

A Work Project, presented as part of the requirements for the Award of a Master's degree in
Management from the Nova School of Business and Economics.

CAN INTERCORPORATE AND NATIONAL ENVIRONMENTS SURROUNDING A
FIRM REINFORCE OVERCONFIDENCE THEREBY CONTRIBUTING TO POOR
DECISION-MAKING? EVIDENCE FROM THE WIRECARD CASE.

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01/2026

ABSTRACT

This thesis investigates how external environments can reinforce managerial overconfidence through an in-depth study of the Wirecard scandal. It examines how intercorporate networks and cultural expectations shaped the company's growth and muted warning signals. This analysis shows the German regulator, auditors, financial peers, and political actors gradually converging around Wirecard's credibility. In a context where Germany was seen as lagging digitally, the aspiration for a champion reinforced executives' confidence and delegitimized dissent; creating a self-reinforcing loop that amplified overconfidence and resulted in flawed decisions. The study also highlights the need for strong independent oversight and safeguards to protect critical voices.

KEYWORDS

Overconfidence, Cognitive Biases, Interorganizational Environment, National Context, Decision-Making, Wirecard Scandal

This work was funded by Fundação para a Ciência e a Tecnologia (UID/00124/2025, UID/PRR/124/2025, Nova School of Business and Economics) and LISBOA2030 (DataLab2030 - LISBOA2030-FEDER-01314200).

INTRODUCTION

In recent years, increased attention has been given to how cognitive biases shape judgement and impact organizational outcomes. Top executives' decisions affect strategy, risk exposure and governance, and when these are influenced by biases, outcomes may be harmful (Ho et al., 2016). Traditional decision-making models assume actors to be fully rational, but research has shown that behavior often deviates from this assumption (Simon, 1993).

Among the many cognitive biases explored in literature, overconfidence is one of the most common and consequential. Overconfident leaders underestimate risks, overestimate their capabilities, and resist information that goes against their beliefs (Ehrlinger et al., 2016). However, biases do not exist in isolation. They interact with the external environment, which can amplify or constrain their effects. Despite this, few studies explore whether intercorporate and national contexts may actively reinforce overconfidence.

The Wirecard's scandal offers an exceptional opportunity to explore such interaction. The company operated in a dense network of institutions – financial peers, the German regulator, auditors, political actors – whose norms and expectations shaped behavior (DiMaggio & Powell, 1983; Galaskiewicz, 1985). It also benefited from national narratives that framed it as the new German technological champion (German Bundestag, 2021). These created an external environment that insulated executives from scrutiny while amplifying existing overconfidence.

This thesis, therefore, asks if intercorporate and national environments reinforce overconfidence and lead to poor decision-making. Using Wirecard as a case study, it examines how external pressures and national cues amplified overconfidence and muted responses to warning signs. By combining behavioral and institutional perspectives, this study aims to contribute to a better understanding of the environment-biases interaction, crucial for corporate governance especially, in innovation-driven, competitive industries.

CHAPTER 1: LITERATURE REVIEW

1.1 COGNITIVE BIASES

There are multiple definitions for the term *bias*. Nonetheless, a consensus has been reached regarding the fact that *bias* refers to an irrational belief that influences the way a decision – based on facts and evidence – is made (Acciarini et al., 2020). Althubaiti (2016) extends further, arguing that, beyond an irrational belief, *biases* can also be systematic errors. More objectively, cognitive biases are systematic tendencies in human cognition to distort an aspect of objective reality, producing altered representations of it (Acciarini et al., 2020).

No matter how much a rational decision-maker believes they have control over judgements, cognitive biases are inescapable. Human beings have a tendency to resist discipline; consequently, cognitive biases are not only common but also inherent to human nature. They embody a mechanical behavior, which allows the human mind to quickly process information. As Das & Teng (1999) puts it “cognitive biases are an ever-present ingredient of strategic decision-making” (p. 757). The outcome may not be optimal, but it is often perceived as satisfactory (Ehrlinger et al., 2016). Is this not enough? Certainly not, as whilst biases expedite decision-making, they do so at the cost of increasing errors rooted in prejudice (Dale, 2015).

In management, there are many cases in which puzzling decisions were made that went against rational behavior expectations. Taking strategic decisions is not merely a routine. It can be ambiguous, complex, and entail a lot of risk. Biases manifest as a way to cope with uncertainty, and it is relatively easy to find cases where biases, such as overconfidence, played a role in the strategic decision-making process (Berthet, 2022).

1.2 OVERCONFIDENCE

Overconfidence refers to the tendency people have to excessively believe their own abilities, knowledge, or judgements. When overconfident, people tend to overestimate the quality of their decisions, as Schaefer et al. (2004) note: “(...) overconfidence is defined as a positive difference between confidence and accuracy” (p. 473). Overconfidence is one of the most pervasive bias if not the most (Ehrlinger et al., 2016). This is easy to envision, as most people have experienced situations where they miscalculated their abilities, leading to misguided visions and outcomes significantly different from those anticipated. A clear example of this is the Dunning-Kruger effect – when people who are shortfall in knowledge or competence are not able to recognize such deficit, substantially overestimating their abilities. In his article, Dunning (2011) addresses this matter very plainly: “(...) those who are incompetent, for lack of a better term, should have little insight into their incompetence” (p. 260).

The tendency for professional managers to make biased judgements and to display inflated views of their competence – thinking on average that they are outperforming their peers – hinders the decision-making process (Dunning, 2011). Overconfidence also leads decision-makers to attribute causal relationships to their behavior and actions, disregarding other players potentially influencing that relationship, and to misestimate risk (Brunzel, 2021).

