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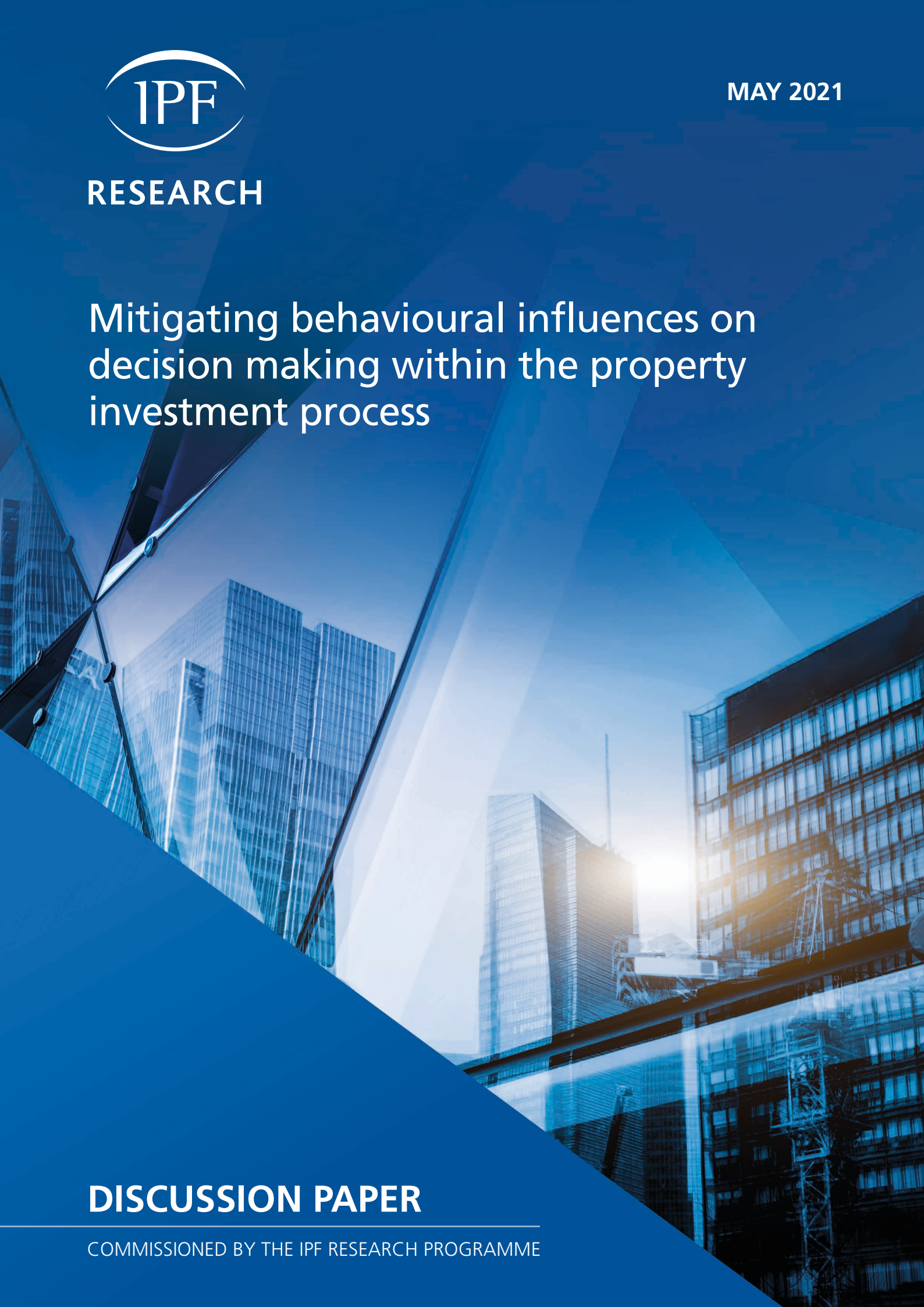
Mitigating behavioural influences on decision making within the property investment process



DISCUSSION PAPER

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Mitigating behavioural influences on decision making within the property investment process

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This Programme supports the IPF's wider goals of enhancing the understanding and efficiency of property as an investment. The initiative provides the UK property investment market with the ability to deliver substantial, objective and high-quality analysis on a structured basis. It encourages the whole industry to engage with other financial markets, the wider business community and government on a range of complementary issues.

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Mitigating behavioural influences on decision making within the property investment process

Discussion Paper

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Mitigating behavioural influences on decision making within the property investment process

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PREFACE

This paper is about thinking twice; it is about uncovering some of the key behavioural influences, biases and heuristics that people are prone to, how they can affect decision making and how organisations might mitigate against them within the very specific context of the property investment process.

The aim of this paper is to help to provide those involved in making decisions with a framework to understand some of the behavioural influences that may be encountered, where they may arise and how they might be mitigated against.

The primary objective of the study is to outline potentially mitigating behaviours that investors can adopt to lessen the potential for these behaviours to influence their decisions, with a focus on identifying actionable organisational processes. The secondary objective of this paper is to highlight the value that may be derived from taking more time to consider how decisions are made.

It is also worth highlighting what this paper will not cover; in particular, it is not about addressing built in biases in property investment. This topic has been covered by, amongst others, a paper[1] from Fidelity International specifically as it applies to real estate. It is also not about the impact of biases on the appraisal process which first garnered attention in the 1990s from authors such as Julian Diaz III and Paul Gallimore. The paper is about the decision-making process itself, not the investment decision-making process such as when to sell or buy an asset or for how much.

[1] Fidelity International, *Addressing built-in biases in real estate investment*

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EXECUTIVE SUMMARY

- The property investment decision-making process is potentially subject to behavioural influences beyond other asset classes because of the extent of the involvement of people in the value chain.
- Behavioural influences on decision making can result in poorly informed, insufficiently challenged and irrational decisions if not mitigated against.
- A large body of literature, in the main written by psychologists, now exists on these behavioural influences and how they have been shown to impact decision-making processes from the simplest to the highest-stakes decisions.
- Whilst cognitive biases are most often exemplified in the literature, behavioural influences on decision making extend beyond biases into areas such as 'being wrong', the role of experience in decision making and the role of groupthink.
- Rationality is not the same thing as intelligence and can be tested for.
- Some key biases include overconfidence, the illusion of control, confirmation bias and commitment bias.
- In domains such as aviation and medicine mitigants are routinely used to improve decision-making processes and so minimise errors. The mitigants tend to be more effective where the incentives to use them are sufficiently high.
- The property investment process can be split into several elements that all investors or investment managers will need to tackle in one way or another. Each element may be exposed to behavioural influences in both formal/informal, individual/group decision making.
- Basic good decision-making criteria can be proposed, but beyond these criteria, authors have suggested mitigants against behavioural influences on decision making.
- There is a high level of overlap between authors' proposed mitigants which results in the identification of actionable strategies for tackling behavioural influences within the decision-making process for property investment.
- Approaches can be identified for tackling different scenarios within the property investment process, such as a formal group decision-making body like an investment committee, or an informal individual decision regarding a lower-cost asset management initiative.

2 Mitigating behavioural influences on decision making within the property investment process

1. INTRODUCTION

In 2007, Daniel Kahneman, psychologist, Nobel Laureate and one of the founders of behavioural economics, ran a seminar entitled *A short course in thinking about thinking*[2]. Amongst the 20 or so people on the impressive list of attendees were Jeff Bezos (Amazon) and Larry Page (Google). Over the two days Kahneman presented on a number of biases and heuristics (or mental shortcuts), that we are all prone to, and that tend to make us irrational decision makers. But he asked a more fundamental question of the attendees: "The question I'd like to raise is something that I'm deeply curious about, which is what should organizations do to improve the quality of their decision-making? I have never tried very hard, but I am in a way surprised by the ambivalence about it that you encounter in organizations. My sense is that by and large there isn't a huge wish to improve decision-making."

