meetings where we go through my portfolio to see how other colleagues view it."
>
> (investment professional 11)

In sum, investment professionals overall perceived that numerical objectivity prevailed largely in accounting information, making it a bias mitigation technique in itself. Some did however emphasize an urge to look more objectively at the numbers, out of their context. This process was either initiated by themselves or the institution that they work for.

4.3 Company Meetings

4.3.1 Company Meetings: The Human Intuition

In a majority of interviews, meetings with company leadership were highly valued for qualitative analysis. Two investment professionals deviated from this pattern, one of which refrains to engage in them at all and the other only engages in time series analysis.

Although accounting information informed the investment professionals' quantitative models they placed an emphasis on the interpretation of them, as equally important. Numbers were rarely taken at face value, rather they were used as a central piece woven into a multifaceted decision:

> "Numbers are numbers and you have to understand what lies behind the numbers."
>
> (investment professional 7)

During the meetings, investment professionals asked technical questions as well as questions related to overall corporate strategy:

> "It can be anything from, a concrete book-keeping technicality: that they increase the rate of depreciation, what it comes from and so on, to how do you view these competitors? Do you agree that the market looks like this? Which strategic decisions are expected and will be made in terms of acquisitions and new markets and so on."
>
> (investment professional 11)

Moreover, investment professionals valued direct dialogues as a means to complement quantitative analysis. They shared a common conviction regarding the most important individuals to meet with:

> "We always try to meet the real decision makers. To be completely honest, meeting the investor relations doesn't give you that much. [...] but in the end our goal is to understand where the company is headed, which means we prefer to meet a major active owner if there is one, otherwise we prefer to meet the CEO."
>
> (investment professional 3)

Although no new information is shared, as it would be unlawful disclosure of insider information, emphasis was placed on the intuition developed in these meetings. What mattered most was not specific numerical values but rather the narrative or ability to fill knowledge gaps regarding the general feeling for the company:

> "For me, the meetings I mean, most of what is said actually or everything that is said is already public information or if not, they would have to issue a press release. So, for me, the purpose is to really try to understand the company's DNA. Is it as good as it sounds?"
>
> (investment professional 2)

In juxtaposition, one out of twelve interviewees reflected on the deteriorating edge of company meetings as well as increased risks associated with meeting management:

> “In the past, it gave you an edge to visit the companies and speak with the management team. Nowadays I've changed my mind and mainly read (news) instead. Company management teams today are incredibly skilled marketers that know exactly which buttons to press to make us bend over backwards when we meet them, so we walk out of there ridiculously excited about the product and the company. That's just how the game works.”
>
> (investment professional 4)

He also reflected on whether access to management can improve relative performance:

> “If it were the case that meeting company management made us perform better, then the managers who have that opportunity, meaning those who have a lot of money, would have higher returns. But they don’t.”
>
> (investment professional 4)

Despite this exception, a majority of interviewees agreed that company meetings were a core information source for building an investment thesis, with reputation of management being a heavy weighted component in the decision:

> “What the company management has managed to accomplish earlier, either in the company we are in at the moment or in a company they have been in before. It is not a gut feeling; it is concrete results that they have managed to achieve.”
>
> (investment professional 6)

Overall, company meetings serve as a central qualitative information source and although they seem to have little concrete value added, investment professionals use them to understand information better, evaluate company strategy, and assess management competence.

4.3.2 Bias in Company Meetings: Complexity and Visual Cues as Triggers

In regard to bias within company meetings, respondents primarily described confirmation bias as the tendency to become more receptive when management expresses something in line with their reasoning. As one interviewee noted:

> "Generally speaking, the more complex the source, the greater the risk of bias, and that can occur in two ways. One example is when company management says something you want to hear, then you become very inclined to accept it and listen to it."
>
> (investment professional 12)

In addition, respondents also acknowledged potential pitfalls with being too reliant on company meetings. Repeated interaction was described as potentially creating dependence on management's narratives or becoming influenced by positive impressions, charisma, and personal rapport. Over time, repeated interaction would lead to overconfidence in management's competence:

> "We need to ask ourselves, is this a risk we are willing to take, or have we ended up here because we thought the management team was wearing fancy suits?"
>
> (investment professional 8)

Bias detected in relation to company meetings was mainly confirmation, arising either from the complexity of the information source or from being overly influenced by visual cues. The complexity creates room for subjective interpretation and visual cues leads to interpreting signals that may be misleading. Although excessive confidence in company management could arise from visual cues, they appeared not to translate into an overconfidence on behalf of the investment professionals themselves.