CAUSES OF OVERCONFIDENCE

Numerous factors influence an individual’s level of confidence, with personality traits and other cognitive biases standing out as particularly significant. Each individual presents a different set of personality traits which characterize the way one behaves. To better understand human personality and behavior, multiple theoretical frameworks were developed, namely the Big Five Personality Model and the Dark Triad (Robbins & Judge, 2021). The Big Five suggests that five fundamental dimensions encapsulate the majority of individual differences regarding human personality – conscientiousness, neuroticism, agreeableness, openness to experience,

and extraversion. Research has tied the latter, extraversion, to overconfidence. In a study conducted by Schaefer et al. (2004), results led scholars to conclude that “extraversion significantly predicted overconfidence” (p. 478). It was also registered that an increase in the respondent’s overconfidence did not match an increase in accuracy. Moreover, the study suggested that accuracy and confidence-related processes may, to some extent, stem from personality (Schaefer et al., 2004).

Furthermore, extraverts tend to experience and display positive emotions. They are usually more enthusiastic and optimistic (Bono & Vey, 2007; Schaefer et al., 2004). Dispositional optimism refers to a generalized and steady tendency to anticipate favorable outcomes in various aspects of life (Scheier & Carver, 2018). Of course, one can be optimistic because they have great confidence in their capabilities, but such optimism will be a fine line between a healthy belief in one’s competence and overconfidence.

Other cognitive biases, such as the availability bias, can also contribute to excessive confidence. The availability bias relates to the impossibility of picturing every possible scenario in which an event can unfold. In Russo & Shoemaker’s (1992) words “(...) what’s out of sight is often out of mind” (p. 11). People not only over-fixate on the expected scenarios and past experiences, but also have the disposition to justify their decisions on easily accessible information. Moreover, situations that evoke strong emotions are easier to remember and therefore more likely to influence decisions than colder, more rational scenarios (Russo & Shoemaker, 1992). A decision-maker on a streak of success and immensely satisfied with their performance is prone to overconfidence and may misjudge the likelihood of a company’s failure due to availability bias. They are more likely to recall past positive outcomes than to predict an eventual collapse.

1.3 OVERCONFIDENCE AND DECISION QUALITY

As explored, overconfidence negatively impacts decision-making leading to poor decision quality. Before examining this relationship further, it is important to differentiate a high-quality decision from a mediocre one. Yates et al. (2003) define a decision as a “commitment to a course of action that is intended to produce a satisfying state of affairs” (p. 15). The more satisfying the state of affairs that stems from a decision, the higher the quality of such decision.

In the present review, it has been established that overconfident people are deluded regarding their skills and knowledge, and often reveal a predisposition to make inaccurate judgements. These elements contribute to worsening decision-making, producing potentially ruinous outcomes. Subpar decision-making tied to overconfidence has had major consequences on the financial market, even being linked to the 2008 crisis (Ho et al., 2016). Researchers described how overconfident bank CEOs tend to underestimate the risks of increased loans during periods of economic growth, allowing their institutions to take on more leverage than those led by less confident CEOs. When the 2008 financial crisis took hold, these banks experienced greater capital losses, sharper declines in performance, and higher rates of CEO turnover and failure (Ho et al., 2016). This conclusion draws a clear link between overconfidence and poor decision quality.

In academic literature, there is consistent support for this reasoning, as overconfidence is a widely spread phenomenon. For example, venture capitalists, despite their expertise, are also subject to it (Zacharakis & Shepherd, 2001). Invernizzi et al. (2017) reached a similar conclusion, identifying a strong link between filing for financial distress and overestimating a company’s financial health. Once again, overconfident entrepreneurs tended to miscalculate the aftermath of their decisions, failing to reach a satisfying state of affairs. Overall, evidence indicates that overconfidence negatively affects decision quality.

1.4 INTERCORPORATE ENVIRONMENT AND DECISION MAKING

No organization is in exile. They are the archers, and they are the prey in a landscape of interorganizational relations. In other words, these relations – between business partners, competitors, regulatory agencies, governmental bodies, or even the media – shape access to resources, legitimacy, and information (Galaskiewicz, 1985). As a result, decision-making is often a response to pressures and signals from outside the organization rather than a purely autonomous choice.

The concept of *action sets* is very useful for studying the mentioned environments and will play an important role in the analysis of the case study. As defined by Galaskiewicz (1985), *action sets* are “(...) essentially purposive networks.” (p. 8). In essence, they are groups of organizations that work together to achieve a certain objective. There are multiple conditions impacting the coordination level of an action set. This study focuses on the following two: (1) the extent to which an organization assumes a leadership role and (2) similarity in values and attitudes among organizations.

A complementary perspective on how organizations interact is given by DiMaggio & Powell (1983). These researchers’ notion of the *iron cage revisited* explains how organizations within the same field tend to become homogeneous, as a result of coercive, mimetic, and normative pressures. Coercive pressures relate to the pressure exerted on organizations by those they depend upon, and cultural expectations in society; mimetic pressures stem as a response to uncertainty; and normative pressures are related to professionalization (DiMaggio & Powell, 1983). All encourage conformity, a fertile ground for cognitive biases to develop.

Leaders of organizations deeply tangled in dense networks and subject to the pressures described above may find their decisions increasingly conditioned by collective expectations. This can amplify cognitive biases – including overconfidence – as decision-makers rely on shared assumptions and established practices rather than critical evaluation (Hart, 1991).

Therefore, understanding how the intercorporate environment influences cognitive biases and limits rational decision-making can be very important for improving decision quality.

