Cognitive bias in the judgment of business valuations and valuators : how systematic patterns of irrationality affect entrepreneurs, legal professionals and business valuators

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5 Exploring Principles for Valuation Practice

5.1 Introduction

In recent decades, a plethora of cognitive biases have been identified that affect the way humans judge and make decisions. These biases follow on from heuristics that developed throughout evolution to simplify and speed up human cognition with the aim of ultimately facilitating survival and reproduction (e.g., Baron, 2007; Haselton et al., 2015). However, heuristics can also affect judgments and decisions and cause irrational behavior. Cognitive biases are omnipresent and influence everyday decision making, and they are also critical to judgments in fields such as law, economics and entrepreneurship.

In the social psychology literature, it is widely recognized that biases are typically highly robust and hard to eradicate. Research conducted on debiasing strategies indicates that debiasing training courses are helpful to mitigate the effects of biases (Morewedge, Yoon, Scopelliti, Symborski, Korris & Kassam, 2015). However, debiasing strategies vary in effectiveness. Rather than focusing on debiasing, some fields have therefore shifted their strategies to overcome (or at least mitigate) the unwanted influence of biases and are focused on implementing certain principles or protocols.[1] For example, in the field of forensic science research protocols have been developed (i.e., information management) to remove potentially biasing and irrelevant information to enhance examiners' objectivity in forensic casework (Mattijssen, Kerkhoff, Berger, Dror, & Stoel, 2016). Auditors and healthcare practitioners also apply protocols and principles to mitigate the effects of biases.

Given the results of the previous chapters, and keeping our central research question in mind, we decided to supplement the three experimental studies with a consultation on the main findings among a selected group of valuators affiliated to global top-tier firms. We set out to explore the possible usefulness of the practical principles approach developed on the basis of this dissertation's findings, to assess whether they might help mitigate the effects of biases in the context of business valuation. As such, the objectives for the consultation was threefold. First, we studied the extent to which valuation experts recognized and acknowledged our research

1 In colloquial Italian the term 'principio' (principle) is used as a synonym for 'beginning', and used as a synonym for a fundamental value, or as an element of a basic notion (e.g., the principles of ethics, of mathematics, of physics, etc.) (Alpa, 1994).

findings in their own work as well as in that of their peers. Second, we conducted a 'sanity check' on our findings, in particular with regard to the researched biases and the presented valuation contexts. Third, we sought to explore whether in the perception of valuation experts certain 'debiasing principles' might be useful in their own working methods.

The outcomes of the consultation were used to develop a set of principles, referred to as 'Statement of Principles for Valuation Practice' (in short: Statement of Principles). These proposed principles aim to:

1. Generate structural awareness and understanding of the potential effects of the studied types of cognitive biases among business valuators worldwide;
2. Offer best practice tools for valuators on how to anticipate on the potential effects of unconscious biased judgments; and
3. Offer practical guidance to reduce these biased judgments in valuation practice.

The consultation thus served as a starting point to explore the usefulness of principles to mitigate the effects of biases among valuators, in particular anchoring, adjustment, and engagement bias, as these were the biases observed among valuators.

5.2 Principles to Mitigate Cognitive Biases

Business valuation practice is generally relatively rule-free, especially as there is no legal (formal) basis for the profession[2] compared to, for example, the audit profession. We therefore considered the implementation of (informal or "soft") principles as a good way to manage the consequences of biases among business valuators, predominantly because of principles' relatively limited mandatory characteristics that in turn fits the nature of the valuation profession. In addition, we also note that many professional bodies worldwide – ranging from federations of corporate professionals (e.g., accountants, lawyers, valuators, brokers, bankers) to organized professionals (e.g., surgeons or archivists) currently apply soft principles or standards that serve as practical guidelines for (ethical) behavior, beliefs, intentions and/or evaluations of their members. The reason for this is that formal ("hard") rules often are too rigid to promote *best practice behavior*.

Where some researchers have shown there is little evidence to what extent principles affect performance (Doig & Wilson, 1998), others have demonstrated that the need for principles for businesses is evident (Rezaee,

2 Literature defines a profession as 'a group of people with a common set of interests, skills, education, and roles within society' (Johnson, 1972).

Elmore, & Szendi, 2001). Moreover, where it concerns the private sector, the natural environment for business valuators, there is a large body of research showing that an effective implementation of principles is part of a learning process that requires inculcation, reinforcement and measurement (Doig & Wilson, 1998). An instant and complete compliance with new principles to mitigate biases in the context of business valuation is therefore unlikely, especially when taking into account professionals' autonomy. However, a code (e.g., of ethics) of the profession is a reflection of the perceived need to defend the private interest of the professional and to protect the public (Fisher, Gunz, & McCutcheon, 2001). Although we have not specifically studied to what extent the private interest of the profession of business valuators or the general public would value the implementation and enforcement of principles to address the impact of biases in the context of business valuation, the findings of our three studies could serve as a starting point.

5.3 Method

5.3.1 Sample

For the interview study, we selected a limited but highly experienced group of 92 valuation experts across the world working for "Big Four" firms and (top-tier) independent (international) valuation boutiques. Since we strived to gather perspectives of valuation experts from all over the world, we used a digital interview format for this global survey.

The selection of valuation experts was based on criteria including 1) the (prestige of the) firm the valuator is affiliated with, 2) having a strong focus and specialization with respect to business valuation, and 3) having ample experience in the field of business valuation, i.e. being a 'leading valuator' in the specific region. The selection process of valuation experts was obtained by either own knowledge, references, or desk research.

Of the 92 selected, 25 had already participated in our study among business valuators (see Chapter 4.). Initially, 23 valuation experts participated in the digital interview study. After sending a reminder to the remaining 69 valuation experts, 7 more respondents finalized the digital interview study, leading to a total of 30 participants from around the globe (response rate: 33%). On average, the time spent to complete the digital interview was 28 minutes.[3]

3 For determining the average time spent on the digital interview, we excluded one person who spent more than 55 hours on the digital interview (probably due to a technical issue).

Figure 16. Overview of the participants' countries of origin (in dark grey).

An overview of the leading valuation experts who indicated their names may be included in a list of consulted valuation experts can be found in Appendix D1.

5.3.2 Procedure

We approached the selected valuation experts, who had been selected based on the criteria as set out in section 5.3.1, by e-mail. Due to the expected practical limitation to approach the participants more than once, primarily because of the limited time that professionals can usually dedicate to research, we chose to present our draft principles to the sample within the same digital interview, however, only after they had reflected on the main findings of the three studies presented.[4]

Prior to informing them of the main findings of each study, we explained the valuation experts about the research background of each study, for example, that it is generally known and a widely observed phenomenon that both valuations and valuators are frequently subject to discussions that often result in disputes, with the consequence of unnecessary value destruction. We also informed them that, although there is some indication that elements other than the correct application of valuation theory can play an important role in the development of wrongful discussions and disputes concerning valuations, this does not seem to receive much attention, either in theory or in practice. In fact, the influence of cognitive biases may well be a major cause of such events.

