Cognitive Biases & Heuristics in Decision Making: A Case Study Analysis

Keshav Gupta

Woodside Priory School

Abstract

Business and finance decision-making often occurs under conditions of uncertainty, time pressure, or both, making it challenging to adopt a goal-oriented, rational approach without relying on heuristics and cognitive biases. This paper discusses the pervasively important—but often invisible—role that psychological factors, namely availability and representativeness heuristics, confirmation bias, and overconfidence, play in decision-making, often leading to inferior outcomes. Through real-world examples such as the 2022 GameStop short squeeze, the Volkswagen emissions scandal, and the Valeant Pharmaceuticals collapse, the practical effects of these cognitive biases are examined. Research demonstrates that cognitive shortcuts and blind overconfidence result in suboptimal and often incorrect decisions, leading to market instability, moral failures, and organizational collapse. This article highlights the psychological risks that can undermine decision-making and suggests practical strategies, such as prioritizing transparency, encouraging reflective decision-making, and improving governance, to enable more effective and ethical decision-making. By examining the relationship between psychology and decision-making, this study emphasizes the need for better individual and institutional

techniques to navigate complex business and financial situations successfully and ethically, highlighting approaches that lead to superior outcomes.

Keywords: Representativeness Heuristics**,** Availability Heuristics, Anchoring Heuristics**,** Cognitive Bias**,** CEO Overconfidence

Introduction

In the realm of business and finance, where uncertainty looms large and outcomes are unpredictable, split-second choices can define success or failure. And, in seconds, one can make a high-stakes decision, going with their instinct instead of the data—leading not by knowledge but conviction. Sounds harsh, the executive and leadership tasks in the fast-moving markets of today seem as if pulled straight from investor dramas. This behavior is completely naive to believe in the rationality of market decision-making, considering that it is heavily influenced by psychological factors such as heuristics, cognitive biases, and overconfidence. Such mental shortcuts are meant to help people make quick decisions when time and/or information are limited, but they come with perils. Heuristics like availability and representativeness heuristics can cause individuals to overestimate probabilities or engage in faulty comparisons, often resulting in suboptimal financial decisions (Kahneman & Tversky, 1974). In a similar vein, cognitive biases such as confirmation bias and overconfidence can lead leaders to ignore warning signs in the environment or data sources.

This paper draws on recent examples from finance—the 2022 GameStop short squeeze—and corporate scandals—Volkswagen Emissions Scandal and CEO overconfidence at Valeant Pharmaceuticals—to examine how different aspects of decision-making are likely to be shaped by psychological processes. According to Malz (2021), retail investors playing in the GameStop

sandbox were heavily influenced by availability and representativeness heuristics, leading to an outright irrational stock price pop seemingly detached from economic fundamentals. Another example is the Volkswagen emissions scandal, as it provides a clear indicator of how cognitive dissonance manifests—whereby the corporate rationale for cheating was that surrendering market supremacy would have been an even greater ethical violation than subterfuge (Loudenslager, 2020; Mansouri, 2016). The downfall of Valeant Pharmaceuticals drives home the dangers of CEO overconfidence, an overestimation of one's own ability, leading to high-risk decisions that may negatively impact shareholders (Malmendier & Tate, 2005). Comprehending how these psychological dynamics influence probabilistic assessments is essential for sound judgment in private and corporate asset management, leading to more ethical and successful market behavior. This paper investigates the intersection where these psychological factors meet and the implications of this on systems and in real-world market situations, as well as how their impact can be minimized by changing what is within control. The paper is an exploration of how heuristics, biases, and overconfidence inform behavior, providing a framework for making better decisions in complex financial conditions both as individuals and as organizations.

Heuristics

Heuristics are mental shortcuts or simplified decision-making processes that individuals often use to form hypotheses in their daily lives. The reason these cognitive strategies are so important in everyday decision-making is simply that they guide people to a useful solution for navigating complex environments without the need for complete information processing (Kahneman & Tversky, 1974). Heuristics are especially useful in situations in which time constraints are a critical factor and decisions must be made quickly (Kahneman & Tversky, 1974). Although very helpful, heuristics are not without potential downsides. They are

furthermore associated with systematic cognitive biases that can distort judgment, and they tend to be more pronounced in high-stakes environments such as financial markets (DellaVigna, 2009). The three most notable heuristics are representativeness, availability, and anchoring/adjustment.