Research by Lovallo and Sibony, the former a university professor and the latter a director at McKinsey, found that in their review of 1,048 business decisions over a period of five years, the decision-making process influenced successful outcomes more than analysis by a factor of six. They concluded that 'superb analysis is useless unless the decision-making process gives it a fair hearing.'

Within the property investment process, extensive analysis of potential investments is undertaken, but it is likely that far less time is used in ensuring that the decision-making process surrounding investing is as good as it could be. Indeed, property is often cited as a 'people business' and, with far more people involved in the value chain of property investment than for equities or fixed income, the prospects for decisions to be affected by behavioural influences might be increased in proportion to the number of people involved. It follows that the value to be gained by addressing behavioural biases and mitigating against them within a decision-making process for property investment is likely a worthwhile endeavour.

However, actively thinking takes time, is contrary to the brain's natural response to situations it is presented with and also requires the right incentives to ensure that the decision-making process itself is taken seriously by those involved. If people can make decisions without actively thinking and taking time, they will. Psychologists call this 'miserly processing'[3]. It is for this reason that Michael Mauboussin (2012) advocates that we should try and 'think twice'.

The remaining sections are laid out as follows:

- Section two considers behavioural influences on decision making. It first outlines what 'being wrong' means, and in what ways experience and groups may or may not help when making decisions. It then takes a deeper look into the question of rationality, leading into an exploration of some of the key biases that are commonly encountered.
- Section three defines and briefly discusses elements of a generic property investment process and highlights areas within it where people are involved, and decisions made.
- Section four looks at criteria for a good decision-making process and lists a series of non-property-specific mitigants that have been proposed by various authors. It offers three examples, one looking at screening potential investments, one looking at a formal, group investment committee decision and the other looking at an informal individual decision regarding an asset management initiative. These are used to explore the types of mitigants that may be useful in the property investment process.
- Section five concludes the paper by considering the potential for mitigants to be adopted within the decision-making process for property.

[2] https://www.edge.org/event/edge-master-class-2007-daniel-kahneman-a-short-course-in-thinking-about-thinking

[3] Miserly processing relates to the brain's desire to use as little processing power as possible to come up with a conclusion.

2. BEHAVIOURAL INFLUENCES ON DECISION MAKING

2.1 Being wrong

There are numerous potential behavioural influences on decision making but the first issue that is encountered when assessing peoples' decisions is what it feels like to be wrong.

In her book, *Being Wrong*, Kathryn Schulz (2010) set out to understand what being wrong means. When people are asked what it feels like to be wrong, they answer a different question. They answer the question; what does it feel like to find out that you were wrong?

Schulz cites an example of a doctor who operated on the leg of a patient at Beth Israel hospital in Boston. On waking, the patient found that the incorrect leg was bandaged. In the subsequent inquiry, the hospital stated that the surgeon felt that they were operating on the correct leg. Being wrong feels like being right. Until the moment when you find out you were wrong.

This issue, that people don't make decisions thinking they are making the wrong decision, makes it difficult for people to think about what they could have done differently before taking the decision. However, there is now a well-researched area around the decision-making process which can help people think about the behaviour, not just the analysis, that led them to the conclusion that they made.

In the context of the decision-making in the property investment process, it could be argued that there are two layers of potential behavioural issues that need to be addressed.

Layer 1

This layer encompasses three factors that may exacerbate irrationality or lead people to believe that they have already mitigated against behavioural impacts on decision making:

- Assuming that good outcomes derive from good decisions
- Assuming that experience minimises error, and
- Assuming that groups make better decisions

Layer 2

This layer includes the assumption that people are making rational decisions.

In section 2.2 the 'layer one' issues will be addressed first, exploring each in turn, followed second by 'layer two' and the question of (ir)rationality.

2. BEHAVIOURAL INFLUENCES ON DECISION MAKING

2.2 Behavioural influences

2.2.1 Assuming that good outcomes are the results of good decisions

When people look at the results of their decisions, they look at outcomes and tend to equate good outcomes with good decisions and bad outcomes with bad decisions. This is known in the psychology literature as 'outcome bias'. Mauboussin argues that:

> **"In many cases, those evaluating the decision believe that a favourable outcome is evidence of a good process. While pervasive, this mode of thinking is a really bad habit … When evaluating other peoples' decisions, you are again better served by looking at their decision-making process rather than on the outcome."**

Within property investment, it is straightforward to see a successful outcome and those outcomes can be measured against absolute targets, other properties, peer-group benchmarks or other asset classes. But a successful outcome is not necessarily the result of a good decision.

A simple matrix can be drawn up using two axes: good decision/bad decision and good outcome/bad outcome. From this it follows that a good outcome can be the result of a good decision or a bad decision, but also that a bad outcome can be the result of a good or bad decision. Luck and skill are in play and the only one of these that can be improved systematically is skill, that is, an improved decision-making process.

Duke (2020) argues that 'luck is what intervenes between your decision and the actual outcome.' Once a decision has been made there are numerous paths to an outcome and only one result. Looking back, it is not easily possible to see the alternative paths that the decision could have followed as the world around us only played out in one way. The idea, in hindsight, that a decision was in some way "dumb" does not take into account the available information at the time and the numerous future paths that things could have progressed along from that point in time.

Nonetheless, decision-making can be improved by looking back at errors. It is quite clear, for example, why the aviation industry should look very hard for potential errors and try to mitigate against them. Not only are accidents investigated thoroughly, with lessons learned spread far and wide, but commercial pilots also keep records of things that might have gone wrong if an alternative, less lucky, future had unravelled. In this way processes can be put in place to mitigate against not only the accidents that do happen, but also the accidents that did not happen.

Another domain that looks similarly hard at actual and potential error is medicine. In a drive to try and lessen medical error a surgeon, Atul Gawande, in his book *The Checklist Manifesto*, advocated the use of checklists in the operating theatre to mitigate against simple errors and improve outcomes. Interestingly, when he first advocated a very simple pre-operation checklist, he found that surgeons did not want to use it, but when he asked if a surgeon would want another surgeon to use it if they were operating on their own mother, the surgeons thought that the checklist should be used.

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Britto[4] comes up with a simple reason for this initial reluctance, 'Unlike pilots, doctors don't go down with their planes.' Despite this reluctance, the World Health Organisation now publishes a *Safe Surgery Checklist*. Its introduction goes back to work published in 2009[5], showing that the use of a checklist halved deaths and cut complications by one third at a time when the number of surgical operations was 234 million annually.

In this way, good process can result in better outcomes.

2.2.2 Assuming that experience minimises errors

In their book *The Myth of Experience*, Soyer and Hogarth (2020) argue that there are two learning environments, one in which experience is a reliable predictor of future improvement, the 'simple' learning environment, and the other where experience is not a guarantee of better future outcomes, the 'wicked' learning environment. They argue that,

> **"If life were like riding a bicycle or playing tennis, the lessons of experience would be largely reliable … feedback is immediate and abundant."**

Sometimes people get immediate feedback on whether they were right or wrong and they can adapt quickly: in tennis you can hit a ball slightly harder or softer or change the angle next time and see what the results are over and over again. Repetitive situations with quick feedback are simple learning environments, but other learning environments are less friendly.

Where feedback is not immediate and abundant (wicked learning environments) the ability to learn, from experience, is limited. Property investing is a case in point. A poor decision taken today may unravel over years or even decades and the people who made the decision may even have left the business by the time there is feedback on the effectiveness of the decision.