4 For practical reasons, the order in which the findings of Study 1-3 were presented to the respondents differs from the order in which Study 1-3 are presented in this dissertation.

We then informed them about the three experimental studies we conducted among legal professionals, business valuators and entrepreneurs (three major stakeholders in the valuation landscape), to show that cognitive biases play an important role when judging valuations and valuators. At the end, a brief description was given of what each bias entails (i.e., outcome bias, similarity bias, gender bias, anchoring bias, engagement bias, and the buyer-seller position). Next we outlined the main findings of each study and asked to what extent participants recognized and acknowledged the findings in their own work and in the work of their peers (i.e., Findings: Part I, see section 5.4).

Finally, we presented the valuation experts a set of seven draft principles (i.e., Findings: Part II, see section 5.5) to explore the usefulness of specific principles to mitigate the effects of different types of biases in a valuation context. We asked the valuation experts 1) to what extent they considered each draft principle to be of added value for the valuation practice, 2) if they had any ideas or suggestions to improve each of the draft principles, and 3) whether they had any thoughts about other principles that might be relevant to adopt (see section 5.5.1). Based on the valuation experts' reflections, ideas and suggestions, we finalized the proposed Statement of Principles for Valuation Practice (see section 5.6).

In summary, the process of drawing up our proposed Statement of Principles can be presented as follows:

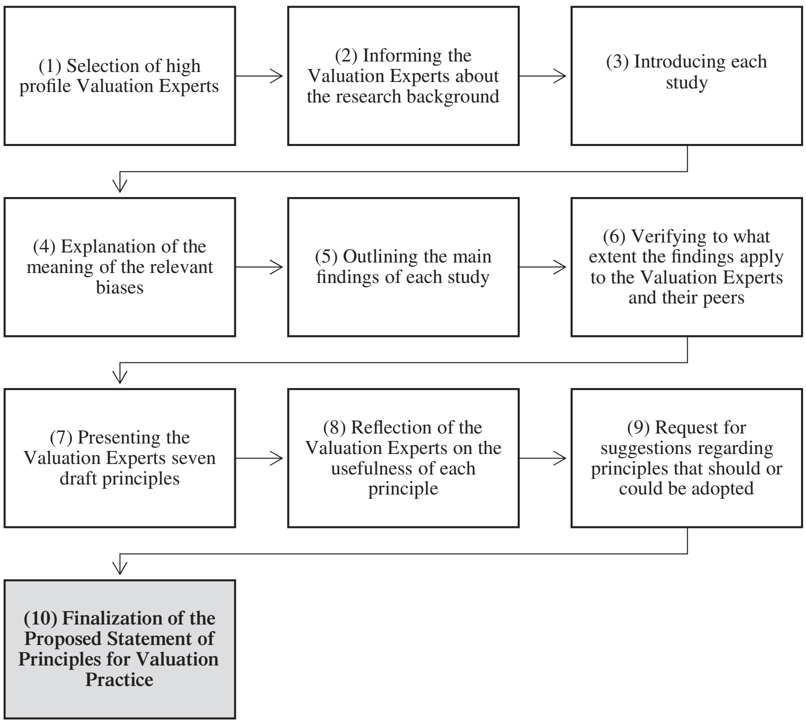


Figure 17. The process used to define the proposed Statement of Principles.

5.4 Findings: Part I. Evaluation of Research Findings

5.4.1 Study 1: Legal Professionals

The main findings of the study among legal professionals (Chapter 3.) indicates that, firstly, if a valuator is perceived by legal professionals to be more similar to themselves, they also perceive the valuator to be more trustworthy, and in turn have more trust in his/her valuation (i.e., similarity bias). Secondly, when legal professionals evaluate a valuator after they have used his/her valuation report for the sale of a company's assets, the outcome of the deal affects the legal professionals' opinion of the valuator (i.e., outcome bias). Thirdly, we found that male legal professionals have more trust in the ability of a valuator if the valuator is male, while female legal professionals do not show this gender bias in their perception of a valuator's ability (i.e., gender bias).

The occurrence of these biases among legal professionals when judging valuations and/or valuators is potentially harmful for valuators. After all, valuators and their work run the risk of being assessed by factors beyond their control. Moreover, this may lead to conflicts, disputes and litigations.

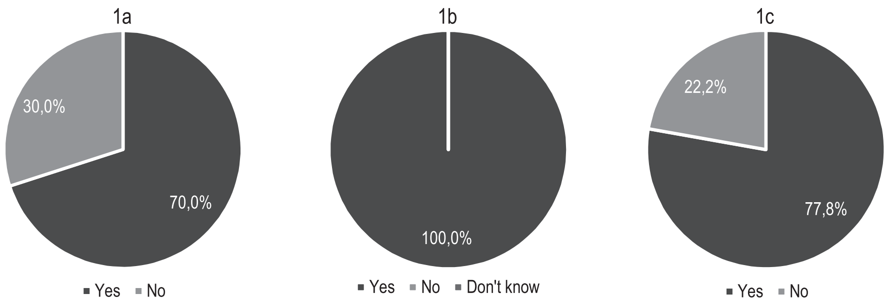
We aimed to explore the extent to which the findings of this study are recognized and acknowledged by the valuation experts. We asked them per type of bias to what extent they experienced each bias in their own work and in the work of their peers.

Study 1: Similarity bias (H_1)

Table 11. Q&A Similarity bias.

<table>
<tr><td colspan="5">Finding: If a valuator is perceived by legal professionals as more similar to themselves, they also perceive the valuator as more trustworthy, and in turn have more trust in his/her valuation. Moreover, in the case of higher perceived similarity, legal professionals are also more positive about the valuator's role in the deal, as they are more likely to rehire the valuator in the future, believe more strongly that the valuator deserves praise (or less blame in case of a bad deal), and they believe more strongly that the valuator did her/his best in valuing (the assets of) the company.</td></tr>
<tr><td colspan="5">Question (1a): Did you ever feel that you were judged differently (either more positively or negatively) based on the degree of similarity (in the broadest sense) between you and a legal professional?</td></tr>
<tr><td colspan="3">Yes = 70.0%</td><td colspan="2">No = 30.0%</td></tr>
<tr><td colspan="3">Question (1b): In addition to having experienced the effects of similarity bias yourself, do you believe that your peers (i.e., corporate finance experts, business valuators) have also experienced that similarity bias can influence legal professionals' judgments of valuations or valuators?</td><td colspan="2">Question (1c): Despite not having experienced the effects of similarity bias yourself, do you believe that similarity bias can in fact influence legal professionals' judgments of valuations or valuators?</td></tr>
<tr><td>Yes = 100%</td><td>No = 0%</td><td>Do not know = 0%</td><td>Yes = 77.8%</td><td>No = 22.2%</td></tr>
</table>