Types of Heuristics

Representativeness Heuristic: This heuristic involves judging the probability of an event by its resemblance to a prototype or stereotype. In market contexts, for example, an investor may believe that a new tech startup will be successful just because it aligns with their mental stereotype of what the entrepreneur in Silicon Valley looks like. They could almost totally ignore statistical data such as the high failure rates of new ventures (Aronson, 1973; DellaVigna, 2009). This heuristic has been famously demonstrated in the context of the "Linda problem," where participants judge it as more likely that Linda is a feminist bank teller than that she is only a bank teller (Kahneman & Tversky, 1974), which goes against the principle of probability theory. This reliance on stereotypes in this context creates substantial biases, especially when statistical base rates get overlooked—and those are the numbers that give accurate information about probabilities. This can cause investors to overlook key financial indicators and rely more on superficial characteristics or trends, particularly in financial markets (DellaVigna, 2009).

Availability Heuristic: The availability heuristic is something that can often lead people to overestimate how frequent or likely an event is because examples of the event that come to mind readily are assumed to be a common thing. This heuristic is especially misleading in situations where recent or vivid events unduly affect people's judgments (Kahneman & Tversky, 1974). Similarly, if one recalls the recent financial collapse, investors might have an exaggerated

idea of how likely a market crash is. In another study, Ross and Sicoly (1979) found that when asked to estimate the percentage of the time they spent on ten different types of household tasks, husbands and wives very much overestimated their contributions and underestimated their partners' contributions for all ten domains, demonstrating that experiences closer at hand are most readily available for use in judgment (Schwartz, 2024). This can lead to severe overreactions to the past in financial markets if investors compensate for the rarity of extraordinary events (Loewenstein et al., 2003).

Anchoring and Adjustment Heuristic: Anchoring and adjustment heuristic refers to making decisions based on an initial reference point, or "anchor," and then adjusting one's judgment away from this anchor to the extent warranted by other information. This heuristic is clearest in financial markets when pricing initial public offerings (IPOs): investors given an arbitrary anchor value for the first share price may use this as a reference point to form valuation estimates of the stock (DellaVigna, 2009). Following in the footsteps of Kahneman & Tversky (1974), Russo and Schoemaker (1989) showed that arbitrary anchors, such as a personal identification number, could sway estimates of casualties in various historic events. This bias is also evident in a study of auditors who were more likely to estimate the occurrence of fraud higher if they had been first asked whether it was greater than ten per 1,000 relative to those asked whether this rate was above 200 per 1,000. This anchoring results in individuals incorrectly mispricing and greatly harms their investment decisions, for they inadequately adjust from the initial anchor—even when it is irrelevant to the actual decision (Schwartz, 2024).

Downside of Heuristics

Heuristics provide benefits in making quick decisions. They are an aid, especially in tough decisions when the information has not settled down yet, to reduce cognitive load and allow people to work well amidst ambiguity (Aronson, 1973). However, heuristics do come with some dangers. The problem is that merely substituting complex real-world decisions with heuristic devices can create cognitive biases, especially in high-stakes markets. For example, people may ignore base rates with the representativeness heuristic, overestimate probabilities of rare events due to the availability heuristic, and be unduly influenced by initial information with the anchoring heuristic—even if it is irrelevant (DellaVigna, 2009; Kahneman & Tversky, 1974).

In addition to heuristics, cognitive dissonance is another psychological concept that affects decision-making, particularly when two of a person's beliefs or actions conflict. This acknowledgment both affirms the power of heuristics and underscores the need to better understand how their use might be influenced by current decision-making processes in less predictable realms where sounder judgment is more critical (Kahneman & Tversky, 1974).

Cognitive Biases

Cognitive biases are systematic errors in the processing and interpretation of information. These biases are usually driven by the brain's need to save energy during information processing, which can often give rise to judgments and decisions that go well beyond rationality (Kahneman & Tversky, 1974). Cognitive biases are of enormous importance because they have a huge effect on decision-making, whether it be in day-to-day life or complex environments like business or finance. If not corrected, cognitive bias can cause irrational decision-making and potentially catastrophic outcomes (DellaVigna, 2009).