It takes hard work to learn the right lessons from experiences and, it is not possible merely to assess outcomes as a sign of success. Processes need to be considered to be able to learn, not just lessons, but the right lessons. Mauboussin argues:

> **"Deliberate practice has a very specific meaning: it includes activities designed to improve performance, has repeatable tasks, incorporates high quality feedback, and is not much fun. Most people – even alleged experts – do not come close to satisfying the conditions of deliberate practice and, accordingly, do not develop the necessary abilities for reliable intuition."**

[4] Cited in Leonhart, D (2006) *Why doctors so often get it wrong,* New York Times, https://www.nytimes.com/2006/02/22/business/why-doctors-so-often-get-it-wrong.html

[5] Haynes et al., (2009) *A Surgical Safety Checklist to Reduce Morbidity and Mortality in a Global Population,* New England Journal of Medicine

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Faced with the need to try and make the right decisions, it is possible to interpose a mitigant to our immediate behaviours. Beyond the task of flying the plane, in an emergency pilots find themselves flicking through checklists: they do not rely on their experience or gut feel. Pilots rely upon the checklist because the right lessons have been learned about what to do in numerous situations, either by those designing the plane or by pilots reporting errors, many of which may never have happened but have nonetheless been anticipated. When Flight 1549 landed in the Hudson River after being hit by birds which stopped both of the plane's engines shortly after take-off, Chesley Sullenburger, the captain, recounts:

> **"Jeff [the co-pilot] needed to handle the emergency checklist…Jeff had just trained on the A320, he had more recent experience practicing the emergency procedures. He could more quickly find the right checklist."**

In that moment, the pilots were able to call on the experience of all of the design team for the plane and all of the pilots who had previously reported actual or potential issues that needed to be anticipated.

However, research by Klein and Gladwell[6] has shown that nearly half of the Fortune 1000 companies' CEOs rely on gut instinct, doubting true experience which results in expertise, and that such a decision-making process is often admired. Nichols (2017) warns:

> **"Doubt is a precious commodity. But it wouldn't hurt to direct a fraction of that doubt against one's own experience and the resulting intuition."**

In short, true experience is not something gained automatically with the passing of time, experience is gained by learning the right lessons (yourself and from others) and learning when, and when not, to apply those lessons. Experience is also learning what you do and do not know and calibrating your actions accordingly. This may sound simple but Soyer and Hogarth note:

> **Denying or going beyond [intuitive] experience can be difficult, especially when the explanations that contradict our experience-based beliefs are abstract and opaque. People may even choose to hold on to their resulting perceptions despite concrete evidence to the contrary. And more experience can make things worse, producing thought leaders with unshakable yet misleading convictions.**

2.2.3 Assuming that groups make better decisions

Most people agree that putting a group of people together to make a decision is likely to result in a better decision, but the group setting can be a breeding ground for biases and a plethora of other issues which are the result of a group's dynamics. Within property investment, the typical group taking a decision to invest, or not, in a particular property is an investment committee and this gives rise to behaviour, resulting from a group's dynamics, to influence the decision.

[6] Cited in Mauboussin (2013).

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Groups can be organised and function in such a way that the potential benefits of making the decision as a group are lessened or they can even bring about worse decisions. Moore (2020) argues:

> When you, as an individual, make biased decisions, it can lead to costly mistakes. But when we, collectively, are biased, the consequences can be momentous.

It is also easy to see why, in circumstances where apparently worse decisions result, that people go back to making decisions themselves believing that they had the right answer all along.

Janis (1982) discusses a key aspect of team-based decision making at length in his work on 'Groupthink', which examined sub-optimal decision making at the very highest level of the US government.

> The word groupthink is now often used and is defined by Janis as, 'a mode of thinking that people engage in when they are deeply involved in a cohesive group, when the members' striving for unanimity override their motivation to realistically appraise alternative courses of action … [and] … the psychological drive for consensus at any cost that suppresses disagreement and prevents the appraisal of alternatives in cohesive decision-making groups.'

Janis argues:

> A considerable amount of social science literature shows that in circumstances of extreme crisis, group contagion occasionally gives rise to collective panic, violent acts of scapegoating, and other forms of what could be called group madness. Much more frequent, however, are instances of mindless conformity and collective misjudgement of serious risks, which are collectively laughed off in a clubby atmosphere of relaxed conviviality.

Along with groupthink come a number of issues, namely:

- The illusion of invulnerability;
- The illusion of unanimity;
- Suppression of personal doubts (becoming 'domesticated');
- The appearance of 'mindguards' who suppress doubters;
- Docility fostered by suave leadership;
- Shared illusions; and
- Complacent overconfidence.

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It might be thought that those who work closely together would be able to overcome these issues simply, but Janis also argues:

> The more amiability … among the group, the greater is the danger that independent critical thinking will be replaced by groupthink, which is likely to result in irrational and dehumanizing actions directed against out-groups.

However, all is not lost, as Janis, and others since, have proposed a series of potential mitigants to the issue of groupthink in the design of group decision-making processes. Changing the way in which a group works was seen to have worked in the high-stakes case of the Cuban missile crisis, that brought the world to the brink of nuclear war. During that crisis, Janis notes a number of mitigants that were used to improve group-based decision making:

1. Every participant was expected to function as a sceptical generalist and as a critical thinker. The president's brother and another member of the group were given special roles to pursue relentlessly every individual issue.
2. Outside experts were invited in regularly with an eye to bringing in fresh points of view, with each being questioned and deliberately asked for their input.
3. The group was sometimes broken into two sub-groups, to facilitate independent critical thinking, and then brought together to debate their conclusions.
4. White House staff had independent one-to-one meetings with the President away from the cabinet room in an environment of psychological safety, to ensure that each individual was putting forward their own view without the pressure of the group.
5. The President did not attend all meetings to ensure that he did not exert undue influence on the meetings.

Janis notes that these changes were not easy for the group as they led to heated debate and agitation, bringing about intense strain though ultimately members noted that this was the best work that they had ever been involved in and the greatest level of group belonging that they had experienced. Groupthink is a potentially powerful influence on group-based decision making, working alongside and over and above the layer of irrationality that individuals can bring to the decision-making process.

2.2.4 Assuming that we make rational decisions

People tend to believe that they are making rational decisions. So too do intelligent, experienced, high achieving people. Within a property business, people will have been recruited on the basis of their intelligence, experience and their decision-making abilities. However, intelligence and rationality, leading to good decisions, are not the same.

The body of research by psychologists into human judgement and decision making has found, perhaps unsurprisingly, that people are not rational decision makers. Nonetheless, people tend to proceed as if they are and that other people are too and, according to Kahneman, the most common mistake that people make when thinking about irrational decision making is that they think that other people have biases, not them.

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This section of the report will refer extensively to *The Rationality Quotient* by Stanovich et al. (2016) since, according to Kahneman, this work presents 'the best analysis of cognitive errors in the scientific literature and make[s] a compelling case for measuring rationality independently to intelligence.'

Stanovich, West and Toplak considered the theoretical underpinnings of rationality, intelligence and the functional architecture of the brain and look at a framework for comprehensively assessing rational thinking. Critically, they argue that IQ tests do not test for rational thought, that intelligence and rationality are different things and that they can be tested for separately. They propose a test for rational thinking, the CART (Comprehensive Test of Rational Thinking), to test an individual's capacity for rational thought in the following areas:

- Probabilistic and statistical reasoning;
- Scientific reasoning;
- The avoidance of miserly processing;
- Probabilistic numeracy;
- Financial literacy;
- Sensitivity to expected value;
- Risk knowledge;
- Contaminated mindware[7]; and
- The dispositions and attitudes of rationality.

The appendix of the book lays out a full test of these factors with sample questions. To give a flavour of the types of questions asked, here are two of the shorter questions in the test which readers here may wish to try out themselves; the full test and explanatory notes extends to 37 pages.