Table 11 findings presented graphically:



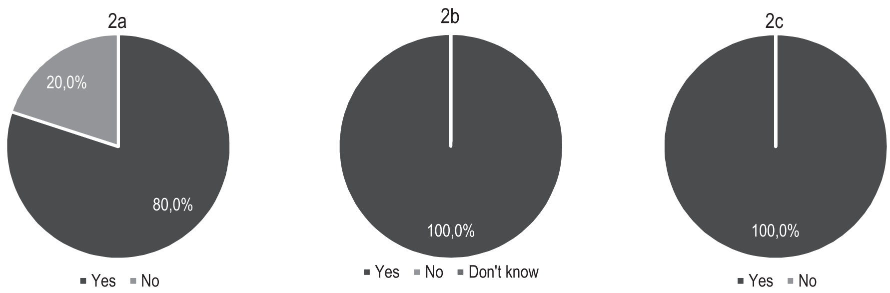
As Table 11 shows, the vast majority of valuation experts indicated having experienced the effects of similarity bias. Of this group, all believed that their peers also would experience the effects of similarity bias when being evaluated by legal professionals. Of those who did not experience the effects of similarity bias themselves, the majority believed that similarity bias can in fact influence legal professionals' judgments of valuations or valuators.

Study 1: Outcome bias (H_2)

Table 12. Q&A Outcome bias.

<table>
<tr><td colspan="5">Finding: If legal professionals evaluate a valuator after they have used her/his valuation report for the sale of a company's assets, the outcome of the deal affects the legal professionals' opinion of the valuator. In case of a good deal, the valuator is perceived in a more positive light whereas the same valuator is perceived more negatively after a bad deal. This effect is independent of the reputation of the valuator's firm.</td></tr>
<tr><td colspan="5">Question (2a): Did you ever feel that the outcome of a certain negotiation or transaction in which your valuation was used affected the way you were perceived (either more positively or negatively)?</td></tr>
<tr><td colspan="3">Yes = 80.0%</td><td colspan="2">No = 20.0%</td></tr>
<tr><td colspan="3">Question (2b): In addition to having experienced the effects of outcome bias among your clients yourself, do you believe that your peers (i.e., corporate finance experts, business valuators) have also experienced that outcome bias can influence their clients' perceptions?</td><td colspan="2">Question (2c): Despite not having experienced the effects of outcome bias yourself, do you believe that outcome bias can in fact influence legal professionals' judgments of valuations or valuators?</td></tr>
<tr><td>Yes = 100%</td><td>No = 0%</td><td>Do not know = 0%</td><td>Yes = 100%</td><td>No = 0%</td></tr>
</table>

Table 12 findings presented graphically:



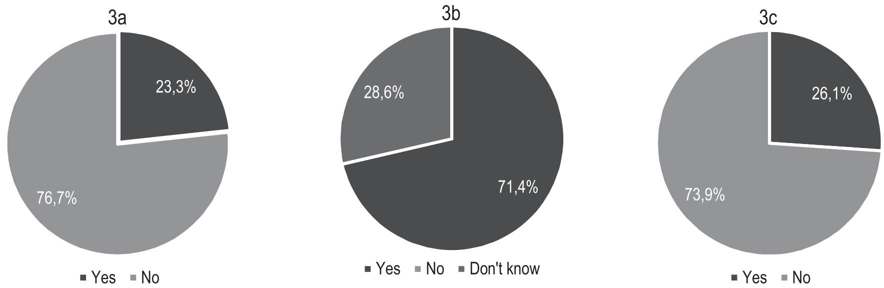
As Table 12 shows, the vast majority of valuation experts indicated having experienced the effects of outcome bias when their valuation was used in a negotiation/transaction. Of this group, all believed that their peers would also experience the effects of outcome bias so that their clients' (i.e., legal professionals) perceptions regarding their work and themselves were affected by the outcome of the negotiation/transaction. Of those who did not experience the effects of outcome bias themselves, all believed that outcome bias can influence legal professionals' perceptions of valuations and valuators.

Study 1: Gender bias (H_3)

Table 13. Q&A Gender bias.

<table>
<tr><td colspan="5">Finding: Male legal professionals have more trust in the ability of a valuator when the valuator is a male as well. This heightened trust in the valuator's ability also predicts trust in the valuation. Female legal professionals do not show such gender bias in their perception of the ability of the valuator.</td></tr>
<tr><td colspan="5">Question (3a): Did you ever feel that you or your work was judged differently (either more positively or negatively) as a result of your gender?</td></tr>
<tr><td colspan="3">Yes = 23.3%</td><td colspan="2">No = 76.7%</td></tr>
<tr><td colspan="3">Question (3b): In addition to having experienced the effects of gender bias yourself, do you believe that your peers (i.e., corporate finance experts, business valuators) have also experienced that gender bias can influence legal professionals' judgments of valuations or valuators?</td><td colspan="2">Question (3c): Despite not having experienced the effects of gender bias yourself, do you believe that gender bias can in fact influence legal professionals' judgments of valuations or valuators?</td></tr>
<tr><td>Yes = 71.4%</td><td>No = 0%</td><td>Don't know = 28.6%</td><td>Yes = 26.1%</td><td>No = 73.9%</td></tr>
</table>

Table 13 findings presented graphically:



As Table 13 shows, a minority of valuation experts indicated having experienced their work being evaluated differently based on gender. Of this group, the majority believed that their peers would also experience the effects of gender bias so that their clients' (i.e., legal professionals) perceptions regarding their work and themselves would be affected by their gender. Of those who did not experience the effects of outcome bias themselves, the majority also believed that gender bias does not affect legal professionals' perceptions of valuations or valuators. Whereas the valuation experts generally did recognize the effects of similarity and outcome bias, they were somewhat skeptical regarding the existence of gender bias (contrary to our research results). It is important to note, however, that the vast majority of the sample was male (i.e., only two females participated), as this may have affected the results.

5.4.2 Study 2: Valuators

In our study among valuators (Chapter 4.), we found that when valuators are confronted with a valuation report and are asked to indicate in what range they believe the true value of the company lies, they use the initial value (i.e., in this case a valuation report conducted by another valuator) as an anchor and indicate a higher range in case of a high anchor, and a lower range in case of a low anchor (i.e., anchoring bias). Moreover, we found that valuators appear to be affected by their clients' interests, so that when they represent a buyer and therefore have an incentive to lower the value of the shares, they also indicate that the valuation should be adjusted downwards more heavily and indicate a lower value range for the 'true' value of the company. The opposite is the case when they represented the seller (i.e., engagement bias).