Types of Cognitive Biases

Confirmation Bias: People tend to favor information that confirms their existing beliefs over new—or even existing—information that contradicts those beliefs. For instance, let us take an investor who is sure a stock is well worth going long. This investor, due to confirmation bias, might not care if the stock is doomed and only decides to be informed by news articles or reports that say good things about it. This attention–context bias results in over-optimism and poor-quality decisions, as the investor does not see the whole truth (Aronson, 1973; DellaVigna, 2009). The persistence of this bias is dangerous, as it heightens existing preferences and makes individuals less able to identify mistakes or view the issue from other points of view, which are pivotal moves for making well-informed and impartial decisions (DellaVigna, 2009; Kahneman & Tversky, 1974).

Hindsight Bias: Another famous cognitive bias, hindsight bias, is where the outcome of an event is deemed to be predictable after it has happened. Some examples include people saying, "I knew that was going to happen," after a financial crisis (even though most of them had no such pre-crisis foreknowledge). This bias creates a deceptive confidence in the certainty and knowledge of history, which is dangerous since it opens an opportunity where someone might overgeneralize when making predictions (Kahneman & Tversky, 1974). In business, hindsight bias contributes to managers falsely believing that they can foresee market conditions better than they actually can and thus become overconfident (DellaVigna, 2009; Kahneman & Tversky, 1974).

Self-Serving Bias: Finally, cognitive bias includes the self-serving bias, where people tend to attribute their successes to personal factors such as effort or intelligence and blame external factors for their failures. For instance, a CEO will boast about having taken the company this far because it is, in part, due to their skills acquired over time rather than that of the

company. In contrast, when the company does poorly, it is just as likely the CEO will attribute this to forces beyond their control—i.e., the external environment (Aronson, 1973). This bias also stigmatizes failures, and as a result, individuals are less likely to review their role in the cause of these failures. This can generate personal stagnation and cause people to continue applying non-productive strategies over time (Aronson, 1973). This bias can be problematic, as people in the organization learn less from mistakes because they are not likely to take a critical view of their contribution to failures. Gradually, this may stunt self-development and perpetuate ineffective approaches (Aronson, 1973; Schwartz, 2024).

Cognitive Dissonance

Cognitive dissonance is the sensation that results when a person holds two conflicting beliefs, values, or ethics simultaneously. This inconsistency produces discomfort, which will either change a person's behavior or make them rationalize to align with their new belief (Aronson, 1973). Smokers, of course, provide the classic example of cognitive dissonance—that is, people who continue to smoke even though they know it's bad. To reduce the dissonance between the conflicting thoughts (I smoke even though I know it can kill me), smokers may minimize either the importance of their behavior or its impact: “It's not that bad,” or they may justify their actions by focusing on what rewards they currently obtain from smoking—“It helps me relax” (Aronson, 1973). This process of rationalization lets them keep doing the behavior without feeling much guilt or anxiety, but it also keeps them in a cycle of unhealthier options. The significant impact of these factors undermines conventional perceptions of market rationality, underscoring the necessity for a more comprehensive knowledge of their implications on both individual and organizational decision-making

One well-known example is post-decision dissonance, which occurs in any situation where an individual must choose between two alternatives that are roughly equal, i.e., equally good or bad. For example, Sheldon has two job offers, but he likes both equally. However, once he decides on the course of action, it leads him to face cognitive dissonance about whether his decision was the right one. That added discomfort may lead him to shift his attention from negatives in his new job, focusing instead on only positive aspects to dehumanize the other option. Meanwhile, he might convince himself that the other job—the one he hadn't chosen—wouldn't have been all that great after all. This selective perception further confirms his decision and minimizes any remaining hesitancies (Aronson, 1973). Although this process may provide psychological ease, it can also cause one to overweigh the options in favor of the choice made, which inhibits a more balanced evaluation of the pros and cons.