Q1: The number of bacteria in a container doubles each hour. If it takes 32 hours to completely fill the container, how many hours would it take for the bacteria to fill half of the container?

A: This question tests reflection versus intuition. The intuitive answer is half of 32 hours; 16 hours. The actual answer (on reflection) is 31 hours. This is the kind of question that people refer to as a 'trick question' but it is just one that you need to think twice about to answer it correctly.

Q2a): Is the distance from San Francisco to Hawaii more than 500 miles? (Yes/no)

Q2b): What do you think the distance from San Francisco to Hawaii is?

A: This question is to test how much the low anchor of 500 miles in part a, influences the answer to part b. The actual distance is 2,387 miles. The authors suggest that any answer greater than 1,000 miles demonstrates that that the low anchor is not having an undue effect on the answer given. The same test could be performed but with a high anchor given in part a), such as 5,000 miles, to see if a high anchor influences the answer.

[7] This can be thought of as a bug in the brain's software resulting in thinking errors.

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This type of question is likely to benefit those who are thinking twice, working out what they do know and using that knowledge to work out the answers.

Whilst Stanovich et al. argue that IQ and RQ are not the same thing, they found that the correlation between IQ and RQ was 0.69, a higher IQ would tend to be related to a higher RQ, but one is not a proxy for the other.

These tests for rationality are inextricably linked to the biases that lead us towards poor decision making; it is biases that deliver irrationality; they are opposite sides of the same coin.

Taken together, the assumptions that good outcomes are the outcomes of good decisions, that experience minimises errors, that groups make better decisions and that people make rational decisions leads us into the world of psychological biases and the impact that these can have on decision making. Beyond understanding and mitigating against these behavioural influences, individuals and groups are subject to a range of biases. Amongst the long list of biases that have been uncovered some tend to loom larger than others and, in the following section, the paper considers four of these key biases that crop up time and again.

2.3 Key biases

2.3.1 Overconfidence

Heath and Heath[8] (2013, p. 9) identify overconfidence as one of the 'villains of decision making' whilst Moore[9] (2020, p. 23) describes overconfidence as a 'gateway bias' in so far as overconfidence is a bias which opens up a whole new world of other biases. Moore categorises overconfidence into three types:

1. Overprecision;
2. Overestimation; and
3. Overplacement.

Overprecision occurs when people are too confident about questions of which they should be more uncertain about the answers. Moore argues that it is straightforward to demonstrate that people are overprecise, and to what extent, by conducting the following test. In this test, people are asked a series of questions and to answer them with a range, within which they believe the actual answer lies, with a chance of nine in 10 (a 90% confidence interval that the range contains the actual answer). For example, the following question could be asked: How many people have walked on the surface of the moon? So, somebody could be 90% confident that the answer lies between two and eight, say. Another might be 90% confident that the answer lies between two and 20. (The answer is 12.) If this exercise is repeated to a total of 10 similar questions, it is usual to find that the correct answer is, typically, only within people's ranges 30% to 50% of the time, when it should be within their ranges 90% of the time.

Overestimation occurs, for example, when people are too optimistic about how long a piece of work might take. Kahneman himself offers an example of this. When he and his colleagues set out to construct a new university course regarding human judgement and decision making, they had to estimate how long it would take to get the course up and running. They wildly underestimated how long this would take, even though the head of the faculty had plenty of information at his disposal that would have suggested more realistic timeframes based on other similar exercises at different universities. They, themselves, had failed to think twice, to look at the data from similar situations and, arrive at reasonable estimates of how long this exercise would take.

[8] Chip Heath is a professor at the Graduate School of Business at Stanford University and Dan Heath is a senior fellow at Duke University's Center for the Advancement of Entrepreneurship.

[9] Dan Moore is a professor of management of organisations at the University of California – Berkeley's Haas School of Business.

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Overplacement occurs when people are asked to place themselves amongst others in a ranking, arriving at the well-known result of 90% of drivers ranking themselves as being better than average.

When a person's performance depends upon effort, being overconfident can reduce the amount of effort that is put into a task and lessen the chances of being successful. In complex situations overconfidence, often backed by experience, can fill the gap between partial and full effort, failure and success. Property investment decision makers may well be viewed as potentially overconfident, being overprecise in their estimation of the likelihood of a particular outcome, being too optimistic about how long a development project might take, or regarding themselves as better investors than others.

Overconfidence, as a 'gateway bias' can quickly lead people towards a series of other biases; confirmation bias is a natural next step. Once somebody has decided on a course of action, they tend to look for evidence to confirm their course of action, to confirm that the path that they have chosen is the right one. This activity can quickly lead on to another bias; commitment bias. This leads people to pursue courses of action that they have decided upon, even if evidence presents itself suggesting that they should change to a different course of action. This series of biases can leave people with the idea that there is no way back from a decision that has been made.

2.3.2 Confirmation bias

Confirmation bias occurs when evidence for a course of action is sought out and evidence against a course of action is either not sought out, is not sought out with similar vigour, or is even suppressed. Often, if someone is presented with disconfirming information by another, the natural bias is to dismiss it and to become further entrenched in one's own views. Listening to opposing viewpoints is hard work and emotionally unsettling, trying to understand them and being open to changing a view is even harder work.

Confirmation bias is all around, but it is stronger in 'emotion-laden domain' where people have a powerful motive to believe one thing or another to satisfy their emotional needs or the amount of time, or money, they have already used in proving themselves right. Another powerful motivator is money, which led Upton Sinclair[10] to state: 'It is difficult to get a man to understand something when his salary depends on his not understanding it.'

Confirmation bias is also more prevalent when people have spent a lot of time or money pursuing a particular path which results in 'motivated reasoning'. The last thing that people want at that point is to be presented with disconfirming evidence or opposing views. Within property, by the time that a decision to invest, or not, in a property is taken, countless hours will have been employed visiting a property, reviewing information, analysing data, constructing an underwriting model and spending money on due diligence, that it is easy to see why those proposing a purchase would be looking for confirmatory signals as they progress through their purchase process. Being intelligent doesn't help to counteract confirmation bias either, as Duke reminds us:

> **Smart people are also better at constructing convincing arguments that support their views and reinforce the things they believe to be true. Smart people are better at spinning arguments that convince other people they are right, not in the service of misleading those people but in the service of keeping the fabric of their own identity from tearing.**

[10] Sinclair, U. (1994), *I, Candidate for Governor; and How I Got Licked*. University of California Press

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In some areas, such as testing the efficacy of a new medical treatment, or in the legal system for example, seeking out, or being forced to present, evidence that is contrary to that which is being sought to be proven is part of the system. Testing for a new medical intervention goes all out to try and prove that something does not work. In such environments one is forced to confront the opposite view.

It is being forced to confront the opposite view that can work to negate confirmation bias. According to Heath and Heath, until 1983[11], the Catholic church had used the 'advocator of the faith' principle to challenge, actively, the case for a person being made a saint. This position is commonly known as the 'devil's advocate'. This process worked because the church had raised the position of the defender of the faith to a 'noble position', one held in great esteem by others. Heath and Heath point out that an effective devil's advocate, 'is not a token argumentative smarty pants; it is someone who deeply respects the Catholic church and is trying to defend the faith by surfacing contrary arguments in situations where scepticism is unlikely to surface naturally.'

It is this latter point that is of interest here, 'situations where scepticism is unlikely to surface naturally', since decisions that are taken, where the case solely for a course of action is presented, are in need of a method for seeking out disconfirming views and evidence. Echoing Janis, the keys here are to:

1. Create a "safe" forum for people to express disconfirming views or even to reward them as being part of a worthwhile decision-making process; and,
2. Ensure that anyone who is a natural sceptic does not cause others to free-ride (by not expressing their disconfirming views as they know the sceptic will do it for them) allowing them to remain popular whilst the sceptic is marginalised.