The existence of these biases is potentially harmful for valuators, the valuation profession and valuators' clients. Indeed, valuators are affected by anchors in such a way that they incorporate irrelevant information into their work, or valuators are guided by the position of their client. In both cases, clients get biased valuation advice making it difficult to determine whether this advice is based on correct assumptions. Moreover, this may lead to conflicts, disputes and litigations.

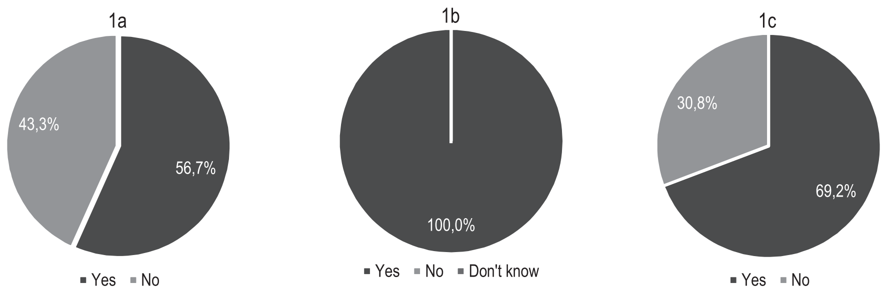
We set out to explore the extent to which the findings of this study are recognized and acknowledged by the valuation experts. We asked them, per type of bias, to what extent they experienced each bias in their own work and in the work of their peers.

Study 2: Anchoring bias (H_1)

Table 14. Q&A Anchoring bias.

<table>
<tr><td colspan="5">Finding: When valuators are confronted with a valuation report and are asked to indicate in what range they believe the true value of the company lays, they use the initial value (i.e., in this case a valuation report conducted by another valuator) as an anchor and indicate a higher range in case of a high anchor, and a lower range in case of a low anchor. Specifically, their perceptions regarding the value of a particular company are affected by the anchor, such that relatively high anchors result in higher valuations compared to when a relatively low anchor is presented.</td></tr>
<tr><td colspan="5">Question (1a): Did you ever feel that in conducting a valuation or in evaluating others' valuations, you might have been affected by an anchor expressed in a numerical value, such as in the examples mentioned above?</td></tr>
<tr><td colspan="3">Yes = 56.7%</td><td colspan="2">No = 43.3%</td></tr>
<tr><td colspan="3">Question (1b): In addition to having experienced the effects of anchoring bias yourself, do you believe that your peers (i.e., corporate finance experts, business valuators) have also experienced that anchoring bias can influence their judgments?</td><td colspan="2">Question (1c): Despite not having experienced the effects of anchoring bias yourself, do you believe that anchoring bias can in fact influence valuators' judgments?</td></tr>
<tr><td>Yes = 100%</td><td>No = 0%</td><td>Do not know = 0%</td><td>Yes = 69.2%</td><td>No = 30.8%</td></tr>
</table>

Table 14 findings presented graphically:



As Table 14 shows, a slight majority of the valuation experts indicated having experienced the effects of anchoring bias when conducting valuations. Of this group, all believed that their peers would also experience the effects of anchoring bias. Of those who did not experience the effects of anchoring bias themselves, the majority believed that their fellow valuators could be influenced by anchoring bias when conducting valuations.

Study 2: Engagement bias (H_2)

Table 15. Q&A Engagement bias.

<table>
<tr><td colspan="5">Finding: Valuators appear to be affected by their clients’ interests, such that when they represent a buyer and therefore have an incentive to lower the value of the shares, they also indicate that the valuation should be adjusted downwards more heavily and also indicate a lower value range for the true value of the company. The opposite is the case when they represented the seller.</td></tr>
<tr><td colspan="5">Question (2a): Did you ever feel that in conducting a valuation or in evaluating others’ valuations, you might have been affected by your clients’ interests?</td></tr>
<tr><td colspan="3">Yes = 66.7%</td><td colspan="2">No = 33.3%</td></tr>
<tr><td colspan="3">Question (2b): In addition to having experienced the effects of engagement bias yourself, do you believe that your peers (i.e., corporate finance experts, business valuators) have also experienced that engagement bias can influence their judgments?</td><td colspan="2">Question (2c): Despite not having experienced the effects of engagement bias yourself, do you believe that engagement bias can in fact influence valuators’ work?</td></tr>
<tr><td>Yes = 100%</td><td>No = 0%</td><td>Do not know = 0%</td><td>Yes = 90.0%</td><td>No = 10.0%</td></tr>
</table>

Table 15 findings presented graphically:

As Table 15 shows, the majority of the valuation experts indicated to having experienced the effects of engagement bias in such a way that their valuations were affected by their clients’ interests. Of this group, all believed that engagement bias would also affect the work of their peers. Of those who did not experience the effects of engagement bias, the vast majority believed that their fellow valuators could be influenced by their clients’ interests when conducting valuations.

5.4.3 Study 3: Entrepreneurs

In our study among entrepreneurs (Chapter 2.) we found that when entrepreneurs are confronted with an independent valuation report and are asked to indicate in what range they believe the true value of the company lies, they use the initial value (i.e., in this case a valuation report conducted by an independent valuator) as an anchor and indicate a higher range in case of a high anchor, and a lower range in case of a low anchor (i.e., anchoring bias). Moreover, we found that entrepreneurs appear to be affected by their position in a transaction in such a way that when they are the buyer, they indicate that the valuation should be adjusted downwards more heavily, and that they also indicate a lower value range for the true value of the company. The opposite is the case when they are the seller (i.e., buyer-seller position).

The presence of these biases is potentially harmful for entrepreneurs who often make important (investment) decisions based on valuations. Moreover, this may lead to conflict, disputes and litigation.

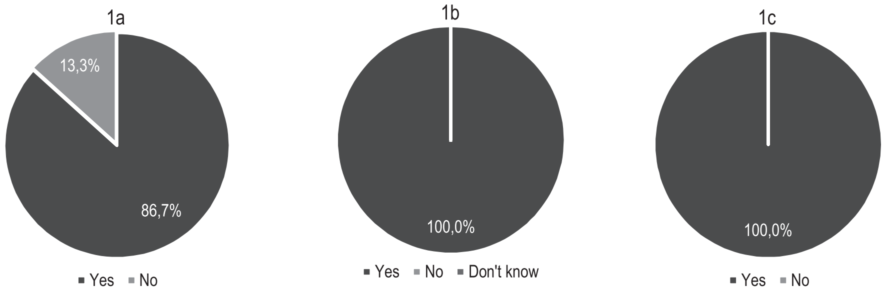
We explored the extent to which the findings of this study were recognized and acknowledged by the valuation experts. We asked them, per type of bias, to what extent they experienced each bias in their own work and in the work of their peers.

Study 3: Anchoring bias (H_1)

Table 16. Q&A Anchoring bias.