4.3.3 Bias Mitigation in Company Meetings: Refraining or Inviting

Given the risks for cognitive bias in company meetings, the interviewees reflected on certain measures they take to limit such bias. The investment professional not engaging in company

meetings also suggested it is a bias mitigation technique to not conduct them. In the rare circumstance that they have a meeting, waiting before taking a position in the company:

> "Preferably an arm's length distance. I have even implemented that if we visit a company, you are not allowed to take any positions in the nearest week."
>
> (investment professional 4)

Meanwhile, another investment professional describes that having junior employees allows them to mitigate some of the bias in company meetings:

> "Sometimes you have different biases and sometimes you have interpreted something in a particular way, and another has interpreted it in a different way. Then one can eliminate such things that are misunderstandings."
>
> (investment professional 11)

However, he raises the potential concern that junior employees are often taught to think the same way as themselves, which could make it a less powerful mitigation technique:

> "But of course, we also have a core thesis about what drives a stock's value over time and that inevitably gets passed on, or installed, in the more junior employees as well. So, we all end up being shaped in fairly similar ways anyways."
>
> (investment professional 11)

In terms of bias mitigation in the use of company meetings, there are conflicting views on whether bias can be mitigated by efforts like inviting other employees to the meetings, or if bias can only be fully mitigated by non-engagement.

4.4 Sell-Side Analysts

4.4.1 Sell-Side Analysts and Consensus: Preferences and Market Views

Sell-side analysts emerged as a widely used yet critically evaluated information source. Most investment professionals relied on analysts to inform some part of their investment process, drawing on written reports, consensus estimates, and dialogue to contextualize information. Despite a broad usage across the sample, several highlighted a degree of scepticism towards the value of the analysts. This scepticism shaped how investment professionals assessed both the

usefulness and the limitations of consensus as well as direct dialogue. Exemplified by one investment professional who strongly expressed his reservations toward relying on sell-side analysts:

> "They are so influenced by the system they're in. I'm not the one, as a client, who decides their bonus. […] We actually don't speak to the analysts."
>
> (investment professional 4)

In contrast, investment professionals who speak to analysts, preferred those whom they have developed a relationship with and coined as knowledgeable. This could also depend based on sectorial coverage:

> "If I'm looking at a company within a certain sector, it might be ABG's analyst I think is best or who thinks similarly and focuses on the drivers I consider important. But if I'm looking at another sector, it might be SEB's analyst or Carnegie's, and so on."
>
> (investment professional 11)

Furthermore, the professionals discussed their use of sell-side research to gauge market consensus. While few relied on analysts for original insight, consensus estimates served as an external benchmark that contextualised their own valuations:

> "You start by checking how the numbers come in and how they compare to consensus, the expectation. And then you look at which companies deviate the most. Is there anything interesting here? Something I want to buy that I don't already own, or something I do own where I might want to act, buy more, or sell?"
>
> (investment professional 11)

The emerging trend was that consensus served as a reference point to see that their investment was following their intended trajectory. Across the interviews, these insights show that sell-side research functions more as a contextual tool used to understand market expectations and to regulate the investment professionals' own expectations, both in the form of consensus and in private conversation.

4.4.2 Bias in Sell-Side Analysts and Consensus: Noise Cancelling and Market Deviation

The ambiguous nature of interaction with sell-side analysts led interviewees to reflect on the adjacent biases. One investment professional expressed the fact that they had reduced counter party discussion with sell-side analysts due to more uncertain markets during the last few years. When asked if they speak to analysts with opposing views he responded:

> "Yes, it's good, absolutely, and we also do that. […] However, in this environment over the past few years, with generally increased uncertainty around earnings, we have reduced our discussions with analysts. Simply because no one really knows, and even if it sounds contradictory, we feel it just becomes more of a disturbance. You just end up more uncertain about your own view of a company than before."
>
> (investment professional 10)

Hence, sell-side analysts were excluded to not conflict with their own view of the company. Although reflecting on the fact that it would be beneficial to speak to analysts with opposing views, the act of reaching a decision seemed more important. Following, another investment professional exemplified overconfidence bias in deviating from consensus:

> "Honestly, I have definitely been overconfident multiple times and gone against the market. And you start thinking: Does the market really have it right? That mindset is dangerous. Sure, the market can be wrong, but it is usually not."
>
> (investment professional 9)

Consistent with accounting information, overconfidence was exemplified in a contrarian resembling investment approach. Specifically, it was expressed in deviation from consensus. Moreover, confirmation bias was exemplified in excluding conversation with sell-side analysts of opposing views.