1.5 NATIONAL ENVIRONMENT AND DECISION MAKING

Just as the intercorporate environment shapes decision-making so does national culture. In fact, researchers have consistently shown that each culture's distinctive worldview impacts decision-making, leadership style, and also communication patterns (Piwowar-Sulej, 2022). The Hofstede's model of cultural dimensions – comprising six dimensions: power distance, individualism versus collectivism, masculinity versus femininity, uncertainty avoidance, and long-term versus short-term orientation – has evidenced that cultural differences manifest in the decision-making process (Cabral et al., 2020). Considering such, it is not a reach saying that the cultural imprint impacts perceptions.

Moreover, Weber & Morris (2010) and Choi et al. (1999) have argued that this cultural imprint affects people's susceptibility to certain cognitive biases, including overconfidence. National pride may also play a role in decision-making behavior, as there is evidence that when an event happens that challenges national identity – a crisis or a loss of sovereignty – people who feel proud of their nation tend to respond with an irrational level of loyalty or defensiveness (Macintyre, 2015). Considering all these factors, decision-making appears to be strongly influenced by the outside context, being it the intercorporate environment or national culture.

1.6 PURPOSE OF THE STUDY

Building on existing research, this study recognizes that cognitive biases can influence decision-making, often leading to subpar outcomes and, in extreme cases, catastrophic repercussions (Ho et al., 2016). The literature also shows that both intercorporate and national environments shape decision processes (DiMaggio & Powell, 1983). However, little can be

found about how these environments interact with cognitive biases, particularly overconfidence, to distort judgment (see Appendix 1).

Accordingly, this thesis seeks to address the following research question: *In what ways might Wirecard's intercorporate relationships and national context have reinforced overconfidence, thereby contributing to poor decision-making?*

The aim is to explore how intercorporate context, and, on a broader level, cultural narratives validated and catalyzed biased judgements in the Wirecard scandal. Wirecard's rise and subsequent collapse occurred within a dense network of institutions, including regulators, auditors, other banks, prosecutors, and national media (McCrum, 2022). Later investigations and inquiries showed that regulators, political actors, and parts of Germany's financial press were unusually aligned in the defense of the company, despite all the red flags (German Bundestag, 2021). Moreover, the fintech carried a symbolic value as the new German and European tech champion, which influenced public and institutional narratives (McCrum, 2022; Orlandi, 2021). Through a detailed study of the Wirecard scandal, this thesis illustrates: (1) how external environment validated erroneous beliefs and reinforced overconfidence, by exploring the interaction between environmental pressures and the psychological tendencies of CEO Markus Braun and COO Jan Marsalek, and (2) how such dynamics undermined critical scrutiny, thus bolstering enough overconfidence to run the biggest German fraud (Taub, 2023).

CHAPTER 2: METHODOLOGY

2.1 RESEARCH DESIGN

This study employs a qualitative single case study to investigate how intercorporate and national contexts can reinforce overconfidence through the example of the Wirecard scandal. A qualitative case study is particularly suitable as the phenomenon examined is complex and context-dependent (Gaya et al., 2016; Yin, 2003). Since the goal is to understand how these

external environments shaped decision-making, the case study offers the depth and detail needed to understand such interactions (Brown, 2008). Unlike quantitative designs, which isolates variables, qualitative cases allow to explore the phenomenon in the real-life context that gives it meaning (Brown, 2008; Johansson, 2007).

The Wirecard scandal, as an extreme and information-rich instance, meets Flyvbjerg's (2006) argument that extreme cases reveal mechanisms more clearly than ordinary cases. Several forces came together, among them institutional support, national symbolism, and managerial overconfidence, which allowed the interaction between environment and bias to be observable in a way that would be difficult to capture in routine corporate settings. Moreover, the scandal's extensive documentation provides sufficient material to conduct this qualitative analysis.

The choice of a single case study is aligned with the research objectives. As this study seeks to understand how external environment may amplify overconfidence, rather than to test the frequency with which it occurs, a more context-sensitivity, descriptive design offers the most suitable methodological approach. On top of that, its easy-to-apply approach makes it an accessible tool for studying the complexity of the human phenomena (Taylor & Francis, 2013).

2.2 DATA SOURCES

This thesis relies exclusively on secondary data, including academic literature on cognitive biases, institutional environment, national culture, and the Wirecard scandal; investigative journalism; regulatory and institutional reports; and, lastly, publicly available legal documents. Secondary sources are appropriate when primary access to decision-makers is not possible. Additionally, cross-checking multiple independent sources ensures interpretive rigor (Bowen, 2009).

2.3 VALIDITY AND RELIABILITY

Credibility was enhanced through the analysis of multiple independent sources, including regulatory reports, investigative journalism, parliamentary inquiries, trial testimony and academic studies. This diversity reduces the risk that conclusions are biased or that rely solely on one perspective (Brown, 2008; Yin, 2003). Reliability was further supported by grounding this thesis in well-established theoretical concepts. In particular, it draws on overconfidence from cognitive psychology (Acciarini et al., 2020; Berthet, 2022; Das & Teng, 1999; Ehrlinger et al., 2016), institutional isomorphism from institutional theory (DiMaggio & Powell, 1983), and the concepts of action sets and interorganizational networks (Galaskiewicz, 1985). These provided a structured basis for interpreting data and helped mitigate potential analytical bias.

Since qualitative single case studies rely on interpretation, their findings cannot establish definitive causal relationships. Instead, the objective of this study is to develop explanations that are theoretically grounded and can be applicable to broader concepts. These conclusions are not supposed to be generalized across entire populations (Flyvbjerg, 2006; Yin, 2003).

CHAPTER 3: THE WIRECARD AG SCANDAL

This study examines the rise and fall of Wirecard AG, a German payment processing and financial services company that aspired to become the “European PayPal”, but ultimately filed for insolvency in June 2020 following the largest financial scandal in Germany’s history.