<table>
<tr><td colspan="5">Finding: When entrepreneurs are confronted with an independent valuation report and are asked to indicate in what range they believe the true value of the company lays, they use the initial value (i.e., in this case a valuation report conducted by an independent valuator) as an anchor and indicate a higher range in case of a high anchor, and a lower range in case of a low anchor. Specifically, their perceptions regarding the value of their company are affected by the anchor, such that relatively high anchors result in a higher perceived value compared to when a relatively low anchor is presented.</td></tr>
<tr><td colspan="5">Question (1a): Did you ever feel that in an engagement, your client might have been affected by an anchor expressed in a numerical value, such as in the examples mentioned above?</td></tr>
<tr><td colspan="3">Yes = 86.7%</td><td colspan="2">No = 13.3%</td></tr>
<tr><td colspan="3">Question (1b): In addition to having experienced the effects of anchoring bias among your clients yourself, do you believe that your peers (i.e., corporate finance experts, business valuators) have also experienced that that anchoring bias can influence their clients' perceptions?</td><td colspan="2">Question (1c): Despite not having experienced the effects of anchoring bias among your clients yourself, do you believe that anchoring bias can in fact influence clients' perceptions?</td></tr>
<tr><td>Yes = 100%</td><td>No = 0%</td><td>Do not know = 0%</td><td>Yes = 100%</td><td>No = 0%</td></tr>
</table>

Table 16 findings presented graphically:



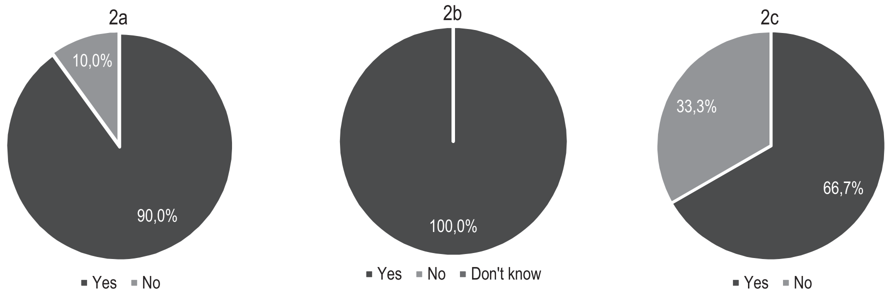
As Table 16 shows, the vast majority of the valuation experts indicated having experienced the effects of anchoring bias among their clients (i.e., entrepreneurs). Of this group, all believed that anchoring bias could also affect their peers' clients. Of those who did not experience the effects of anchoring bias among their clients, all believed that the clients of their fellow valuators could be influenced by anchoring bias.

Study 3: Buyer-Seller position (H_2)

Table 17. Q&A Buyer-Seller position.

<table>
<tr><td colspan="5">Finding: Entrepreneurs appear to be affected by their position in a transaction, such that when they are the buyer, they indicate that the valuation should be adjusted downwards more heavily and also indicate a lower value range for the true value of the company. The opposite is the case when they are the seller.</td></tr>
<tr><td colspan="5">Question (2a): Did you ever feel that in an engagement, your client might have been affected by the position (buyer or seller) he/she had in a transaction when judging the value of the company?</td></tr>
<tr><td colspan="3">Yes = 90.0%</td><td colspan="2">No = 10.0%</td></tr>
<tr><td colspan="3">Question (2b): In addition to having experienced the influence of position effects among your clients yourself, do you believe that your peers (i.e., corporate finance experts, business valuators) have also experienced that position effects can influence clients' perceptions regarding a company's value?</td><td colspan="2">Question (2c): Despite not having experienced any position effects among your clients yourself, do you believe that position effects can in fact influence clients' perceptions regarding the company's value?</td></tr>
<tr><td>Yes = 100%</td><td>No = 0%</td><td>Do not know = 0%</td><td>Yes = 66.7%</td><td>No = 33.3%</td></tr>
</table>

Table 17 findings presented graphically:



As Table 17 shows, the vast majority of the valuation experts indicated having experienced that their clients' perceptions of their companies' value were affected by the position they had in a transaction (i.e., being a buyer or a seller). Of this group, all believed that this position could also affect the peers' clients. Of the small group who did not believe their clients' perceptions were affected by position effects, the majority believed that clients' perceptions generally could be affected by these position effects.

5.4.4 Discussion Findings Part I

The main purpose of this part of the digital interview was to discover to what extent valuation experts recognized and acknowledged our observations in their own work and in the work of their peers. Additionally, their substantive reflection also served as a 'sanity check' for our findings and to protect ourselves against possible personal biases (e.g., confirmation bias). The consultation showed that the vast majority of experts recognize the influence biases can have on their work or on that of their peers, thus supporting the findings of the three studies.

Interestingly, of the participants who did not recognize the biases in themselves, the vast majority believed these biases could in fact influence others. This phenomenon is called 'bias blind spot', meaning that people believe others are affected by biases to a larger extent than they themselves are (Pronin et al., 2002).

5.5 Findings: Part II. Evaluation of Draft Principles

Following the outline of the three studies and our request for valuation experts to reflect on the findings, we presented seven draft principles for the international valuation practice to mitigate cognitive biases. We emphasized that the aim of defining a Statement of Principles is not to serve as a valuation standard, nor that it should include any requirements on how business valuations are to be conducted. The proposed Statement of Principles is solely intended as a prelude to a framework to facilitate business valuators around the world to (1) (better) assess whether and to what extent biases might affect a specific valuation situation in which they are involved, (2) to raise awareness for biases in valuation practice, and (3) to serve as a practical guidance to mitigate biases. In addition, the proposed Statement of Principles is intended to be applicable in all jurisdictions, preferably but not necessarily adopted by national professional associations.

Some of the principles may seem counterintuitive, revolutionary or provocational and/or (too) far from mainstream thinking and practice. However, we expect that the high profile valuation experts around the world, considering their professional background and position, should be able to consider each principle professionally as well as be able to judge the principles on a more abstract level. The valuation experts' commentaries on the principles are intended to help with the further development, interpretation, clarification, and application in practice. Based on their commentaries, in some cases we adjusted the initial draft principles (section 5.6).

5.5.1 Draft Principles and Experts' Commentaries

Participants were asked to indicate on a scale from 0-100% to what extent they considered each principle to be of added value to the valuation practice. Additionally, participants were asked whether they had any suggestions or ideas to improve the respective principle. Finally, after the seven principles were presented, participants were asked whether they had any suggestions regarding additional principles that should or could be adopted to minimize the effects of cognitive biases in the valuation domain.

The draft principles are first presented in textboxes, then reflections of some participants are presented[5], and finally we present our overall conclusion regarding the specific principle.