4.4.3 Bias Mitigation in Sell-Side Analysts and Consensus: Embracing Opposing Views

A clear pattern in mitigating bias in the interaction with sell-side analysts was in the selection of whom to speak with. Most investment professionals expressed a preference for talking to analysts of opposing views:

> "The best way for me is really, if I am very positive to SAAB, then I talk to the analyst who has sell, what am I missing in my analysis?"
>
> (investment professional 2)

Thus, the source in itself constitutes a bias mitigation technique, in place to mitigate confirmation bias, by incorporating opinions that counter their own views of an investment. However, less was said about mitigation of overconfidence bias in the source. See Appendix 3 for a synthesised presentation of the findings.

5. Analysis

This section analyses the empirics found in the previous section. Drawing on Dual Process Theory, the findings are first analysed based on the two types of processing in the framework. The analysis is then structured into two main contributions to current qualitative literature.

5.1 Type 1 and Type 2 in Relation to the Findings

Our findings indicated that investment professionals' information acquisition cannot be solely ascribed to one type of processing, but rather a process which unfolds involving both Type 1 and 2 processing. DPT states that Type 1 processing occurs quickly and autonomously with little use of working memory, drawing mainly on past learned experiences (Evans and Stanovich, 2013). This type of processing was extensively reflected in our data collection, in particular where investment professionals rely more heavily on tacit cues. Such cues presented themselves in sensing whether a management group appeared competent and non-verbal impressions that determined their perceived future performance. These intuitive assessments were often described as a natural part of an investment professional's day to day operations, manifesting how experience can lead to more efficient decisions, but also risk bias.

The findings also show that investment professionals do not remain exclusively within Type 1 processing. In situations where information is more complex, uncertain, or faced with contradicting motives, investment professionals must employ another form of processing. Namely Type 2, in which the interpretation of information serves as more reflective and deliberate (Evans and Stanovich, 2013). This is exemplified by speaking with sell-side analysts

who hold contradicting views, exhibiting engagement in hypothetical thinking. In these instances, Type 2 processing served as a cognitive process employed to mitigate bias.

What must be noted is that the usage of Type 1 and Type 2 processing is not strictly limited to certain situations. Instead, investment professionals moved instinctively and fluidly between the two dependent on a set number of factors. These include but are not limited to; the information source, the perceived reliability of the information, how institutionalized the organization is, strategy, and other situational factors such as time pressure. However, the focus of the analysis will adhere to bias exercised within the information sources. The alternation between the types of processing is therefore central to understanding how investment professionals perceive bias as well as their intention to mitigate them.

Utilizing Dual Process Theory to interpret cognitive biases in the information environment we have answered our research question: *How are cognitive biases perceived and mitigated in the information acquisition process of investment professionals?* On a superficial level we do so by acknowledging in which information sources investment professionals are aware of the cognitive biases and have efforts targeted at mitigating them. On a deeper level, we explore the overlaps between Type 1 and Type 2 processing, in which the perception of both bias and their mitigation efforts are steered by the trade-off. In doing so, the thesis contributes to the domain of qualitative accounting literature on capital markets, in two prominent ways. Firstly, awareness of confirmation bias appears more widespread among investment professionals than overconfidence bias. Secondly, the perception of bias and mitigation varies across the information sources. The subsequent analysis examines how our findings extend and challenges insights from previous literature.

5.2 Confirmation “Confirmed”, Overconfidence Overlooked

In positioning our findings within existing qualitative accounting literature, our first contribution is directed towards studies on cognitive biases in investment professionals’ information environments (Abraham and Slack, 2023; Barker et al., 2012; Camilli et al., 2025; Coleman, 2015; Millo et al., 2023). We build on these foundations but add the conceptual layer that cognitive biases emerge from the type of processing undergone by the investment professional.

As a broad starting point, bias becomes more likely when Type 1 processing dominates, while mitigation depends on the extent to which Type 2 processing is evoked.

Across interviews, the investment professionals reflected on several parts of the process in which the choice and regurgitation of certain information sources was impacted by biases. Confirmation bias was frequently acknowledged, whereas overconfidence was mainly externalized and attributed to others' strategies. This was visible both in the explicit recognition of the biases as well as the bias mitigation techniques.

In line with Barker et al's. (2012) suggestion to study bias as explanation behind the phenomenon of company meetings, we found some evidence of overconfidence via explicit mentioning. In addition, we found no bias mitigation techniques related to overconfidence, indicating Type 2 processing was not evoked. Further, we observed confirmation bias in relation to company meetings. This was evident in both Type 1 and 2 processing. Type 1 processing manifested itself where quick evaluations of management competence were common. Meanwhile, deliberate efforts to mitigate confirmation bias, highlighted analytical reasoning in the form of Type 2 processing.