To defuse the potential for the search for disconfirming evidence becoming an organisational issue, it is worthwhile asking whether there is any evidence that would cause a change of view – what would have to be true for this decision to be the right one? This appeals to the less emotional side and switches from a situation becoming argumentative and entrenched to becoming analytical.

2.3.3 Commitment bias

Commitment bias is, to some extent, an extension of confirmation bias. Commitment bias leads people to continue with a course of action even when it clearly makes sense not to. There are two reasons why people tend to become increasingly committed to a course of action.

First, people tend to believe that sunk costs can be "recovered" by continuing with a course of action, whereas sunk costs have already gone. Sunk costs appear to be a waste of money (especially if it was someone else's money) or time and it feels inconsistent, or even foolish, to waste time or money. Here, it is easy to see that in a property investment decision requiring costs to be spent to work out whether a course of action is the right one, even if the course of action feels like the wrong one after the money has been spent, the project may continue regardless. Running up abortive costs is not welcomed whereas swallowing sunk costs into an overall budget seems more palatable in the short term and brings with it hope of their recovery.

[11] In 1983 the process was changed and the rate of saint creation has increased by 20 times.

2. BEHAVIOURAL INFLUENCES ON DECISION MAKING

Second, once a course of action has been started, changing one's mind is viewed as a weakness, particularly if that person or group has publicly stated their commitment to a course of action. Confronted with contrary evidence, the desire is to continue on regardless. Changing one's mind would mean admitting to a mistake in the past. This goes against peoples' strong desire to prove to themselves, and to others, that they are rational and consistent decision makers.

It is easy to forget, as a property purchase or sale progresses, that the option to quit remains open to pursue, even though it may come with issues, and to become even more committed to a path even if there is evidence suggesting that quitting might be the best option.

To avoid commitment bias driving decisions, people need to be comfortable with making mistakes and updating their decisions, and the organisation that they are in needs to be comfortable with that too. Furthermore, people and their organisations also need to be comfortable with being seen as 'inconsistent' when in fact all they have done is change their mind from an outcome that would likely be bad to an outcome that would be better, something to be applauded.

One way to counter commitment bias is to make a pre-agreement with oneself or for the group to do so. For example, somebody could set a budget beyond which they will no longer continue with a project, the money spent on due diligence could be partitioned by physically moving this to a "sunk cost account" so that it is not visible as an asset, or a set of circumstances beyond which you will not continue could be defined. Pre-committing to a course of action allows you to make a rational decision in advance of being confronted by an irrational self at a later date.

2.3.4 The illusion of control

Makridakis et al. offer numerous insights into the illusion of control in their book *Dance with Chance*. The illusion of control is a bias that leads people to believe that they have a greater influence on the course of events than they do, typically downplaying the role of luck in positive outcomes but overplaying it in the case of negative outcomes. The illusion of control is a pervasive bias that seemingly endows people with some strange powers.

For example, research has shown that in games of pure chance people behave as if they can influence the outcome. Makridakis et al. cite two pieces of research as simple examples. The first shows that people are prepared to pay more for a lottery ticket if they can choose the numbers themselves than buying a ticketwhere the numbers are chosen at random by a computer[12]. The second shows that people prefer to throw dice themselves than to have somebody else throw the dice for them.

Mauboussin also cites research that shows that people roll dice softly when they want to roll low numbers, but more forcefully when they want to roll high numbers. In essence, we believe that we can control outcomes that are uncontrollable. These irrationalities may not be much of an issue in low-stakes games of chance, but in high stakes situations, where skill and luck are involved, falling prey to the illusion of control can prove costly.

The issue here is that success tends to rely on a lot of luck unless luck can be completely removed from a process or decision-making area. When asked to provide an equation that summed up the 21st century, Kahneman provided not one but two equations:

[12] There is some logic to this if people choose numbers over 31 (as there are no 'lucky' birthdays beyond this) as, in the unlikely event that somebody wins, they are potentially less likely to have to share the prize or to share it with fewer people.

2. BEHAVIOURAL INFLUENCES ON DECISION MAKING

1. Success = some talent plus luck;

2. Great success = some talent plus a lot of luck

The Success Equation by Mauboussin (2012) explores aspects of disentangling luck from skill in business sports and investing. In areas like these, where luck may play a major role, Mauboussin encourages the use of a naïve alternative to assess what might have happened as a result of luck, or as the result of a strategy that requires minimal skill levels.

An example of this in property investment management would be to look at risk-adjusted performance information which can ask two questions: first, is the performance greater than might be expected as a result of the risk that you took? (the naïve alternative) and, second, does that outperformance persist for sufficiently long a period to demonstrate that skill was involved? (was it luck or skill?). Studies of risk-adjusted performance persistence can be found in work by the IPF, undertaken by Mitchell (2008).

Other examples come in the form of predictions. As a result of the illusion of control people tend to believe that things can be predicted that cannot. In situations where predictions are made, it is useful to compare it to a simple projection that could have been made without any skill, or with minimal skill. For example, the assumption that the return on an asset next year will be the same as last year is a simple strategy to compete against. Or, assuming that the return next year would be the same as the return over the last ten years on average say. Such naïve competitors have been used in the IPF's own studies of property market forecasting accuracy[13].

By comparing outcomes to those that could be expected as the result of luck, it is possible to start to establish people's skill levels and to understand the role of luck in decision making, exposing and mitigating against the illusion of control.

2.4 Summary

This section of the paper has sought to provide a framework for understanding what it means to be wrong, what assumptions might be held that provide reassurance that irrationality is being mitigated against, what irrationality is, some key biases that may surface and some mitigants against them.

In section 3, the property investment decision-making process is considered with key elements and decision-making points discussed.

[13] See for example, McAllister, P., Newell, G. and Matysiak, G., (2006) *Disagreement and Uncertainty in UK Property Market Forecasts*, Investment Property Forum - https://www.ipf.org.uk/static/uploaded/d813e7d6-f667-439d-9c63aaaaa4dad813.pdf

3. THE PROPERTY INVESTMENT PROCESS AND DECISION MAKING

3.1 Introduction

The aim of this section of the report is to define and briefly discuss the elements of a generic property investment process and highlight areas within it where people are involved, and decisions made. Whilst each investor will have their own investment process, there are aspects of property investment management that are likely to be carried out regardless of the specific approaches used by any individual investment manager. The following section identifies each of these elements and draws out the individual and group decisions that are being undertaken throughout the process, so that these can be considered for the biases and heuristics that may occur.

3.2 The property investment process and decision making

Whilst each property investor or investment manager will have their own investment process, which is either formally laid out or executed less formally based upon 'tried and tested' methods, it is possible to identify those parts of an investment process that may be familiar to any institutional or private equity type property investor or investment manager. Within and between each of these elements it will be necessary to make decisions and it is these decision-making points that give rise to the potential for decisions to be influenced by behaviour, biases and heuristics.

3.2.1 Elements of the property investment process

This section defines and outlines the types of generic decisions that property investors will need to take to be able to run a property portfolio. There are many more decisions beyond these, for example, legal and tax issues, which may sit outside an investment process.

1. Deciding which portfolio to hold

The strategy for a portfolio will have been determined to a greater or lesser extent directly between client and investment manager or, in the case of a pooled fund, laid out in the investment manager's documentation. It may also be that an investment manager takes over a portfolio previously run by another investment manager. The portfolio that should be held will depend on numerous factors and the decisions around this will likely be subject to scrutiny within an institutional or private equity setting.

2. Introductions/Deal sourcing

In order to create a portfolio or replace sold assets with new assets it is necessary to source deals actively or to have those deals introduced to the investment manager. Decisions will need to be taken to determine which properties to source and vetting of properties to accept or reject for purchase.