The analysis focuses on the behavior of key players surrounding Wirecard – including major banks, the German financial regulator BaFin, prosecutors, and the media. It also examines Wirecard’s background, traces the company’s collapse, and analyzes the behavior of its leadership: CEO Markus Braun, now in custody and the main defendant in the criminal trial concerning Wirecard’s collapse, and COO Jan Marsalek, one of Europe’s most wanted fugitives (Jolley, 2024). It then explores whether an environment marked by impunity, lack of due diligence, and national enthusiasm for a supposed new German champion may have enabled

the leadership's overconfidence. Finally, the study addresses the following question: can external factors – specifically the intercorporate environment and national culture – act as catalysts for overconfidence, ultimately leading to flawed decision-making?

3.1 WIRECARD BACKGROUND

Wirecard was founded in Munich in 1999, emerging from the ashes of the dot-com boom as a small and struggling payments processor which allowed websites to accept credit card payments. During the same period, Austrian businessman Paul Bauer-Schlichtegroll was struggling to find a way to process credit card transactions for his high-risk online ventures – chiefly adult-content platforms. In 2002, after a series of difficulties and operational failures, Wirecard faced insolvency. An opportunity seized by Bauer to gain control over an already licensed payment processor, thus finding the much-needed solution for his delicate matters. After acquiring the company, he appointed Markus Braun, a former consultant from KPMG, as Chief Executive Officer (CEO), and kept Jan Marsalek as an employee, who would later become Braun's protégé and rise to the position of Chief Operation Officer (COO). In doing so, Bauer paved the way for these two Austrian men to transform a niche, busted, payment processor into Germany's and Europe's largest fintech (McCrum, 2022). Much like the myth of Icarus, Braun and Marsalek rise was matched only by the magnitude of their fall, becoming the protagonists in the biggest financial scandal in European history.

With Markus Braun as CEO, Wirecard expanded its operations and started processing online gambling payments. In 2005, with the company's core business being managing payments for pornography and online gambling, Wirecard joined Frankfurt Stock Exchange. To avoid the scrutiny associated with an initial public offering, the company employed Bauer's very first approach: acquiring an existing company that had already been vetted. In this case, a defunct

call center group. Through this, Wirecard was able to conceal the true nature of its operations while achieving a public listing (Alderman & Schuetze, 2020; McCrum, 2022).

In 2006, Wirecard acquires the bank XCOM, fusing its non-banking operations with XCOM's. This blending of operations made it harder to examine accounts, as there were no peers with whom to compare Wirecard's books – investors were now almost exclusively relying on scout's honor. Moreover, by acquiring the mentioned German bank, the rebranded Wirecard Bank could issue credit cards and manage merchant's money (Carozza, 2021). Just two years after this, in 2008, the first suspicions arise. However, they are readily discarded. Both the German prosecutors and the financial regulator, *BaFin*, sided with Wirecard. Rather than checking the company's practices, they opened investigations into the man who had raised the suspicions, for alleged market manipulation on the basis that they had not disclosed their short positions against Wirecard. Also, Ernst & Young (EY) became Wirecard's external auditor (McCrum, 2022). Notably, the same auditing firm was, in 2010, sued for allegedly facilitating accounting fraud in the collapse of Lehman Brothers during the 2008 financial crisis (Freifeld, 2015).

In 2010, Marsalek is at last appointed COO. Between then and 2014, the company raised €500 million from shareholders, which it used to acquire obscure payment companies across Asia and the Middle East. This expansion relied on strange deals, characterized by limited disclosure and a lack of transparency regarding key parts of the transactions, as well as odd prepayments and large sums paid for struggling companies (Jolley, 2024). No matter how shady these deals were, they fueled Wirecard's rapid growth – and the company was avid. In 2015 and 2016, suspicions resurface: Financial Times (FT) publishes the *House of Wirecard* series, questioning some of the companies practices; *J Capital Research* claims that Wirecard's operations in Asia are much smaller than what the company disclosed; and a group of short sellers under the pseudonym *Zatarra* accuses the company of money laundering. But history appeared to repeat itself: rather than investigating Wirecard, BaFin focuses on *Zatarra* for alleged market

manipulation. Journalists from the FT and other Wirecard critics are targeted in a hacking campaign that would go on for several years (McCrum, 2022). Still in 2016, Wirecard takes over Citibank's prepaid credit card business – happenstance or not, prepaid cards are often considered a key instrument for money laundering (Choo & Putt, 2008; FinTech Futures, 2017). The following year, a renewed wave of investor optimism drove Wirecard's share price to more than double.

In March 2018, Wirecard Singapore launches an internal investigation after a whistleblower raised concerns about illegal money flows. That said, 2018 feels like a rollercoaster kind of rush, as in August Wirecard shares peak, valuing the company at more than €24 billion – a market capitalization exceeding that of Germany's two largest banks, Deutsche Bank and Commerzbank. Wirecard's list of clients included known retailers, like Aldi or Lidl, and multiple airlines. It seems that the days of processing pornography and online gambling are long gone, and in September, Wirecard replaces Commerzbank in the renowned Dax 30, Germany's main stock market index (McCrum, 2022). It is Europe's largest fintech, the European David against Silicon Valley's Goliath.

THE FALL

As the internal investigation launched in Singapore led nowhere, a whistleblower decided to contact the FT with his suspicions, sharing thousands of compromising emails. In January 2019, the FT publishes its first report based on the disclosed information. Unsurprisingly, BaFin appeared certain about who had engaged in illicit affairs – the FT itself. Shielding Wirecard, the German regulator started an investigation into the newspaper for alleged market manipulation. Conversely, Singaporean authorities understood the seriousness of the FT's claims and raided Wirecard's offices in Singapore. In response, BaFin retaliates by banning

short selling of Wirecard shares, due to the company's importance to the economy. Despite these, Wirecard's share price falls below €100 (McCrum, 2022).