In a similar fashion, the same tensions between intuitive and analytical processing was evident in accounting information. Extending the study of Abraham and Slack (2023), our findings support that accounting information was employed partially in a confirmatory purpose. Although our findings did not support bias specifically regarding reading of risk disclosures, we found confirmation bias in other forms of accounting information. For instance, in tendencies to look for more positive signals in numbers when having a preference for a certain investment thesis. Despite accounting information's perceived objectivity by the investment professionals', it is not sufficient to activate Type 2 processing on its own. Interestingly enough, mitigation techniques were not employed to counteract overconfidence bias while simultaneously acknowledging the existence of it. On the other hand, mitigation techniques were employed to mitigate confirmation bias. This further strengthens the notion that confirmation bias is perceived more frequently in the cognitive frames of investment professionals and Type 2 processing is seen as a required intervention. Alternatively, overconfidence bias may be more difficult to articulate. Further

reiterating that investment professionals do not perceive overconfidence to the same extent in their investment strategy and rather it is externalized to contrarian investors.

The asymmetry in awareness between the two investigated biases align partly with Coleman's (2015) observations that investment professionals frequently rely on heuristics, intuitive judgements, and do not practice mitigation techniques. It appears to be the case for overconfidence bias, both in the form of less explicit expression and absence of mitigation techniques. However, we contrast his study in part as they are largely aware of their confirmation biases and have practiced mitigation techniques to target them. In accordance with Coleman (2015), such mitigation techniques are rarely formalized and are used sparingly. Instead of formal mechanisms, these mitigation techniques became visible when we as researchers allowed them to reflect on their routines to mitigate biases. Only then did we uncover techniques relied on by the investment professionals. Through the lens of DPT, this suggests that while heuristics remain central to Type 1 reasoning, investment professionals do attempt to mitigate them through Type 2 interventions.

In reference to sell-side analysts, they constituted an exception in which both confirmation and overconfidence was expressed explicitly in the respondents' own strategy. Similarly to Millo et al. (2023) and their notion of boldness in relation to sell-side analysts, this buy side study supported the prevalence of overconfidence in the action of deviating from consensus. However, again, seen from DPT, there was no mention of any bias mitigation technique to promote deliberate, Type 2, processing in regard to overconfidence. On the one hand it could be a deliberate decision, made through Type 2 processing, to trust the Type 1 instincts. On the other hand, it risks being subject to Type 1 bias. This ambiguity highlights that investment professionals sometimes rationalise intuitive processing as deliberate judgement, making it difficult to distinguish between whether a bias is ascribed to Type 1 or 2 processing. Such rationalization by investment professionals blurs the intersection between the two types of processing.

In sum, our first contribution is that investment professionals are largely aware of their cognitive biases in their information acquisition process. DPT provides the perspective that this could be

ascribed to investment professionals inherently residing in Type 1 thinking, at least to some extent. However, they still equip themselves with mitigation techniques, suggesting the deliberate analytical reasoning of Type 2 processing. The awareness is however unevenly distributed between the biases, where confirmation bias is more readily acknowledged and actively mitigated, compared to overconfidence bias.

5.3 Deliberate Processing Varies Across Sources

Our second contribution is to the body of qualitative capital market literature exploring the role of various information sources (Barker et al., 2012; Graaf, 2021; Millo et al., 2023; Spence et al., 2019). Specifically, that bias mitigation varies extensively depending on the information source, and these differences reflect the extent to which investment professionals engage in Type 1 or Type 2 processing.

Consistent with prior literature, we found indications that investment professionals prefer qualitative interaction with sell-side analysts whom they considered knowledgeable (Graaf, 2021; Spence et al., 2019; Millo et al., 2023). Such a use of sell-side analysts could be rooted in Type 2 processing, due to the deliberate selection process. However, it risks being overridden by Type 1 if familiarity dominates and investment professionals simply accept calculations by analysts they trust (Hamiton and Winchel, 2019). Our study adds to prior literature in that sell-side analysts were also predominantly selected when having deviating opinions, serving as bias mitigators. This willingness to alter perspectives demonstrates an effort to activate Type 2 processing. In these instances, sell-side analysts help investment professionals counteract potential confirmation bias. The deliberate shift into Type 2 processing also characterizes how investment professionals interact with accounting information. Respondents described using accounting information to reference assumptions and to challenge preconceived notions, an expression of cognitive decoupling (Evans and Stanovich, 2013). However, some displayed an overreliance on the objective nature of accounting information, which could manifest as Type 2 overconfidence bias, as proposed by Hamilton and Winchel (2019).

The contrast between mitigation and reinforcement of bias becomes clear when analysing company meetings, where the abundance of intuitive cues makes deliberate reasoning difficult.