Interaction Between Biases and Dissonance

Cognitive dissonance and cognitive biases frequently synthesize to create increased potency, compounding the damage done by errors in perception. Confirmation bias frequently intensifies when individuals experience cognitive dissonance, for example. People are more likely to seek information that supports a decision if they regret it after making the choice. Thus, the resulting feedback loop between these items is substantial—the bias continues to be supported by efforts to reduce dissonance, which then makes it more difficult to correct mistakes (Aronson, 1973; Kahneman & Tversky, 1974).

This can be potentially deadly, especially in financial markets. An investor who buys a stock only to have the share price fall could look for positive news about the company to reconcile with their purchase instead of selling it and ending up losing more. This emotionally

driven behavior generally results in huge financial losses and some portion of the market volatility due to a predominant number of investors who invest in biased and emotion-driven decisions (Loewenstein et al., 2003).

CEO Overconfidence

CEO overconfidence is a psychological bias invoking the idea that CEOs overestimate their abilities to deliver good performance (Malmendier & Tate, 2005). CEO overconfidence can impact the entire firm, as overconfident CEOs undertake more risks, pursue bolder strategic initiatives, and discount contradictory views of their peers or advisors (Malmendier & Tate, 2005). Overconfident CEOs are even more prone to making large merger and acquisition deals, taking risky projects without considering the ramifications correctly, or ignoring information that would go against their opinions just because they feel correct (DellaVigna, 2009). Malmendier and Tate (2005) conducted a study on overconfidence that shows it is a significant problem in corporate leadership—not only affecting the chief executive's decision-making but also the whole team around them. One well-known fact is that it also triggers reckless behavior—excessive risk-taking that serves to increase market fragility and corporate losses.

For instance, overconfident CEOs may take on more leverage than is optimal or sometimes invest in costly projects that fail to deliver returns over time (Malmendier & Tate, 2005). Valeant Pharmaceuticals, discussed in more detail later, reveals the dangers of a CEO who is overly optimistic about their share price: despite multiple acquisitions that helped it grow, Valeant went bankrupt (DellaVigna, 2009). Moreover, CEO overconfidence can affect decision-making quality since overconfident leaders are likely to neglect negative feedback and sometimes even different viewpoints. Worse yet, this could result in a culture where the firm

does not value opposing beliefs, which only magnifies the CEO's poor-thinking biases (Malmendier & Tate, 2005). This overconfidence can also lead CEOs to misinterpret the complexity of market dynamics and possibly inflate their self-importance, leading to strategic failings as well as missed opportunities. Furthermore, face loss has the potential to lower stakeholder trust in organizational processes and negatively impact corporate market value when associated with invisible ventures or financial mismanagement (Hao, 2022).

These studies illustrate the pervasive effects of CEO overconfidence on organizational outcomes, including decision-making, financial health, and company culture. It is crucial to be aware of the implications this psychological tendency can have in minimizing risks and establishing more balanced leadership strategies.

Case Studies

Case Study: The GameStop Short Squeeze (2022)

Retail investors on platforms such as Reddit's WallStreetBets and Robinhood manipulated GameStop's stock price in January—sending the stock to open at a record high above $300, up from less than $20. Then, inflation fears receded, which caused the U.S. economy to soar in the year-on-year comparison, triggering a buying frenzy by institutions as they tried to buy back into GameStop at exorbitant prices and push up the price, demonstrating the power of online communities when it comes to moving markets (Malz, 2021; Hao, 2022; Liu et al., 2022).

The events surrounding the GameStop short squeeze provide an example of how different heuristics (availability and representativeness heuristics) impacted investor behavior.

Psychologists would call this latter phenomenon the availability heuristic, where investors base decisions on how easily they can recall similar events like past rallies in Fitbit and Nokia. Success stories were highly visible on social media platforms. This heuristic caused retail investors to overestimate the chances of making quick profits (Kahneman & Tversky, 1974; Malz, 2021). This heuristic may have been further reinforced by the popular media coverage of the price surge of GameStop, which is likely to widen the attention of quick profits in investors' minds (Hao, 2022; Liu et al., 2022).