In March, the FT reveals that half of Wirecard's business is outsourced. Moreover, it reports that the company's Philippine partners were registered at odd addresses, including the home of a retired seaman and an abandoned shack. Wirecard files lawsuits against both the FT and Singaporean authorities (McCrum & Palma, 2019). Nonetheless, Softbank, a conglomerate known for its large investments in technology firms, reiterates its confidence in Wirecard by injecting €900 million into the company. On the same day the investment was announced, the FT reveals that only three partner companies, based in the Philippines, Singapore, and Dubai, account for the majority of Wirecard's profit (McCrum, 2019). Auditors are expected to maintain professional skepticism, assess whether such concentrations of profit represent a significant risk, and investigate potential fraud. Yet, EY approves 2018 accounts with minor qualifications about Singapore (Boyer et al., 2023).

In July 2019, Wirecard accuses the FT of colluding with short sellers. These claims were supported through an orchestrated conversation between FT journalists and a London financier – evidence later revealed to have been staged. Mirroring BaFin, the German press – particularly, the newspaper *Handelsblatt* – appeared to side with Wirecard and published the company's allegations. By this point, German institutions seemed unable to challenge their darlings, even as evidence of misconduct accumulated. Three months later, the FT reports that profits at some Wirecard's units are overinflated (McCrum, 2022). The company denies the authenticity of the documents; however, under growing pressure, KPMG is appointed to conduct a special audit. In December, it is revealed that part of Wirecard's reported cash reserves do not belong to the company. In fact, they are held by trustees in escrow accounts – special accounts intended for a specific purpose, such as collateral or guarantees (Jolley, 2024; Uhlig & Busvine, 2019).

In 2020, both KPMG and EY postpone the publication of their audits. By the end of April, KPMG publishes its special report, reporting that its auditors had to go out of their way to gather information due to Wirecard's lack of cooperation. Moreover, KPMG states that it could not verify the authenticity of many third-party arrangements responsible for the majority of the reported profits from 2016 to 2018, casting serious doubt on Wirecard's financial integrity. Meanwhile, EY delayed the publication of its report to June. But in the very beginning of that same month, BaFin finally files a criminal complaint against Wirecard. Police raids the fintech's offices as Munich prosecutors launch a criminal investigation against the CEO Braun and other board members (McCrum, 2020).

On June 18, Wirecard was expected to publish its audited financial results for 2019. Instead it announces that €1.9 billion, supposedly held in trust accounts at the Philippine banks BPI and BDO, is missing. COO Marsalek is suspended, and the very next day CEO Braun resigns. For the first time, Wirecard publicly acknowledges the possibility that a large-scale accounting fraud had been going on for years. Adding to this, the company admits that the €1.9 billion may not exist at all. On June 23, Braun is arrested, and on June 25 Wirecard filed for insolvency. Marsalek disappears, remaining a fugitive (McCrum, 2020; see Appendix 5 for a timeline of key Wirecard events).

CEO MARKUS BRAUN

Markus Braun, a computer scientist from Vienna and Wirecard's CEO from 2002 to 2020, carefully positioned himself as a technological visionary driving a cashless future. His communication style – from the way he dressed to Wirecard's annual reports – emphasized his grandiose ambition and desire to leave a legacy (Davies, 2020; McCrum, 2022; Wirecard, 2017). Under Braun's leadership, Wirecard rapidly became a member of the Dax index, being briefly valued at over €24 billion. Reporting and trial testimony describe a highly hierarchical

environment in which criticism was dismissed as jealousy or malicious intent, leaving little space for scrutiny. Oliver Bellenhaus, an early Wirecard employee and head of Wirecard's largest unit in Dubai, testified to this highly toxic work environment devoid of psychological safety. He claimed Braun was obsessed with rapid growth and that "Braun called the shots, and when he said something, it was done his way" (McCrum, 2022, p. 309; see Appendix 4 for full profile).

COO JAN MARSALEK

Jan Marsalek, who joined Wirecard in 2000, rose quickly within the company despite little formal training. In 2010, he is appointed COO and becomes responsible for Wirecard's global operations (McCrum, 2022). Widely described as a cunning, charismatic man, he was a charming communicator and quite approachable. Yet, he also displayed a strong competitive drive, admiration for rule-bending success stories, and a willingness to pursue ethically questionable strategies (McCrum, 2022). His associations with oligarchs, far-right circles, and intelligence communities, alongside his narcissism and authoritarian tendencies, suggest a personality inclined toward overconfidence and distorted risk perception (Brunzel, 2021). Following Wirecard's collapse in June 2020, Marsalek was suspended, and disappeared within days. As of 2025, he remains a fugitive wanted by German authorities on charges of fraud and market manipulation (Jones, 2025; see Appendix 4 for full profile).

BRAUN-MARSALEK RELATIONSHIP

Braun and Marsalek were clearly different in temperament and background. Yet their relationship became the most defining, and ultimately the most destructive, within Wirecard. Braun, the cold technocrat, was drawn to Marsalek's charming and endearing personality. His ease and apparent ability to execute bold ideas quickly were a bait too enticing to refuse. When Marsalek was appointed COO, the decision was not motivated by his expertise, but rather by

Braun's belief that he was a loyal protégé capable of realizing his strategic ambitions. Their relationship was not grounded on complementary competencies but on mutual reinforcement – while Braun provided legitimacy, managing external relations such as press conferences, Marsalek seemed very effective in driving international expansion (McCrum, 2022).