Principle 1: Valuation Biases Awareness Training

Part of a business valuators' education should be a mandatory biases training creating awareness around biases and de-biasing strategies. Such training allows business valuators to experience the (negative) effects of their own biases and how biases are formed by others. Participation in such a "valuation biases awareness training" should contribute to disturb unconscious decision-making processes in the context of business valuation.

The results for this principle are:

Figure 18. Results Principle 1.

5 The participants' comments were somewhat limited in terms of volume.

In all the figures in this section, the vertical line represents the average (*M*) score on the scale from 0-100% and the shaded area represents the scores within 1 standard deviation (*SD*) below (left of the line) and 1 standard deviation above (right of the line) the average score.

Figure 18 shows that participants generally leaned towards considering this principle to be of added value, as can be derived from the average score of 67.7%. However, the somewhat large standard deviation of 24.2% suggests there was quite some variation in the answers.

Some participants commented very positively on this principle, thus acknowledging that bias awareness training programs can be of added value for practice, as derived from the following illustrative quotes:

- *"An "unconscious" biases awareness training would be beneficial."*
- *"In the audit practice, such awareness training is already common and will provide a basis for valuators. Specific adjustments will be needed however because a valuation is more about different interests than an annual report."*

However, the following critical note was also made:

- *"What is needed is not mandatory training on biases … What are needed is enforcement mechanisms when a valuation professional deliberatly* [sic] *skews a valuation."*

Conclusion Principle 1

We conclude that this principle is generally considered to be of added value We also feel, based on the results and on our own observations, there is 'momentum' given the fact that bias awareness training programs are becoming increasingly commonplace in the corporate world. For example, the audit profession (see above) and CFA-education (i.e., Certified Financial Analyst education), as well as in the leadership domain (e.g., in strategic decision-making) these awareness training programs are becoming more popular and recognized as an effective means to reduce biases. Hence, we believe this principle could support valuation professionals to mitigate the effects of cognitive biases.

Principle 2: Debiasing Information Processing Protocol

Biases are the result of being exposed to irrelevant information. Therefore, the risk of bias is reduced when such information is withheld from the business valuator. To protect the executive business valuator from being exposed to potentially biasing information, a second person (when the nature of a business valuator's firm allows the involvement of a second person) conducts the intake with the client whereas the executive business valuator receives only information through this second person relevant to the execution of the valuation work.

The results for this principle are:

Figure 19. Results Principle 2.

Figure 19 shows that participants were somewhat critical regarding this principle, as derived from the average score of 38.9%. However, the fairly large standard deviation of 30.9% suggests there was quite some variation in the answers, ranging from highly critical to very supportive.

Eleven participants commented negatively, generally considering a debiasing information processing protocol as proposed, to be of limited added value. Interestingly, this is mostly because they suspect bias could also occur due to the selection of information to be passed on. The following quotes highlight this concern:

- *"This process will add to bias as the question becomes who determines what is relevant!"*
- *"The use of an intermediary does not solve the underlying problem because he/she will be affected by the biased information. And so will the executive valuator, although maybe to a somewhat lesser extent. In my view it is simply a required skill of the valuator to be aware of this phenomenon and work around / with it."*

In contrast, the following supporting note was made:

- *"This is a great idea, but I wonder how much time it could take to eliminate the executive valuator receiving only relevant information, given inconsistencies in how client firms store and share information."*

Conclusion Principle 2

The respondents generally seem to be somewhat skeptical regarding this principle. They worry that the lead valuator who decides which information is irrelevant versus relevant might add bias. Hence, for this principle to be of added value, it would be worthwhile further specifying what can be considered as relevant and irrelevant information. Even though discussions may take place on the relevance of specific information, some information is evidently irrelevant for conducting a valuation. For example, a client's gender, the similarity between the valuator and the client, and the client's value perception should not affect a valuation. Therefore, we believe it can be beneficial for an executive valuator when a lead valuator (who collects information and conducts client interviews) filters this irrelevant information. Hence, despite the concerns raised by the respondents, we believe this principle could support valuation professionals to mitigate the effects of cognitive biases and is therefore worth exploring further.

Principle 3: Avoiding Knowledge of the Client's Value Perception

When a business valuator is requested to value a business or a business interest, (s)he should avoid having any knowledge about the client's value perception, either through the ultimate client or the client's representative, towards the valuation object.

The results for this principle are:

Figure 20. Results Principle 3.

Participants were ambivalent about this principle, with an average score around the midpoint (48.3%). Additionally, the standard deviation of 30% suggests there was quite some variation in the answers, ranging from highly critical to very supportive.

Eight participants commented on this principle. They were generally quite nuanced in their comments, acknowledging both the limitations and the potential upsides of this principle. The following quotes are illustrative:

- *"Although not knowing the client's value perception might make the valuation more objective, it might be harmful for the "impact" of the valuation work in certain settings (i.e. the ability to convince a client to actually follow the outcomes of the valuation work). Of course, the mentioned constraint is only applicable in settings where a client has an option to deviate from the outcomes."*
- *"Clients are free to disclose their target values. Valuators should simply acknowledge the risk of such anchor."*
- *"It is close to impossible to avoid the client's value perception, more often than not this is why valuators are hired in the first place. The only remedy is to confront the client with market-based data indicating counter evidence for his/her value perception. Or to explain based on these data what the underlying assumptions of the client's value perception actually are (e.g. growth, profitability, market share, peer group multiples, etc.)."*

Conclusion Principle 3

The participants' concerns mainly seem to focus on the practical feasibility of this principle, as clients' value perceptions are often voiced at an early stage and are sometimes even the starting point of an engagement. However, participants acknowledged the risk of bias due to a client's value perception and suggested that clients should substantiate their value perception. Although we agree that insights with respect to the company's value drivers are important discussion points with the client, the quantification of the client's value perception is irrelevant and should therefore be withheld from the valuator. Hence, it remains important for a valuator to limit exposure to a client's quantified value perception. With that, we still believe this principle could help valuation professionals mitigate the effects of cognitive biases, and is therefore worth exploring further.

Principle 4: Signaling Subjectivity and Performing a Debiasing Exercise

When a business valuator is engaged through a direct client or another professional such as a lawyer or an auditor to support their client's interests, (s)he should be aware of any subjective party-information received that might influence his/her perceptions on the case. During the intake the business valuator checks which elements according to him/her might affect the perception on the valuation case (through a practical "valuation biases checklist" including topics such as 'Who is your client?', 'Is your fee in line with market conditions?', 'Did your client express any numerical expectation?', 'Is this the first time you work for this client?', etc.). When finalizing the valuation work, the valuator compares his/her work with the initial listed elements, amends if necessary ("valuation de-biasing exercise") and attaches the checklist to his/her valuation file.

The results for this principle are:

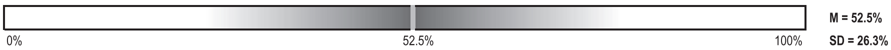


Figure 21. Results Principle 4.