According to Malz (2021) and Hao (2022), the representativeness heuristic was also involved. Retail investors were influenced by analogies between GameStop, a company with its own complexities, and a start-up tech firm that eventually garnered a following. This ultimately led to simplistic decision-making in which base-rate information about the broader decline of brick-and-mortar retail—such as those exemplified by GameStop—was potentially overlooked in favor of expectations that GameStop might produce successes akin to those produced by other firms in the past (Loudenslager, 2020; Kahneman & Tversky, 1974). The echo chambers of online forums simply increased the number of biased sources echoing shared beliefs and, therefore, buttressed a similar cognitive shortcut that only circulated information reaffirming these predispositions (Malz, 2021; Liu et al., 2022).

Heuristics had an immense influence on the market and its behavior during the GameStop episode, creating a great deal of volatility and financial risk. The availability heuristic directed investors' attention toward easier examples of financial success to recall—recent, vivid examples—like the early retail investors in GameStop who saw large returns (and are disproportionately highlighted on platforms like Reddit and mainstream media) (Hao, 2022; Liu et al., 2022). This error in perspective caused many new investors to incorrectly believe that

similar results were common, which led to a buying craze not grounded in reality for GameStop's underlying financial standing (Malz, 2021; Loudenslager, 2020).

Finally, the representativeness heuristic led market participants to compare GameStop (a small company with no innovation) to other turnarounds that had defied expectations (Kahneman & Tversky, 1974; Hao, 2022). This bias led to a disregard for the fiscal health of GameStop (declining revenues, etc.), as well as the challenges brick-and-mortar retail faced in general (Malz, 2021; Loudenslager, 2020). Online forums served as echo chambers, perpetuating these biases through one-sided stories that backed up the idea of GameStop possibly being a great success story, despite opposing evidence (Liu et al., 2022; Malz, 2021). Fueled by these heuristics and the social influence spread in online communities, the stock price quickly detached from its intrinsic value as investor sentiment became even more optimistic, and they purchased more stocks.

The GameStop short squeeze was enormously costly in both financial and reputational terms. As a result, hedge funds shorting GameStop's stock, like Melvin Capital, suffered from being pressured to buy back the shares at high prices, incurring billions of U.S. dollars in losses (Malz, 2021; Liu et al., 2022). Despite some retail investors who reaped rewards early, many buying at peak prices lost most of their fortunes when the stock eventually stumbled (Hao, 2022). This, in turn, led to backlash and regulatory scrutiny of trading platforms like Robinhood that halted buying pressure on GameStop shares at the height of its surge due to concerns about market structure fairness and transparency (Loudenslager, 2020; Malz, 2021). The incident has shed light on the rising power of retail investors and social media in financial markets, triggering concerns that its fallout should be governed by new regulations to control market turbulence as

well as hedge potential manipulations prompted by online collaboration (Malz, 2021; Hao, 2022; Liu et al., 2022).

The GameStop short squeeze was propelled by two major heuristics: the availability heuristic and the representativeness heuristic. Retail investors saw what had happened with recent "meme stock" victories and thought they could score similar gains by swooping in on GameStop. On top of that, investors erroneously compared GameStop to companies with similar valuations without referring to fundamentals. It also served to amplify those biases via mechanisms such as social media, like Reddit, which became an echo chamber and only reinforced this incorrect thinking.

This situation highlights the need for practical and scalable solutions that address common heuristics such as the availability heuristic and the representativeness heuristic with a minimum requirement for investor education to make an impact on a larger crowd of investors. A primary way to do this is by making general, understandable financial information more widely available. Making unbiased data more abundant and available on trading platforms makes the investor much more likely to make informed decisions relying on facts rather than cognitive shortcuts. For instance, instead of concentrating on stock price trends, fundamental details like earnings reports, market conditions, and expert evaluations in layman's terms could be displayed. Providing these details would help investors move away from thinking micro and reacting to current high-profile news and refocuse them on real value.

Another avenue of pragmatism—to encourage reflective decision-making. Subtle reminders or short breaks within trading platforms to force investors to pause before completing their trades could work. Or even something as basic as a pop-up on the screen that says, "Have

you used all the data available?" This way, it might prompt more reflective thinking and less heuristics-based processing.