Wherein company meetings, Type 2 processing was difficult to adhere to in order to mitigate bias. Attempts such as involving junior colleagues in meetings often caused similar frames of processing as the more senior professionals would indoctrinate their modes of reasoning onto them. Furthermore, the meeting environment typically favours Type 1 processing due to its tacit and interpretative nature, making an override with Type 2 difficult. This extends the findings of Barker et al. (2012, p. 210) who found that the meetings may be conducted as investment professionals "act on the basis of irrational bias". Although there are mitigation techniques, they are in themselves susceptible to bias. The sole option to fully mitigate bias appears in the form of not engaging in the meetings at all. This displays a dominant tendency of Type 1 processing in the source.

The above forementioned leads to our second contribution. Namely, that investment professionals to a large degree recognise the importance of mitigating bias in their information acquisition process. However, the findings demonstrate that bias mitigation is unevenly distributed across the information acquisition environment because different sources evoke different forms of cognitive processing. Sources that naturally cause Type 2 processing, such as interaction with sell-side analysts and, in part, accounting information, create the conditions necessary to mitigate confirmation bias. In contrast, sources dominated by Type 1 processing, in particular company meetings, exhibit fewer attempts at reflective reasoning, causing fewer mitigation attempts or even biased ones. It appears that when Type 1 is overridden by Type 2 processing, investment professionals truly recognize the risk for cognitive bias and work to mitigate it.

6. Conclusion

6.1 Summary of Contributions

The aim of the study was to investigate how investment professionals perceive cognitive biases in their information acquisition process and how they seek to mitigate it. Our analysis sheds light on the incompleteness in current qualitative capital market literature in fully addressing this gap.

In line with previous research (Abraham and Slack, 2023; Barker et al., 2012; Millo et al., 2023) we found that the investment professionals did perceive the two chosen biases, overconfidence and confirmation, in the information sources. Moreover, the investment professionals generally expressed awareness that such biases impact their decision making. This awareness was conveyed through both explicit mentioning of bias and the presence of mitigation techniques. Most notably, confirmation bias was more frequently acknowledged and more actively addressed than overconfidence bias. Interpreted through the lens of DPT this implies that Type 2 processing was purposely evoked in relation to confirmation bias, exemplified in more explicit recognition and the deployment of mitigation techniques. In contrast, overconfidence was mostly externalised and ascribed to a contrarian investment strategy.

Unlike the notions of Coleman (2015), investment professionals in our study were found to employ bias mitigation techniques to shield from being unconsciously steered by them. However, these techniques varied substantially across the different sources. To illustrate, in company meetings mitigation techniques were present, but at times appeared to be subject to bias themselves, making this source more closely associated with intuitive, Type 1, processing. Sell-side analysts, on the other hand, mostly constituted a bias mitigation technique, evoking Type 2 processing. Meanwhile, accounting information was more situated between the two. In this line of reasoning, we conclude that susceptibility to bias is perceived strongest in company meetings, followed by accounting information and lastly sell-side analysts. In drawing this conclusion, we make contributions to the body of literature exploring the role of the various information sources; sell-side analysts (Graaf, 2021; Millo et al., 2023; Spence et al., 2019), accounting information (Abraham and slack, 2023), and company meetings (Barker et al., 2012)

Notably, both contributions arise in the intersection between Type 1 and 2 processing (see Figure 1 in section 2.2.4). It remains ambiguous whether overconfidence is perceived and mitigated less than confirmation due to accurate intuition, Type 1, or inadequate activation of Type 2 processing. Likewise, bias in company meetings could be recognised and mitigated to a lesser extent due to familiar information being conveyed, indicating that Type 1 processing can successfully be applied.

In sum, we shed light on contextual drivers that affect to what extent investment professionals are both perceived aware of biases and equip themselves with mitigation techniques. Given the increasing influence of investment professionals and the magnitude of their assets under management (Finansinspektionen, 2025), the study reinforces the need for sustained bias awareness and continued refinement of mitigation strategies. This is particularly important in situations where biases are recognised but not actively mitigated or in information sources in which bias mitigation appears most difficult.

6.2 Limitations

Despite concluding that investment professionals were more aware and more actively mitigated confirmation bias than overconfidence bias, it cannot be ascertained that it is the case. As the present study investigates the explicit mentioning and mitigation of a certain bias, it cannot be ruled out that overconfidence is not equally, or more, present in their information acquisition process. Thus, one inherent limitation of this study is that it is confined to the explicit forms of biases. Investment professionals may be less willing to attribute overconfidence to themselves than confirmation bias. Secondly, this study has investigated biases mainly from a neoclassical economic point of view, investigating the potential downsides perceived of relying too heavily on heuristics. Thus, in part, limiting the depth of positive applications of heuristics.