The participants were ambivalent towards this principle, as can be derived from the average score around the midpoint (52.5%). Additionally, the standard deviation of 26.3% suggests there was quite some variation in the answers. Participants were, for instance, concerned with the principle's practical applicability. For example:

- *"Usually we do not have time for this."*

Others noted that the value of this principle depends on the context of the valuation, as demonstrated by the following quotes:

- *"This may be helpfull* [sic] *for certain types of engagement where a valuator needs to be truly independent."*
- *"It might be beneficial to the business valuators who are not members of any VPOs* [Valuation Professional Organizations] *but not to the VPO members."*
- *"As a form of self-help the checklist could be effective, like having another look in the mirror. I doubt whether the valuator will actually be able to go back to the drawing table after completion of the exercise because he/she is already too much involved. As a more internal means of evaluation and case filing it may be a nice instrument."*

Conclusion Principle 4

In general, participants seemed concerned about the required time investment and the valuator's ability to amend a valuation once it has been conducted. Therefore, for a bias-checklist to be effective, it should in our opinion be applied a-priori (i.e., prior to conducting a valuation) and should require little time. Additionally, the precise content of such checklist is open to further discussion. Topics such as "Is your client a highly reputable organization?" (as this might increase engagement bias), "Is your reward based on a success-fee?" (as this might increase engagement bias), "Did your client express any numerical expectation?" (as this might cause anchoring bias) might be included in such a checklist. Hence, if conducted a-priori and in a time-efficient manner, a bias-checklist could prove to be a valuable instrument to mitigate the effects of biases in valuations. This principle also seems worth exploring further.

Principle 5: Criteria setting on quality of valuation to align mutual expectations

When a business valuator is requested to value a business or a business interest, (s)he requests beforehand the criteria on which the client will assess whether the valuation work performed by the business valuator has been carried out properly or poorly. In case of doubt regarding mutual expectations the business valuator takes the initiative to discuss this matter. In any case, the topic of "potential valuation biases" should be discussed with the client.

The results for this principle are:

Figure 22. Results Principle 5.

Participants were slightly unsupportive of this principle, as can be derived from the average score just below the midpoint (44.5%). However, the standard deviation of 30% suggests there was quite some variation in the answers. Participants were mainly concerned whether clients in general are in fact able to judge a valuation, considering they do not have the same expertise as a professional business valuator.

Some quotes regarding this principle highlight this concern:

- *"Clients are not always familiar with the business valuation and are not interested in such discussion with the business valuators."*
- *"This question is not easy to answer because some clients do not have the competencies to judge the valuator's work. On the other hand, the valuator should apply a certain minimum amount of quality of his/her work, but in practice we see a lot of weakly supported valuation reports. I think a comprehensive and meticulous engagement letter provides the basis for criteria setting and quality standards."*
- *"If the client does not have valuation expertise, how will the client be able to assess if the valuation work has been carried out?"*

Conclusion Principle 5

Participants' concerns are predominantly concentrated around the client's lack of 'technical' knowledge regarding valuations. As a result, they might not be able to discuss valuation quality criteria. We agree that a discussion with clients regarding the quality of a valuation should not focus on valuation technicalities; it would be more constructive to discuss the fundamentals of the valuation. For example, it might prove valuable to discuss the criteria used to evaluate the valuation, other than the valuation outcome. This principle would thus serve to prevent valuators and valuations from being judged solely on the outcome of the transaction for which the valuation was used. This might particularly help avoid valuators and valuations being unjustly negatively judged when clients' objectives are not achieved, often the origin of many disputes and litigation. Despite its somewhat critical reception, we still consider a discussion with the client regarding the client's criteria at the start of an engagement to be of added value for preventing unjust post-hoc evaluations (i.e., outcome bias). Yet this principle also needs further exploration before being adopted in practice.

Principle 6: Four-Eyes Principle

Business valuators should through confidential conversation discuss their valuation assumptions and valuation outcomes with at least one colleague ("Four-Eyes Principle") or – preferably – with several peers before releasing the final valuation report. The topic of "potential valuation biases" should explicitly be discussed among the peers engaged and be documented.

The results for this principle are:

Figure 23. Results Principle 6.

Participants were very supportive regarding this principle, as can be derived from the average score of over 80%. Additionally, the standard deviation of 25.3% shows there was less variation in the answers than with the previous principles. Some of the supportive views include:

- *"This is a principle that is quite essential and that I have applied throughout my entire valuation career (I guess I am (therefore) biased as to this question ;-))."*
- *"Consult even more than you think you need to. And then do it again."*

However, there was some disagreement regarding the execution of this principle. Some believe a second look should come from someone from outside his/her own firm, whereas others believed this should be someone from inside the firm. The following quotes illustrate these opposing views:

- *"… it would be better if the reviewer were not from the same firm."*
- *"Four Eyes principle is good, but should be limited to colleagues only."*

Conclusion Principle 6

Considering the wide support for this principle, we strongly believe this principle should be adopted in a Statement of Principles. Having another valuator review the valuator's work might help expose the potential impact of biases in the initial valuation, which then allows for a correction to be implemented. Who would be most suitable to conduct such a peer review remains open to debate.

Principle 7: Mirroring to assess the counterpart's perspective

Business valuators should always consider an alternative valuation scenario – next to their initial conducted valuation outcome – from the perspective, position and potential criticism of their client's counterpart. Following this exercise, the initial valuation outcome should be reconsidered and amended if necessary.

The results for this principle are:

Figure 24. Results Principle 7.

Participants were relatively in favor of this principle, as can be derived from the average score of 63.1%. Some expressed their strong support toward adopting the counterpart's perspective:

- *"Apply this principle 24/7."*
- *"I think that a valuator should always face risks properly and, saying so, I mean that he should always consider better and worse scenarios to have a better range of results to analyse [sic]."*

Others expressed a more nuanced view. To illustrate:

- *"This question contains two sub-questions that can (and, in my case, have to) be answered differently. First part: consider alternative views – YES Second part: reconsidered and amended – NOT NECESSARILY (in situations where the valuator is working on behalf of one party)."*

Conclusion Principle 7

Given the support for this principle, we believe it should be adopted in the Statement of Principles. However, some participants seemed to have interpreted this principle in such a way that a valuation should always be adjusted following the exercise; this is not the purpose. Rather, the principle merely aims to serve as a 'sanity check' of the assumptions used in a valuation. It is possible that, after adopting the perspective of the counterparty, a valuator would concludes that (s)he had been too steadfast in his/her assumptions. However, it is also possible that a valuator could conclude that the assumptions were sound.