Their alliance proved poisonous. As Marsalek's influence expanded, so did his contempt. He began to ignore Braun's calls and act more and more independently – he even had an office outside Wirecard's headquarters. This was particularly observable from 2018 onwards, when scrutiny from FT journalists and short sellers increased (McCrum, 2022). Nonetheless, Braun insisted on shielding Marsalek. The CEO's overconfidence and selective perception led him to dismiss warning signs as minor, isolated errors. Following the scandal, Braun tried to position himself as another victim of Marsalek's manipulative personality. However, during the trial, testimonies contradicted Braun's version of events. It was described a corporate environment in which subordinates blindly followed the CEO, suggesting that he was not only aware but also complicit in Marsalek's actions (McCrum, 2022). The relationship between Braun and Marsalek was a toxic symbiosis – two personalities whose delusions fed one another.

3.2 ANALYSIS

This section examines how Germany's intercorporate and cultural context interacted with the personal traits of Wirecard's leaders to catalyze overconfidence bias, resulting in the poor decision-making seen in the Wirecard scandal. By integrating the concepts of action sets (Galaskiewicz, 1985) and iron cage revisited (DiMaggio & Powell, 1983), this analysis clarifies how systemic deficiencies shielded Wirecard from scrutiny and reinforced cognitive biases amongst decision-makers.

INTERCORPORATE ENVIRONMENT AS A CATALYST OF OVERCONFIDENCE

Germany's financial ecosystem surrounding Wirecard – which included other banks, BaFin, EY, investors, and the media – worked very much like an action set: a purposive network of organizations sharing interests in reputation, legitimacy, and market confidence (Galaskiewicz, 1985). So while BaFin, EY, and the German media were expected to act as independent watchdogs, they were behaving as allies, pursuing stability and rapid growth.

BaFin's persistent defense of Wirecard, including its short-selling ban and its investigation of journalists, can be seen as a result of coercive and mimetic pressures. The regulator traded its role from one of vigilance to one of solidarity (Jakubeit, 2021), so that it could respond to expectations of nurturing a domestic tech champion and also to the cues of peer institutions. Banks such as Deutsche Bank and Commerzbank, which had strategic incentives to showcase Germany's ability to produce a global fintech leader, became business partners and reputational shareholders. Financially backing the company also worked as an implicit endorsement. EY played a central role in normalizing the perception that the company was sound (Jo et al., 2021). Audit procedures were repeatedly softened or accepted with thin documentation. These audit approvals amplified mimetic pressures: if a Big Four auditor endorsed the accounts, regulators, banks, and investors saw this as assurance. Thus, each actor reinforced a collective narrative that normalized overconfidence.

The described intercorporate interactions became increasingly homogeneous. The auditor and the regulator, facing similar public pressures, converged on a mimetic defense posture – each responding by imitating peers in the financial field, like Deutsche Bank – and opted to trust Wirecard rather than investigating warning signs. SoftBank's involvement also signaled external validation, and parts of the German media, such as *Handelsblatt*, echoed Wirecard's counteraccusations against the FT. These coercive pressures further reinforced conformity. The European Securities and Markets Authority (ESMA) later highlighted that the company was framed as an “EU champion, flagship of the FinTech industry”, which further discouraged

dissent (Securities and Markets Stakeholder Group, 2021). The resulting homogeneity mirrored the kind of closed cage DiMaggio & Powell (1983) warned about.

In sum, the intercorporate environment in Germany enabled overconfidence. Instead of being independent and critical, BaFin deferred to EY's audits, EY relied on Wirecard's internal controls, banks and investors trusted the regulator, and the media amplified the company's defensive narratives. The more these institutions were aligned, the more the action set reinforced itself, creating an echo chamber of confidence. Gradually, avenues for independent verification were blocked and allowed overconfidence to grow into a near-dogmatic belief.

NATIONAL CULTURE AND THE SEARCH FOR A NEW CHAMPION

Germany has long prided itself on engineering excellence and global market leadership (Schenkenhofer, 2022). Culturally, the country scores high on uncertainty avoidance (Hofstede, 1984; Minkov & Kaasa, 2022), which suggests a preference for risk mitigation over aggressive risk-taking (Mihet, 2013). However, Wirecard's rise ran counter to this cautious orientation, emerging amid worries that Germany was lagging in digital innovation and lacked large-scale tech firms. For example, the ESCP Digitalreport 2024 showed that 95% of German executives view the country as falling behind in digitalization (Kocher & Meissner, 2024), while the 2019 European Commission DESI report ranked Germany as only a medium performer in digital adoption (European Commission, 2019). Additionally, in 2015, BCG warned that "the German way" could pose obstacles to achieving digital leadership (Gumsheimer et al., 2015). Wirecard quickly became a symbolic antidote to this perceived national deficiency.

Political leaders and BaFin increasingly promoted Wirecard as evidence that Germany could produce a globally competitive fintech and not fall behind Silicon Valley (Knight, 2021; Taub, 2023). Once elevated to the status of a national asset, criticism became costly, and critics of the

company – particularly foreign short-sellers and journalists – were quickly dismissed as hostile outsiders (McCrum, 2022). The “German mentality towards non-German” further heightened sensitivity to foreign scrutiny (Prentice, 2023), possibly creating coercive pressures for conformity, just as observed in the intercorporate environment.

Research helps explain this defensive posture. Criticism from a member outside a group evokes more defensiveness than internal critique, a phenomenon described as *sensibility effect* (Hornsey & Imani, 2004). Furthermore, intergroup hostility is more likely to occur when a treasured aspect of a group identity is challenged or delegitimized by an outgroup member (Bourhis et al., 1979; Grant, 1992; Grant & Brown, 1995). Wirecard is a very good depiction of both these phenomena: as outsiders pointed out the red flags, they were increasingly interpreted as hostile attacks rather than legitimate concerns. As a result, Germany’s cultural environment largely shielded the company even as evidence of wrongdoing accumulated.