3. Purchase decisions

Purchase decisions are likely to need to be made by all investors apart from those managing a portfolio in wind down. As high consequence decisions it is likely that these will require the oversight of an investment committee or a similar review body.

4. Hold/Sell decisions

As with purchases, hold/sell decisions are critical for all property investors as they change the nature of the portfolio. It is unlikely that such decisions are taken, at least in an institutional or private equity style setting, without passing these through an investment committee or a similar review process.

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5. Asset management decisions

Asset management decisions and the associated costs and benefits of these have a major part to play in the delivery of performance within property as an asset class. Less consequential (or less costly) asset management decisions may be subject to individuals' discretion, but larger, more costly and consequential decisions may be subject to the decision of an investment committee.

6. Decisions around the use of financial leverage

Leverage is not used by all property investors but, where it is possible, the decision to use it (and in what form it is used e.g. fixed versus floating rates) is a non-trivial one. Leverage ranges may well be pre-determined within the agreements between client and investment manager but still a decision is required at what level to use it.

3.2.2 Decision making

The types of decisions that are made throughout this process can be split into four categories: individual formal or informal decisions, and group formal or informal decisions. Within a property investment setting, the higher the stakes, the more likely it is that the decision will be taken by a formal, group decision-making body, an investment committee. An example of a high-stakes decision would be the purchase of a property.

The lower the stakes, the more likely it is that individuals will make informal decisions about the path that they will pursue. An example of this might be a small asset management initiative where an individual is given delegated authority to pursue initiatives up to a certain monetary value.

Informal group decisions might arise when groups are considering underwriting assumptions for the sale or purchase of an asset. This is a 'gather around the (virtual) desk' type of decision.

Formal individual decisions may arise when an individual fund manager looks to decide upon the strategy for a fund. Sometimes this may be a formal group decision.

At all stages however, people are involved in the decision-making process: it is unlikely, for example, that algorithms will have been set up to trigger the sale or purchase of a particular asset. Given that people are involved throughout the process, it is unavoidable that they will, to a greater or lesser extent, be subject to biases that influence their decisions. It seems prudent, therefore, that identifying and mitigating against these behavioural influences should be part of the decision-making process itself.

4. MITIGATING BEHAVIOURAL INFLUENCES

4.1 Introduction

The previous two sections have discussed and identified some of the behavioural influences and more common biases and heuristics, at the individual and group level, that may have an influence when making decisions, and, having identified a generic property investment process, outlined where within that process individual or group, formal or informal decisions are made.

This section brings together sections two and three to focus on the mitigation of behavioural influences on decision making within the property investment process. It offers practical, organisational and procedural, mitigants, based on extensive research into the topic by psychologists and economists focussed on behavioural influences on decision making.

The section is split into three parts:

1. Identifying good decision-making criteria;
2. Mitigants that can be employed to counter potential biases in individual or group, formal or informal settings based on extensive research by others; and
3. Examples setting out how these mitigants can be put into practice within the decision-making process for property investment.

4.2 Good decision-making criteria

Whether it be individual or group, informal or formal decision making, there are a number of criteria that can be used to consider whether a decision is being made in a sensible way. Lists of these criteria can be found in a number of texts but the list reproduced here is that provided by Janis, as he considers how decision making had changed from the failure of the Bay of Pigs invasion of Cuba to the time of the Cuban Missile Crisis. The criteria are as follows:

1. The objectives of each potential course of action have been laid out;
2. The costs, drawbacks and risks of negative consequences, as well as the positive, have been weighed up;
3. There has been a continuous search for alternative courses of action;
4. Expert views have been properly taken into account especially where they contradict the proposed course of action;
5. A thorough re-examination has taken place of all courses of action, even those initially dismissed; and
6. Detailed execution of the course of action is drawn up along with special attention to contingency plans that might be required if known risks materialise.

4. MITIGATING BEHAVIOURAL INFLUENCES

Whilst this list highlights good criteria for decision making, Sibony[14] used an analogy to the legal system to demonstrate how most decisions are actually made in organisations, which is what the mitigants that follow aim to avoid.

> Imagine walking into a courtroom where the trial consists of a prosecutor presenting PowerPoint slides. In 20 pretty compelling charts, he demonstrates why the defendant is guilty. The judge then challenges some of the facts of the presentation, but the prosecutor has a good answer to every objection. So the judge decides, and the accused man is sentenced. That wouldn't be due process, right? So, if you would find this process shocking in a courtroom, why is it acceptable when you make an investment decision?
>
> Now of course, this is an oversimplification, but this process is essentially the one most companies follow to make a decision. They have a team arguing only one side of the case. The team has a choice of what points it wants to make and what way it wants to make them. And it falls to the final decision maker to be both the challenger and the ultimate judge. Building a good decision-making process is largely ensuring that these flaws don't happen.

On top of this, the judge(s) are typically close working colleagues who work with the prosecutor in a "collegiate" atmosphere of amiability, an atmosphere which Janis has argued is the most fruitful for groupthink to take shape.

4.3 Mitigants

This section considers a number of mitigating strategies to improve decision-making processes within the property investment process. These take the form of short mitigation checklists that have been created from some key authors' ideas.

Some mitigants are better suited to particular situations within the property investment process and these will be highlighted in three examples. Likewise, not every mitigant will be useful to every organisation and, for that reason, a number of different strategies from different authors are proposed.

4.3.1 Mauboussin – Think Twice

Mauboussin states that his work into thinking twice is of greatest value 'in situations where the stakes are sufficiently high and where your natural decision-making process leads you to a suboptimal choice.' He advocates a number of ways to mitigate potentially irrational decisions:

1. Get feedback – a simple way of doing this as an individual is to record (actually write down) the decisions you make, why you made them and what you expect to happen. As a group, meeting minutes should be comprehensive, allowing somebody to go back and look at the decision in the future to examine the analysis and process. This will help avoid hindsight bias and allow you to learn from the decisions you make.

2. Create a checklist – these are useful in "stable domains" where cause and effect are clear or where a particular activity needs to be repeated, for example in building a financial model or selling a property.

[14] Cited in Heath and Heath (2014).

4. MITIGATING BEHAVIOURAL INFLUENCES

3. Perform a pre-mortem – this is done by imagining yourself at a point in the future, where an outcome has been unfavourable and looking back at what went wrong to get you to that point in the future. This activity helps people identify more issues than you might do otherwise, and these can then be controlled for or mitigated against.

4. Know what you can't know – in complex systems it is often impossible to know what the outcome of a particular course of action will be. In such instances it useful to plan and prepare for downside scenarios in advance.

4.3.2 Heath and Heath – Decisive

Heath and Heath provide numerous suggestions as to how to mitigate against decision-making biases; the list below draws from these.

1. **Avoid framing the problem narrowly –** narrow framing can mean that the decision-making set is too restricted, looking at whether or not to do one thing. This can be avoided by looking at the opportunity cost of a decision which reveals other options, or by looking at vanishing options which starts with the premise that the current option has disappeared, and you now have to decide what to do.

2. **Use the outside view –** consider how things generally unfold in similar situations rather than how you hope a specific situation will unfold – try and find base rates (sound estimates based on past data) for your decision or ask an expert.

3. **Consider a wide range of outcomes from the very best to the very worst –** the future is not a single point, a single scenario that must be predicted. Instead, think about the widest range of possible outcomes and plan, in advance, for each so that actions have been given some thought prior to arriving at a situation and simply reacting.

4.3.3 Janis – Groupthink

Janis' suggestions on decision-making processes are, understandably, focussed on the prevention of groupthink and are suitably specific to offer practical anti-groupthink mitigants.