Additional Principles

At the end of the digital interview, we asked the valuation experts if they had any suggestions regarding additional principles that should or could be adopted to minimize the effects of cognitive biases in the valuation domain in addition to the seven principles presented. The main reason for this question was, on the one hand, to use their experience and expertise to enrich the draft principles and, on the other hand, to avoid our own 'tunnel vision bias', i.e. we wanted to provide room for new insights and ideas regarding novel principles that might be as or more relevant or niftier than those we proposed and tested. We evaluated the additional ideas when drafting our final Statement of Principles.

Interestingly, one of the participants suggested that to avoid outcome bias, valuators should use a 'factual memorandum'; a valuation report without outcomes in order to agree on methodology and assumptions. Risks regarding any information not provided by the customer should then be secured by means of a so-called 'representation letter'.

Another participant proposed the introduction of an 'integrity principle' by means of a full file review by colleagues and the proper construction of a case file including all documentation. Interestingly, in line with the current debate in the audit profession, one participant also suggested a more far-reaching measure, namely 'third party contracting' to ensure valuators cannot be influenced by the original client who ultimately pays the fees. A signal to exercise caution around such principles came from another participant who warned that, despite the existence of potential bias, this should not result in the valuator being totally isolated from the original client.

5.5.2 Discussion Findings Part II

The aim of the digital interview study was, firstly, to explore whether the introduction of principles to mitigate the effects of biases might be a feasible approach in the opinion of business valuators. We investigated this by positing several statements that we felt were relevant on the basis of practical experience. On second, our aim was to have the draft principles evaluated by the valuation experts regarding their added value, and then to improve them based on their suggestions. Ultimately, by means of the use of principles, we aim to generate structural awareness and understanding of the potential effects of biases among business valuators, and to offer best practices on how to anticipate on the potential effects to reduce unconscious biased judgments.

Despite a number of critical remarks, respondents were generally fairly positive about the proposed principles. The research project suggests that valuators have no fundamental objections to principles per se, yet the feasibility, scope and practical usability are, in some cases, open to debate.

More generally, it needs to be discussed whether the valuation profession, i.e. the local professional bodies, should proactively embrace the development of principles or wait until society requires it. We advise the profession to seriously consider doing this.

Currently, the way in which standards are implemented within professions depends, among others, on their social impact. For example, following international scandals involving the audit and banking profession, the public debate on their role in society led to stricter regulations being enforced by regulators rather than self-imposed by professional bodies. Freedom regarding the interpretation, practical application and regulation of themes like quality standards and professional behavior is no longer as obvious as it used to be. The lesson for auditors and bankers is that they should have taken control much earlier by being stricter on regulating their own profession. Now they are no longer in the driver's seat, as society (read: governments) have taken control by implementing stricter rules and guidelines.

Self-imposed regulation and the implementation of directive principles and/or rules obviously leads to objections. In principle, this can be perceived as a restriction on the professional field's autonomy, limiting their playing field. It is tempting to maintain the status quo, as long as nobody objects.

We should not forget however that although the profession is not yet legally embedded in most countries, major business decisions are taken based on valuation results and valuations therefore impact society as a whole. Furthermore, as per the starting point of this dissertation, many disputes and litigation result from (presumed) poor valuations. This observation also argues in favor of self-chosen, proactive measures that harmonize the execution of the profession. The introduction of our proposed Statement of Principles for Valuation Practice can contribute to this.

5.6 Proposed Statement of Principles for Valuation Practice

Based on the feedback from the respondents and our critical review of the principles, we implemented a number of changes, resulting in the following proposed Statement of Principles that serves as a prelude to the development of additional principles.

A Statement of Principles for Valuation Practice to Mitigate Cognitive Biases

Principle 1: Valuation Biases Awareness Training
Part of a business valuators' education should be a mandatory biases training program creating awareness of biases and de-biasing strategies. This training program would allow business valuators to experience the (negative) effects of their own biases and how biases are formed by others. Participation in a "valuation biases awareness training program" will contribute to awareness about the unconscious decision-making processes in the context of business valuation.

Principle 2: Debiasing Information Processing Protocol
Biases can result from being exposed to irrelevant information. Therefore, the risk of bias is reduced if this information is withheld from a business valuator. To protect the executive business valuator from being exposed to potentially biasing information, a second person (i.e., the lead valuator) should conduct the intake with the client and filter the irrelevant information for the executive business valuator.

Principle 3: Avoiding Knowledge of the Client's Value Perception
If a business valuator is requested to value a business or a business interest, (s)he should avoid having any knowledge of the client's value perception towards the valuation object, either through the client him/herself or through the client's representative.

Principle 4: Signaling Subjectivity and Performing a Debiasing Exercise
If a business valuator is engaged through a client or another professional such as a lawyer or an auditor to support their client's interests, (s)he should be aware of any subjective party-information that might influence his/her perceptions regarding the valuation object. At the initial stages of the engagement, the business valuator should check which elements might affect the perception on the valuation case through a practical "valuation biases checklist". When finalizing the valuation work, the valuator should compare his/her work with the initial listed elements, and amends the valuation assumptions if deemed necessary.

Principle 5: Criteria setting on quality of valuation to align mutual expectations
If a business valuator is requested to conduct a valuation, the valuator should discuss the (non-technical) valuation criteria on which the client evaluates the valuation before conducting the valuation. In case of doubt regarding mutual expectations, the business valuator should take the initiative to discuss this. The topic of "potential valuation biases" must be discussed with the client in all situations.

Principle 6: Four-Eyes Principle
Business valuators should, in confidential conversations, discuss their valuation assumptions and valuation outcomes with at least one or preferably several colleagues/peers ("Four-Eyes Principle") before releasing the final valuation report. The topic of "potential valuation biases" should explicitly be discussed among the peers, and be documented.

Principle 7: Mirroring to assess the counterpart's perspective
Business valuators should always consider an alternative valuation scenario – in addition to their initially conducted valuation outcome – from the perspective, position and potential criticism of their client's counterpart. Following this exercise, the initial valuation outcome should be reconsidered and amended if necessary.

5.7 Limitations

We have developed a Statement of Principles based on commentaries from the consulted valuation experts. Ultimately, this proposed statement is neither exhaustive nor 'final'. It is meant to serve as a first step for a necessary discussion on biases in international valuation practice and, how to deal with these biases, and thus form an initial stage in the development of a comprehensive set of (localized) guidelines for dealing with biases in relation to specific business valuation circumstances. It is up to future researchers to determine how to make these principles manageable and implementable, bearing in mind existing regulations, code of conducts, professional standards and best practices, as well as the increasing demands of society.

The extent to which such principles should be implemented and in what way, may vary from country to country. Some local professional valuation bodies may already have paid attention to the bias problem, others may still be at the starting point. This may depend on the popularity and scale of business valuations in the country, as well as the sophistication of the local profession and corporate finance community in general. Whatever the situation, it is obvious that professional associations at a national level should be involved in a possible implementation, including the process of adjustments or extensions of specific principles.