6.3 Future Research

Given the limitations of this study, we propose suggestions for further research. Firstly, future research could investigate the unconscious expression of cognitive biases as it could reduce the barrier of what investment professionals want to articulate. However, such a task would require proxies for determining expression of a bias and would therefore require a more in-depth study. Secondly, future research could investigate the advantages of employing cognitive biases in the information acquisition process, or a comparative study examining both potential upsides and downsides. Finally, research could extend beyond the information acquisition process to examine how biases are perceived in other phases of decision-making.

7. References

Abraham, S., & Slack, R. (2023). Understanding fund manager readership of annual report risk disclosure. *Accounting Forum, 49*(1), 156-180.

Ahrens, T., & Chapman, C. S. (2006). Doing qualitative field research in management accounting: Positioning data to contribute to theory. *Accounting, Organizations and Society*, *31*(8), 819-841.

Barker, R. G. (1998). The market for information—evidence from finance directors, analysts and fund managers. *Accounting and Business Research*, *29*(1), 3-20.

Barker, R. G. (1999). The role of dividends in valuation models used by analysts and fund managers. *European Accounting Review*, *8*(2), 195-218.

Barker, R., Hendry, J., Roberts, J., & Sanderson, P. (2012). Can company-fund manager meetings convey informational benefits? Exploring the rationalisation of equity investment decision making by UK fund managers. *Accounting, Organizations and Society, 37*(4), 207-222.

Camilli, R., Cristofaro, M., Hristov, I., & Sargiacomo, M. (2025). Cognitive biases in accounting judgement and decision making: a review, a typology, and a future research agenda. *Accounting Forum,* 1-30.

Coleman, L. (2014). Why finance theory fails to survive contact with the real world: A fund manager perspective. *Critical Perspectives on Accounting*, *25*(3), 226-236.

Coleman, L. (2015). Facing up to fund managers: An exploratory field study of how institutional investors make decisions. *Qualitative Research in Financial Markets*, *7*(2), 111-135.

Conti, J. A., & O'Neil, M. (2007). Studying power: Qualitative methods and the global elite. *Qualitative Research*, *7*(1), 63-82.

Eshraghi, A., & Taffler, R. (2015). Heroes and victims: fund manager sensemaking, self-legitimation and storytelling. *Accounting and Business Research*, *45*(6-7), 691-714.

Evans, J. St. B. T. (2010). Intuition and Reasoning: A Dual-Process Perspective. *Psychological Inquiry*, *21*(4), 313-326.

Evans, J. St. B. T. (2011). Dual-process theories of reasoning: Contemporary issues and developmental applications. *Developmental Review*, *31*(2), 86-102.

Evans, J. St. B. T., & Stanovich, K. E. (2013). Dual-Process Theories of Higher Cognition: Advancing the Debate. *Perspectives on Psychological Science*, *8*(3), 223–241.

Fama, E. F. (1970). Efficient Capital Markets: A Review of Theory and Empirical Work. *The Journal of Finance*, *25*(2), 383-417.

Finansinspektionen. (2025). *Report: Household savings in Sweden*. 3-29. https://www.fi.se/en/published/reports/reports/2025/household-savings-in-sweden2/

Graaf, J. (2021). Can Sell-side Analysts Compete Using Public Information? Analysts as Frame-makers Revisited. *European Accounting Review, 32*(1), 141-167.

Hamilton, E. L., & Winchel, J. (2019). Investors' Processing of Financial Communications: A Persuasion Perspective. *Behavioral Research in Accounting*, *31*(1), 133-156.

Hellman, N. (2000). *Investor behaviour: An empirical study of how large Swedish institutional investors make equity investment decisions*. Economic Research Institute, Stockholm School of Economics. https://research.hhs.se/esploro/outputs/doctoral/Investor-behaviour--an-empirical-study/991001480598906056

Kahneman, D. (2011). *Thinking, fast and slow* (1.ed.). Farrar, Straus, Giroux.

Lillis, A. M., & Mundy, J. (2005). Cross-sectional field studies in management accounting research-closing the gaps between surveys and case studies. *Journal of Management Accounting Research, 17*, 119-141.

Lochmiller, C. R. (2021). Conducting Thematic Analysis with Qualitative Data. *The Qualitative Report*, *26*(6), 2029-2044.

Millo, Y., Spence, C., & Valentine, J. (2023). The Field of Investment Advice: The Social Forces That Govern Equity Analysts. *The Accounting Review*, *98*(7), 457-477.

Parker, L. D. (2012). Qualitative management accounting research: Assessing deliverables and relevance. *Critical Perspectives on Accounting*, *23*(1), 54-70.

Puetz, A., & Ruenzi, S. (2011). Overconfidence Among Professional Investors: Evidence from Mutual Fund Managers. *Journal of Business Finance & Accounting*, *38*(5-6), 684-712.