Case Study: Volkswagen Emissions Scandal

Volkswagen was found to have violated emissions standards after it was discovered that it had installed defeat devices in its diesel cars. In 2015, while, on paper, cars equipped with these defeat devices may have passed regulatory standards during testing, in reality, they emitted up to 40 times more pollution than is legally allowed (Volkswagen: The Scandal Explained - BBC News, 2015). The scandal affected around 11 million vehicles worldwide and had significant legal, financial, and reputational consequences for the company (Loudenslager, 2020). Volkswagen executives and engineers did not take responsibility for the decisions leading to both unethical practices and market-driven pressures to stay ahead in a highly competitive, environmentally regulated market.

This scandal is regarded as one of the most serious in the company's history and within the automotive industry as a whole. Volkswagen faced a series of lawsuits, government inquiries, and regulatory actions, which resulted in multi-billion-dollar fines. Many cars were subsequently recalled, and the company provided compensation to affected customers (BBC News, 2015). The scandal also damaged Volkswagen's reputation, as the company had previously positioned itself as a leader in clean and efficient diesel technology. Public confidence in the company declined, and Volkswagen lost market share (Forsgren, 2019). The scandal prompted increased scrutiny across the entire industry and led to changes in emissions regulations and testing practices (BBC News, 2015).

The Volkswagen emissions scandal illustrates several cognitive biases that contributed to the company's actions. One of the key biases at work was overconfidence. Volkswagen management believed it was ahead of the regulatory curve, which led to an underestimation of the potential negative consequences of its actions—including the likelihood of being caught and the potential damage to its reputation (BBC News, 2015).

Confirmation bias also played a role. Volkswagen's management selectively focused on information that supported its view of the necessity of defeat devices to maintain competitiveness, disregarding ethical and legal concerns (Loudenslager, 2020).

Groupthink further contributed to the situation. Volkswagen's corporate culture became inflexible, discouraging dissent and rewarding compliance. Employees were under pressure to meet ambitious sales targets and follow top-down mandates from management, which created an environment where unethical decisions were normalized, and employees adhered to directives without questioning their legality or morality (Forsgren, 2019).

Cognitive dissonance was also a factor. Volkswagen's engineers and executives were aware of emissions standards but rationalized the installation of defeat devices as a necessary measure to achieve sales and maintain market dominance. This rationalization helped alleviate the discomfort of acting against legal and moral standards (Loudenslager, 2020).

To prevent similar scandals in the future, companies must address the cognitive biases and dissonance that lead to unethical decision-making. Creating an organizational culture that promotes open communication and reflection is essential. When employees feel empowered to voice concerns and question management decisions, groupthink can be minimized, and ethical practices can be maintained. If Volkswagen had promoted transparency and accountability, the

use of defeat devices might have been detected earlier, preventing the scandal from escalating (Loudenslager, 2020).

Furthermore, structured decision-making processes can help organizations avoid cognitive biases. For instance, in the Volkswagen case, exhaustive testing for legal compliance and environmental impact could have reduced the likelihood of the company adopting an unethical solution. Considering multiple perspectives when making decisions can mitigate confirmation bias and encourage more balanced and well-grounded choices (Loewenstein et al., 2003).

Awareness of cognitive biases and dissonance is crucial. Leaders and employees can adopt a more ethical perspective by recognizing overconfidence, confirmation bias, and groupthink. Companies can educate their workers on these biases and establish policies that promote ethical behavior and adherence to the law (Aronson, 1973; Kahneman & Tversky, 1974; DellaVigna, 2009). By understanding and managing these risks, organizations can improve decision-making processes and avoid incidents like Volkswagen's.

Case Study: Valeant Pharmaceuticals

A string of price increases and infamous practices nearly broke Valeant Pharmaceuticals, the Canadian drug maker. Over the same period, under now-ousted CEO Michael Pearson, Valeant spent billions on acquisitions of smaller companies and jacking up prices of key drugs. However, this strategy, plus cost-cutting and raising prices, in the end, brought it down (CBC News, 2017; Seven Pillars Institute, 2017). Pearson's reliance on acquisitions and price hikes created financial and reputational issues for Valeant (CBC News, 2017).