This dynamic also interfered with Wirecard’s leadership. When group identity feels threatened, individuals are more prone to confirmation bias and overconfidence, seeing criticism as disloyalty (Weber & Morris, 2010). Thus, national pride fed into Braun’s and Marsalek’s self-narratives, validating their claims and enabling overconfidence. Wirecard was judged not just on its performance but on what it symbolized. All in all, Germany’s identity operated as a protector, quieting outside skepticism while amplifying executive overconfidence inside.

ENVIRONMENT AND AMPLIFICATION OF BIAS

The environment surrounding Wirecard did not create overconfidence, but rather amplified existing psychological predispositions towards it. Both CEO Markus Braun and COO Jan Marsalek exhibited traits empirically associated with overconfidence and aggressive risk-taking: overambition, high extroversion, and a narcissistic self-belief in their vision (Brunzel, 2021; McCrum, 2022; Schaefer et al., 2004). Hence, these men were more susceptible to

interpreting rapid growth, intercorporate, and national approval, as confirmation of their exceptional ability.

Instead of setting boundaries, the intercorporate environment reinforced the mentioned behavior. Banks, such as Deutsche Bank and Commerzbank, would lend financial resources and credibility to Wirecard. SoftBank's investment added further validation to a false perception of reality. EY consistently approved the company's accounts, even while relying on short documentation or a lack of proof. Meanwhile, BaFin introduced short-selling bans and launched investigations against critics. Within this action set, each one of these deeds worked as an endorsement of Wirecard leadership's growth strategy. Each player had incentives tied to the company's "magical" growth. Therefore, assertiveness was rewarded, while doubt – whether from employees, journalists, or analysts – was cast a wary eye.

The broader context, which encompassed the national environment, further strengthened the explored narrative. Political leaders praised the company, and parts of the German media promoted it as a symbol of technological sovereignty. Thus, Braun's narrative of building a "German champion" met the expectations of the cultural zeitgeist. This dynamic reflects the logic of coercive isomorphism described in *The Iron Cage Revisited* (DiMaggio & Powell, 1983), with leaders and overseers internalizing the same belief of inevitable success.

Taking all these factors together, a self-reinforcing biased system was created. It inflated Wirecard CEO's and COO's belief in their own capacities, which in turn encouraged aggressive expansion, opaque acquisitions, book-cooking, and the reporting of falsified cash positions – all to sustain the illusion of success. There was an almost consensual idea that this company's growth trajectory was not only justified but also inevitable. As a result, alerts appeared malicious, and opportunities to address the underlying problems were missed. The result was the firm's collapse and the largest corporate fraud in modern German history (see Appendix 3).

It would be reductionist to attribute this scandal solely to personality. Personality traits may have served as the seed, but the environment was a fertile ground for bias to flourish. Under strong counterweights, similar personality traits could have resulted in innovation rather than deception. Empirical evidence supports this view. Galasso & Simcoe (2011) have shown that overconfident CEOs are more likely to push their companies in a new technological direction. Similarly, Li & Zhang (2022) have found that CEO overconfidence positively impacts firms' innovation productivity. The differentiator factor in Wirecard's case, this analysis suggests, was the interaction between biased individuals and an environment that validated those biases. In a context that rewarded aggressive expansion, minimized scrutiny, and celebrated the company as a national success story, dispositional overconfidence escalated into reckless decision-making, and ultimately, financial fraud.

3.4 ALTERNATIVES EXPLANATIONS

While the interaction between environment and overconfidence is highlighted, this thesis does not deny that other factors contributed to Wirecard's fall. Prior research has shown that corporate scandals often result from a combination of deliberate fraud, weak internal controls, and moral choices (Healy & Palepu, 2003; Sikka, 2009). Even though these contributed to the scandal, they do not fully explain why warning signs were ignored, nor why the company's top management felt entitled to make the dubious decisions they did. The environment-bias interaction explored offers additional insight into these questions.

3.5 REFLECTING ON THE WIRECARD CASE

The Wirecard case shows how networks of regulators, auditors, and corporations, as well as prevailing cultural norms can unintentionally create feedback loops that amplify overconfidence. After all, this scandal was more than an isolated error, it came as the result of major oversight. ESMA concluded that the German regulator demonstrated deficiencies in both

independence and supervisory effectiveness (Langenbacher et al., 2020). The collective stance created a setting in which challenges to Wirecard's claims were viewed as suspicious. Existing scholarship supports this view. Möllers (2021) argues that the Wirecard scandal exposed systemic weaknesses in Germany's financial structure, where auditors, the regulator, and peers were so closely tied to one another that severely constrained scrutiny – a clear depiction of an action set where accountability lines blurred. The “echo chamber” environment fed self-reinforcing beliefs (Levy & Razin, 2019). In this case, Braun's and Marsalek's misperceptions of reality, which resulted in poor-decision-making.

3.6 IMPLICATIONS FOR PRACTICE

Important lessons can be taken from this study. To address overconfidence shaped by intercorporate and cultural factors, regulators should share information across borders and monitor unusually fast or opaque growth. Following sanctions against EY for audit failures in the scandal (Reuters, 2023), auditors should adopt stricter checks on foreign accounts and proactive reporting of irregularities. Regulators must ensure audit quality, and media should maintain independent investigations even under pressure, supported by robust legal protection for press freedom and adequate financial support (See Appendix 6 for concrete implications by actor). These steps can help prevent similar scandals.