Roberts, J., Sanderson, P., Barker, R., & Hendry, J. (2006). In the mirror of the market: The disciplinary effects of company/fund manager meetings. *Accounting, Organizations and Society*, *31*(3), 277-294.

Spence, C., Aleksanyan, M., Millo, Y., Imam, S., & Abhayawansa, S. (2019). Earning the "Write to Speak": Sell-Side Analysts and Their Struggle to Be Heard. *Contemporary Accounting Research, 36(*4), 2635-2662.

Stanovich, K. E., West, R. F., & Toplak, M. E. (2011). The complexity of developmental predictions from dual process models. *Developmental Review*, *31*(2-3), 103-118.

Sveriges Riksbank. (2024). *The Swedish Financial Market 2024.* 5-94. https://www.riksbank.se/globalassets/media/rapporter/den-svenska-finansmarknaden/engelska/2024/the-swedish-financial-market-2024.pdf

Swedish Investment Fund Association. (2025). *Nysparande och fondförmögenhet (månadsstatistik)*. https://www.fondbolagen.se/fakta_index/statistik/

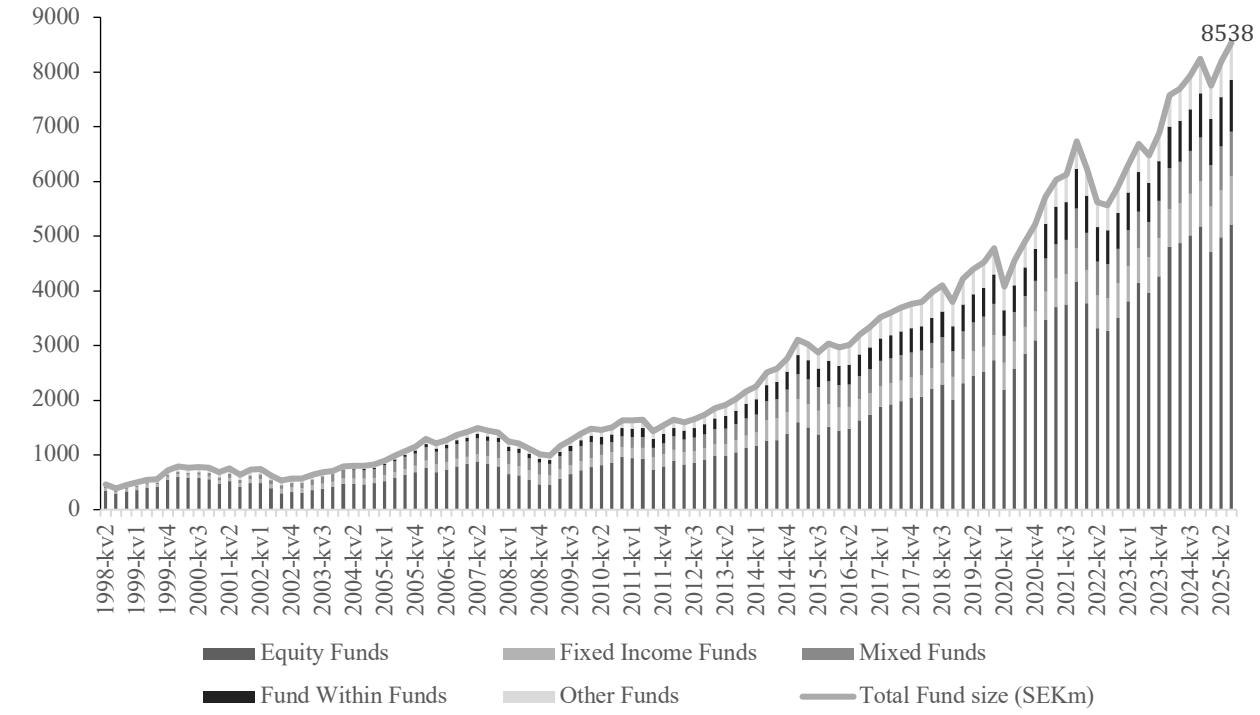
Thayer, J. (2011). 2009 American Accounting Association Competitive Manuscript Award Winner: Determinants of Investors' Information Acquisition: Credibility and Confirmation. *The Accounting Review*, *86*(1), 1-22.

Tversky, A., & Kahneman, D. (1974). Judgment under Uncertainty: Heuristics and Biases. *Science*, *185*(4157), 1124-1131.

Wason, P. C., & Evans, J. St. B. T. (1974). Dual processes in reasoning? *Cognition*, *3*(2), 141-154.