What led Pearson to the decisions he made as CEO was multi-faceted. CBC News (2017) wrote that the early victories of Valeant buying other pharmaceutical companies to grow its revenue and stock price supported Pearson in his notion that he could keep expanding without too many repercussions. Critical investing gurus like Bill Ackman stacking on were only going to reaffirm Pearson's perspective (Seven Pillars Institute, 2017). In addition, Valeant generated risk as a company by having a corporate culture that took big risks but left the company without enough protections to make sure it would not be on the hook for such liabilities long-term. The confidence when managing market dynamics and the company's rapid growth likely gave Pearson belief in this environment (Volkov, 2016).

Michael Pearson believed in his different way of looking at drugs with such confidence, despite all skepticism throughout his Valeant career. Now there was a new style of pharmaceutical stewardship: the company acquired while reducing its R&D—a bold innovation in pharmacophore operating systems. Subsequent to these acquisitions, Valeant aggressively increased drug prices, which led to explosive and thus high leverage (CBC News, 2017; Volkov, 2016). However, neither Pearson nor the crew at Valeant fully realized how unsustainable that tactic would prove in the long run without triggering a level of regulatory scrutiny and public blowback over drug price increases. In time, this reliance on price increases rather than investment or innovation to drive growth weakened Valeant outright and cast a shadow over the company. Valeant's dependence on rising prices as opposed to fostering growth through the discovery of new drugs weakened the very fabric of its business model. Additionally, the fact that Valeant sold some of its drugs through specialty pharmacies such as Philidor raised suspicions that it was engaging in price gouging, eventually triggering investigations and further undermining credibility (Volkov, 2016).

The costs of these approaches were high. Valeant suffered enormous financial losses, with the company's stock crashing from over $200 to less than $25 nearly overnight. The consequences of this plummet were financial losses for investors, including Bill Ackman (CBC News, 2017). The company's reputation took a hit too, in part due to deep price hikes for essential lifesaving drugs like Cuprimine and Nitropress post-Valeant (Seven Pillars Institute, 2017). Thus, Valeant weakened its balance sheet with leverage, eventually becoming overly levered and beginning to sell hard assets to pay down debt.

Succession and Governance**:** Governance is essential to dealing with the potential consequences of CEO overconfidence. The answer to this is to improve governance structures and build accountability around them. A board of directors, when committed and independent, can monitor the CEO and their decisions to ensure they serve the long-run interests of the firm (Malmendier & Tate, 2005). A firm culture that fosters questioning and challenges to forecast and test the CEO's decisions prior to implementation, together with governance reforms, can decrease overconfidence (DellaVigna, 2009).

Lastly, it is important to recognize the reasons behind CEO overconfidence to mitigate the risk of this bias. Executive coaching or other forms of leadership training may help CEOs recognize faulty decision-making biases within themselves (Loewenstein et al., 2003). Similarly, robust structured decision-making frameworks founded on evidence-based analysis can help ensure that CEOs do not suffer from overconfidence and can make their decisions with more data at hand. Regular performance evaluations that incorporate feedback from peers, employees, and stakeholders can ensure that CEOs remain grounded and avoid decision-making errors related to overconfidence (Malmendier & Tate, 2005; Loudenslager, 2020).

Conclusion

Leaders, on a daily basis, need to make decisions in a fast-paced organizational environment, where psychological factors such as heuristics, cognitive biases, or overconfidence can have a profound effect on outcomes. Although heuristics are helpful in getting a quick mental picture, they often result in poor decisions—as many individuals found with the GameStop short squeeze. Similarly, behavioral determinants of decisions and choices can foster massive financial misdeeds, such as those that led Volkswagen and Valeant Pharmaceuticals to financial ruin: cognitive biases including overconfidence, confirmation bias, and groupthink running unchecked.

To reduce these risks, it is essential to implement measures that promote sound decision-making. Providing access to unbiased financial information, fostering a corporate culture of transparency, and strengthening governance can help mitigate the impact of these biases. By understanding and addressing these psychological influences, investors and companies will be better equipped to navigate market complexities, leading to more ethical and successful decision-making processes

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