1. **Leader impartiality –** the key leader(s) should remain impartial instead of stating preferences and expectations at the outset and not advocate any specific proposal.

2. **Split into smaller groups –** two or more groups should consider the same matter to ensure that 'concurrence-seeking tendencies' are lessened. The groups can then meet subsequently to discuss their findings.

3. **Elect a devil's advocate –** at least one member of the group should be assigned the role of devil's advocate.

4. **Give the decision a second chance –** a "second-chance" session can be used where, with some distance between an indicative decision and a final decision, members of the group can express any views that have developed since the indicative decision during an informal meeting[15].

[15] This is famously summed up by the actions of Alfred Sloan of General Motors who asked; 'Gentlemen, I take it we are all in complete agreement on the decision here? Then I propose we postpone further discussion of this matter until our next meeting to give ourselves time to develop disagreement and perhaps gain some understanding of what the decision is all about.'

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4.3.4 Duke – How to decide

Duke gives us an array of practical tools in her book *How to Decide*. Some highlights from this are listed below:

1. **Talk in probabilities, not phrases with vague meaning -** don't use words to assess your chances, use probabilities. Phrases such as "serious possibility" can mean different things to different people as Mauboussin found out in a survey of words and phrases and the probabilities that different people attach to them. Probabilities convey uncertainty consistently and are likely to help elicit views around them.

2. **Allocate time where it is important –** irreversible, non-repeating, high-impact decisions, where the cost of quitting is high, should be allocated the greatest amount of time to decide.

3. **Pre-decide when you will quit –** decide in advance the conditions under which you will quit to avoid commitment bias.

4. **Ensure good "decision hygiene" –** if you want to know what somebody thinks, stop infecting them with what you think. When gathering information ensure that you are gathering other peoples' views and not your own. In a group setting gather views individually before the group meets and anonymise the views before presenting them to the group.

4.4 Examples

4.4.1 Screening potential investments

Property investors will need to screen potential investments. There are numerous permutations to how this might be done but there are a generic set of issues that may arise.

1. Have you seen all the options?

Without seeing all of the potential options a decision may be subject to 'availability bias'. This could result, for example, in believing that the properties that you are looking to invest in are scarce, putting upward pressure on the price you may be willing to pay.

Putting in place an origination process that ensures you see all the properties that you want to see should help to mitigate against availability bias.

2. How do you know when you have found a potential property?

Do you have a checklist to decide which properties fit with your strategy? Without it, time and money could be wasted on exploring properties that do not fit with a strategy or almost match.

A checklist could be set up with company, fund, or strategy-specific criteria related to the property search in order to filter out properties that do not fit. This would also mitigate against the role of choosing in Mauboussin's 'emotion-laden' environment as pressures to invest potentially surface. If criteria are changed, the presence of a list will record those changes for future reference.

3. Who screens?

Unlike other asset classes, properties are not homogenous and there may be valuable information within the business that could be used to help screen properties. It may be that a colleague knows vital information regarding a property that you may not find out until later and which may come at a cost.

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Putting a process in place where all relevant information can be captured, for example by ensuring that as many people as possible screen a property, or circulating a list of properties under consideration for any feedback, may help to mitigate against a lack of information and uncover outside views which would help to improve the decision to consider a property or not.

4. Why are they selling?

Mauboussin recommends asking who is on the other side of a trade. This act puts yourselves in the seller's shoes and asks why they would be selling. Much like a pre-mortem, this can expose information or at least questions that it would be useful to answer given the asymmetry of information between buyer and seller.

5. When do you quit?

Once you start considering a property, the potential for confirmation bias and commitment bias to creep in arises.

It is worth seeking out disconfirming information from others to counter confirmation bias and to pre-draw a line in the sand where you 'commit to quit'. The natural tendency is to keep trying to resolve issues as you go along, getting deeper and deeper into a transaction, when in fact the best option may be to stop and start looking again.

4.4.2 The property investment committee

The typical point for a formal decision-making process within the property investment process is the Investment Committee (IC) or a variant thereof. This will constitute a group of people who ultimately decide, or recommend onwards, a course of action. As identified in section three, typical decisions are related to the purchase and sale of assets but may extend further into portfolio construction, performance reviews, major asset management initiatives or the use of leverage.

Laid out here are a number of considerations and suggestions for the way in which the decision-making process may be set up to mitigate the potential issues and biases that have been discussed in this paper. The emphasis here is thinking about the design of the decision-making process.

1. Who is in the group?

Before setting out to make a decision it would be useful to know first, the extent to which individual members of the group are rational decision makers and secondly, their 'cognitive style' (the way in which they understand and interpret information and make decisions around that). In this way, membership of the investment committee can be established to take account of individuals' rationality and cognitive styles. Better decisions tend to be taken by more rational thinkers and by teams with greater cognitive range.

Capacity for rational thought can be tested using questionnaires such as those devised by Stanovich et al. Cognitive differences can be established by using psychometric tests (which can be aggregated to an overall team), such as those discussed by Kress, Steinert and Price.

In this way, the team can be assessed and adjusted as necessary to promote rational thought and cognitive range.

2. How many are in the group?

The best performing groups not only have high cognitive range and low value range (i.e. they hold the same values) but are perhaps smaller than might be expected. The optimal team size is around four to six members.

4. MITIGATING BEHAVIOURAL INFLUENCES

Hackman (2002) has argued that whilst the potential productivity of a group increases as size increases, marginal gains tend to diminish. Also, as the group size increases, process losses tend to increase. These are linked to higher costs of co-ordinating the group and decreasing levels of motivation for individuals. Taken together the actual productivity of a group typically peaks at around four to six people.

3. What is the purpose of the IC?

Is it scrutiny or is it approval? The way in which the purpose of an IC is conveyed (framing) can already begin to direct the group's decision: if the IC is framed as a body that is convened for the 'approval of decisions', then this kind of narrow framing means that the mind of the IC members may be cued towards approval and the consequent lack of rigour (thinking once) attached to a decision which is implicitly signalled as 'for approval'. It is worth thinking back here to the analogy presented earlier by Sibony to ensure that investment committees are not characterised by one-sided "case for" presentations.

A checklist of questions could be drawn up to ensure that the IC considers appropriate questions, for example: do we have an information advantage in this market? Why is the seller selling? What does the seller know that we don't? Why is this property more suitable than those that have been rejected? etc.

4. Before the group meets

Before the group meets, Duke's 'good decision hygiene' should be employed. That is, individual members of the investment committee should express their views and questions in written form, which should then be collated and presented, anonymously, to the investment committee at the meeting by the leader of the group.

This allows each member of the investment committee to come up with their own ideas uninfluenced by the group. The views do not need to be expressed in open discussion and are not attributed, which allows people to speak their minds in a "safe" way.

5. Who leads the group?

It is natural for the investment committee to be led by the most senior person in the group. However, and as Janis has argued, this may not be the best path unless that person can adopt some distance between their view and their role. Their role is to encourage debate, to tease out viewpoints to maximise the value of the teams' cognitive range and get to the best possible decision. The group's leader, especially if they are the most senior person in the room, should not state their view on the proposal until all other views have been aired. It may be an idea to vary the person who leads the group.

6. Use base rates to counter inside views

Is there, explicitly, an outside view or have "inside outside" views (views from within the organisation but from outside the proposing team) been sought? Outside views are best sought from those without sunk costs (in terms of time and emotion) in the decision in order to avoid confirmation and commitment biases. A research team could be a good place to start for base rates, realistic ranges around these, and evidence-based probabilities based on broad market experience – rent levels, rental growth, voids, letting periods, costs, time schedules, yields, etc,.

In amongst the base rates should be views of various scenarios which are used to test the potential range of outcomes. This should include the full range of possible outcomes, rather than small sensitivities around individual variables, along with probabilities attached to each outcome.