8. Appendices

8.1 Appendix 1: Assets Under Management, Historic Development (1998-2025)



(Swedish Investment Fund Association, 2025)

8.2 Appendix 2: Interview Guide- Final Version

Introductory questions

- What position do you have and where?
- Can you briefly describe your professional background?

Investment decisions

- What types of investments do you/your firm focus on?
- What types of investment decisions are you involved in?

Intro to information use

- Which sources do you use to inform your investment decisions?

Cognitive biases

- Do you perceive confirmation bias to impact your information acquisition process?
  - *Definition of confirmation bias: favouring information supporting pre-existing beliefs*
- Do you perceive overconfidence bias to impact your information acquisition process?
  - *Definition of overconfidence bias: overestimating one's knowledge, abilities or control over a situation.*

  [Here it is important to ask follow-up questions, dependant on the interviewee's response]

Accounting information

- What accounting information do you use to inform your investment decisions?
- What is the purpose?
- Follow up questions regarding potential bias discussed

Company Meetings

- Do you regularly meet with representatives from the companies you invest in?
- Who do you meet with? Why?
- Why do you engage in such meetings?
- What are the most important insights gained from holding such meetings?
- Do you have any example of an instance in which such a meeting has affected an investment decision?
- Follow up questions regarding potential bias discussed

Sell-side analysts & consensus estimates

- Do you rely on the investment advice of any specific analyst? Why / Why not?

- What type of information do you seek from them?
- What is most important in your choice of analyst?
- Do you use consensus estimates in your decision-making process?
- What is the purpose of using consensus estimates?
- Follow up questions regarding potential bias discussed

Buy side analysts

- Do you have an in-house analyst that you use to inform your investment decisions?
- What is the purpose of using them?
- Follow up questions regarding potential bias discussed

News

- Which information sources do you use?
- Are there any that are more important than others? Why?
- Follow up questions regarding potential bias discussed

Cognitive Bias (revisited)

- Do you think that cognitive bias impact your choice of information sources?
- What techniques do you use to mitigate bias in your information acquisition process?

Concluding questions

- What is most difficult in having (their position)?
- Is there anything we have forgotten to ask about on this topic that should be mentioned?

8.3 Appendix 3: Summary of Findings

Cognitive bias	Information sources		
	Accounting info.	**Company meetings**	**Sell-side analysts**
Confirmation bias	• Seeking positive information when already having a preference company • Externalises it to a larger societal issue	• Becoming more receptive to when management says what they want to hear • Visual cues like "fancy suits" leads to biased interpretation • Risk of being too impressed by management narratives	• Excluding analysts with opposing views to avoid uncertainty • Seeking analysts who share thinking, and issue buy on preferred companies
Mitigation (confirmation)	• Discussing anonymized financials with colleagues to avoid name-based bias • Using only numbers in the screening process • Capping positions to avoid "darlings" dominating the portfolio • Anonymized company data to avoid prior assumptions • Institution enforced portfolio review	• Inviting multiple colleagues to meetings • Using junior employees to diversify interpretation (though limited by shared thinking) • Avoiding meetings entirely to eliminate management influence • No trading in a company before a week's cooldown period	• Deliberately speaking to analysts with opposing views • Using consensus as a benchmark to challenge internal assumptions
Overconfidence bias	• Externalised and ascribed to contrarian investors • Contrarian investor's view on financial modelling	• Repeated interaction causes inflated trust in management competencies	• Taking positions that deviate strongly from consensus • Reducing discussion with sell-side analyst
Mitigation (overconfidence)	• No explicit mitigation found	• No explicit mitigation found	• No explicit mitigation found

8.4 Appendix 4: AI Statement

In writing this thesis, artificial intelligence (AI) in the form of ChatGPT (version 5.1) has been used continuously. We used this to ensure correct language, both grammatically and academically, not in the purpose of any research. The tool helped us to point out where we had any grammatical issues or instances in which the tone of our current formulation was slightly non-academic. Risks associated with this use of AI is that the meaning, bottom line, of a sentence may change if asking for help to refine the language. However, we took several measures to make sure this risk does not apply to the thesis. Firstly, we asked questions simply of grammar or vocabulary used in a sentence, rather than taking suggestions of overall improvements. Secondly, we never simply accepted a re-formulation of a sentence directly from ChatGPT but looked at the detected errors and made our own decision in whether the sentence should be changed in any way. If we thought that it was in fact in need of a change, we thought for ourselves what we considered an appropriate replacement. Consequently, the AI tool was used to detect errors, not reformulate. Insights gained from using AI was thus regarding the language accuracy in academic writing. The tool was good for pointing out errors in grammar and language, but it is us as writers that need to come up with the improvements as the tool risks suggesting new formulations that violate the underlying meaning we had intended.