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7. Use probabilities to counter overconfidence and uncertain descriptive words

How confident are you that the tenants won't break their lease? Very confident? You are better to put a percentage on this chance, based on empirical data, and on other probabilities throughout the process as Mauboussin and others argue.

Bernstein suggests that 'consequences are more important than probabilities, but this does not mean you should focus on outcomes instead of process; it means you should consider all possible outcomes in your process.'

8. Elect a devil's advocate to challenge one-sided views and an easy consensus

The devil's advocate role is not an easy one to play as that person risks becoming alienated from the group, but the role, if played well, can help to expose sloppy thinking or assumptions that need discussion. It can weed out biases and prevent an all-too-easy consensus forming.

Standing alone in opposition to a forming (or formed) consensus is a difficult psychological position to adopt and so electing more than one devil's advocate is preferable, if numbers allow it. Actively appointing a devil's advocate can liberate an individual to raise issues that they may not have done previously, freeing them of the psychological pressures that may otherwise be felt.

Another option is to have this role revolve amongst different people within the investment committee which also recognises that this is a role that is being played in order to improve the decision-making of the investment committee, not one that is attached to a person who is deliberately anti the group.

9. Conduct a pre-mortem

Pre-mortems allow "prospective hindsight" by imagining an event to have already occurred. Again, this exercise should be conducted first by individuals within the investment committee, which can then be shared in a group setting. The pre-mortem view can be established by asking a simple question such as, 'Imagine that in five years' time this property has delivered the worst performance in the portfolio, what will have led it to this position?'

Different people will have different ideas of what has brought it to this situation. Beware however that people don't just assign a prospective bad outcome to bad luck (the market moved against us) but to discernible factors that can be discussed and potentially resolved.

10. When deciding, avoid deemed consent and negative questions.

Making a decision is best not done by the most senior person in the room asking if anybody disagrees with them, or to assume that because no dissent has been heard that there is none. Make it the role of the chairperson to ensure that disconfirming views and dissent from the group view is welcome and is uncovered (with the help of a devil's advocate) and/or provide a safer place for discussion on a one-to-one basis with the group's individual members.

To avoid deemed consent, for example, if the chairperson feels that the group is silently moving towards an unquestioning approval of a proposal, the chairperson could ask each person individually for comments on the proposal and if necessary, this could be done away from the glare of the group. The chairperson could also tease out negative views by suggesting that they themselves have reservations, but without naming any to see if this brings any concerns to the surface.

4. MITIGATING BEHAVIOURAL INFLUENCES

11. Be aware of the potential impact of hierarchy and business culture within the meeting

The impact that the most senior person (Highest Paid Person in Office, or HiPPO) in the room can have on the group should not be underestimated and, it was for this reason, that President Kennedy absented himself from meetings even at the most critical of times. As Soyer and Hogarth observe:

> If a representative of upper management remains in the room, people don't speak or even think freely. Worse, when the boss says something, others stop providing their own perspectives … [they] don't even have to talk for this to happen. Their face and body language are often enough for observers to guess which comments they favour and which ones they oppose. They roll their eyes and it's all over.

Whilst initially uncomfortable for the HiPPO, better discussion and decisions may result. However, beware that somebody else in the meeting doesn't replace the HiPPO and recreate all of the behavioural influences that the act of removal had sought to stop.

12. Set up a second-chance meeting to counter commitment bias

Once a decision has been formed, it is a good idea to go back and look at the decision, usually in a less formal way, and potentially on a one-to-one basis with members of the investment committee. Are there things that the investment committee members are thinking now that they wish they had said originally? Was their decision influenced by other people?

If there are doubts, or material factors have been thought about at the second chance it may be advisable to reconsider the decision.

13. Take minutes

Minutes of the meeting(s) allow you to look back faithfully on what was said and why. This can prevent hindsight bias and can be used proactively to try and disentangle skill and luck when looking at investment outcomes. This technique is known, broadly, as making a 'decision-making journal'. The IC paper should form the basis for this, containing all of the salient information and assumptions on which the decision was based at the time.

This schedule of twelve potential mitigants to overcome biases in the decision-making process is not exhaustive and may not work for every group but it offers ideas, proposed and tested outside of the property investment process, which have been seen to work to improve decision making. For example, in the original analysis of using a premortem by Mitchell et al. they found that the ability to correctly identify reasons for future outcomes increased by 30%.

Each of these initiatives takes time are likely to feel unnatural. Introducing one of these potential mitigants at a time may be a preferable approach to making any changes.

4. MITIGATING BEHAVIOURAL INFLUENCES

4.4.3 The asset management initiative

A less formal and potentially individual decision (within limits) is an asset management initiative. Here, an individual is likely choosing between various options

1. Have you explored all the options?

Ask other people, without telling them what you have already thought about, what they consider the options are in the situation you are in. Use the "vanishing options" approach to remove the current option and expose what other options there could be.

2. What are the chances?

Assign each option's varying outcomes probabilities in order to assess the best option. Refer to others for base rates regarding these probabilities and ensure that your spread of possible outcomes truly represents reasonable expectations of a range.

For example, the rate at which properties typically go vacant, or leases are renewed at the end of a lease can be ascertained from data.

3. Break down your schedule into small steps to better work out timing and cost.

This will help to negate the planning fallacy, a bias that results in overoptimistic expectations regarding the way in which a project will play out. Research has shown that breaking a task down into smaller units allows people to appraise costs and timings in a better way than estimating overall costs. This takes time but is likely to produce a more realistic answer.

4. Seek other peoples' views regarding cost, timing and things that they have seen go wrong.

This may be an individual decision but using the crowd to help provide inputs will potentially open up a range of outcomes that may not have been considered. Look for disconfirming information and don't influence what other people will tell you by telling them the outcome you are looking for first.

Mauboussin argues that, 'while people are notoriously poor at guessing when they'll finish their own projects they're pretty good at guessing about other people [sic].'

5. Consider producing a log which details the shared knowledge of the group of asset managers that you work with, in the form of a checklist.

Using a log will establish information on the things you need to know most. How long did project X take? If it took longer than expected, why did it take longer? With multiple projects behind you this should deliver into a useful set of information to provide you and others in the team with base rates regarding asset management initiatives along with the best and the worst outcomes that you have seen.

Again, each of these mitigants against individual biases takes time to implement and an experimental approach to working through each one may be the best option as a process for adopting them. The set of options here is not exhaustive and other mitigants may be equally or more useful depending upon the circumstances.

5. CONCLUSIONS

Human judgement and decision-making studies now have a long history and numerous biases have been teased out and tested, mostly by psychologists but increasingly by those in other domains that could benefit from understanding these tendencies such as medicine, aviation and investment. In domains where the risk to the decision maker is exceptionally high, such as aviation, mitigants are vigorously employed. Where the risk to the decision maker is lower and the risk is borne by others mitigants have not been embraced as vigorously.

It is possible that within the property investment decision-making process, the risk to the decision makers is insufficiently high to ensure a focus on mitigating potential biases in their decisions. This will depend upon the nature of the organisation and the way in which incentives are set up. The property investment domain has tended to rely upon analysis and experience to make decisions, though it has been argued that neither guarantee that good decisions will be made. By understanding the impact that the decision-making process itself might have on the decisions made, it should be possible to interpose mitigants in the process to lessen the behavioural influences on those decisions.

It may also be that there is implicit recognition that luck plays a large role in investment outcomes and so improving decision-making may offer small marginal gains if the outcome is largely beyond our control. However, this would be contrary to the illusion of control exhibited throughout the investment landscape.

To ensure that behavioural influences do not exert undue influence on decisions, individuals and groups could be provided with training on how to identify and mitigate such influences and to establish revised working procedures.

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