3.7 LIMITATIONS

This thesis faces limitations commonly associated with qualitative single-case research. Firstly, it relies exclusively on secondary data, lacking direct access to internal decision-making processes. It may also reflect interpretations or biases of original authors. Thus, this research required careful cross-checking, as publicly available documents vary in accuracy and completeness. By drawing upon different sources, this study seeks for convergence and corroboration across them (Bowen, 2009). Secondly, as noted by (Flyvbjerg, 2006), single-case

studies offer analytical depth but not generalization across populations. These studies contribute to clarify mechanisms and enrich theory, but they are not universal statements. On that point, this research focuses on an extreme case, which again makes mechanisms easier to understand, yet may represent atypical configurations of the system (Flyvbjerg, 2006). As a result, while findings suggest that a company's external environment can reinforce cognitive biases, these should not be assumed to apply in every organizational context. Finally, retrospective research carries the risk of hindsight bias – the tendency to see past events as being obvious in hindsight (Roese & Vohs, 2012). To mitigate this, multiple independent sources were analyzed, and interpretation was grounded on well-established frameworks and theories.

CHAPTER 4: CONCLUSION

This thesis studied how intercorporate and national environments can amplify overconfidence bias through the analysis of the Wirecard scandal. It showed that the company operated within an institutional setting, which progressively gave in to pressure and aligned around assumptions of credibility (DiMaggio & Powell, 1983; Galaskiewicz, 1985). An alignment that limited criticism. At the same time, the national narrative that pushed Wirecard as a European, but more importantly as a German, technological success delegitimized dissent (McCrum, 2022). These contextual conditions fed into leaders' delusions and reinforced existing overconfidence, contributing to persistent managerial misjudgments, and facilitating the scandal.

The findings suggest that overconfidence can be intensified by the surrounding environment rather than arising solely from individual features. It is an illustrative case on how institutional pressures and national expectations interacted with leaders' cognitive tendencies to shape decision-making outcomes. The context created a self-reinforcing feedback loop that clouded judgements and culminated in one of the biggest European financial frauds. Beyond this academic contribution, this study highlights the importance of independent governing bodies

especially when organizations become politically or symbolically valuable. Regulatory and auditing bodies may need safeguards to reduce the risk of convergence, as effective oversight requires mechanisms that challenge prevailing narratives rather than support them.

Yet our understanding of behavioral biases and their interaction with the broader environment is still very incomplete. This thesis opens several opportunities for future research. First, as findings derive from an extreme case, future studies should examine whether similar mechanisms of environmental reinforcement and overconfidence occur in more typical settings. For example, comparative research across countries could clarify whether environments with stronger media scrutiny or different cultural attitudes toward authority and prestige are less prone to the convergence observed in the Wirecard case. On the other hand, a research within a country could allow us to understand if diverse, less cohesive interorganizational networks are more likely to face external checks that constrain biased judgements. Second, the results suggest the need to investigate how oversight bodies can preserve independence when a company's success is closely tied to a country's success. Finally, as this thesis relies on secondary data, future research could employ scenario-based methods, in which decision-makers are asked to respond to constructed scenarios that mirror real-world environmental cues. These allow researchers to observe how participants interpret regulatory signs, media scrutiny, or institutional pressures without them disclosing misconduct – rarely do people acknowledge poor judgement on unethical behavior in direct questioning (Aronow et al., 2015). This method would constitute a form of primary data collection. Such research would help validate and refine the mechanisms identified in this study. Ultimately, this thesis showed that in the Wirecard case, bias became more dangerous when the environment validated it. Recognizing and addressing this phenomenon is essential to preventing failures like Wirecard and improving the quality of managerial decisions.

BIBLIOGRAPHY

Acciarini, C., Brunetta, F., & Boccardelli, P. (2020). Cognitive biases and decision-making strategies in times of change: a systematic literature review. In *Management Decision* (Vol. 59, Issue 3). <https://doi.org/10.1108/MD-07-2019-1006>

Alderman, L., & Schuetze, C. F. (2020, June). In a German Tech Giant's Fall, Charges of Lies, Spies and Missing Billions. *The New York Times*. <https://www.nytimes.com/2020/06/26/business/wirecard-collapse-markus-braun.html>

Althubaiti, A. (2016). Information bias in health research: Definition, pitfalls, and adjustment methods. In *Journal of Multidisciplinary Healthcare* (Vol. 9). <https://doi.org/10.2147/JMDH.S104807>

Aronow, P. M., Coppock, A., Crawford, F. W., & Green, D. P. (2015). Combining list experiment and direct question estimates of sensitive behavior prevalence. *Journal of Survey Statistics and Methodology*, 3(1). <https://doi.org/10.1093/jssam/smu023>

Bartlett, L., & Vavrus, F. (2017). Comparative Case Studies: An Innovative Approach. *Nordic Journal of Comparative and International Education (NJCIE)*, 1(1). <https://doi.org/10.7577/njcie.1929>

Berthet, V. (2022). The Impact of Cognitive Biases on Professionals' Decision-Making: A Review of Four Occupational Areas. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.802439>

Bono, J. E., & Vey, M. A. (2007). Personality and emotional performance: Extraversion, neuroticism, and self-monitoring. *Journal of Occupational Health Psychology*, 12(2), 177–192. <https://doi.org/10.1037/1076-8998.12.2.177>

Bourhis, R. Y., Giles, H., Leyens, J. P., & Tajfel, H. (1979). Psycholinguistic Distinctiveness: Language Divergence in Belgium. H. Giles & R. St-Clair (Eds.) *Language and Social Psychology*, 158–185. https://www.researchgate.net/publication/265966348_Bourhis_RY_Giles_H_Leyens_JP_Tajfel_H_1979_Psycholinguistic_Distinctiveness_Language_Divergence_in_Belgium_In_H_Giles_R_St-Clair_Eds_Language_and_Social_Psychology_pp_158-185_Oxford_UK_Blackwell

Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal*, 9(2). <https://doi.org/10.3316/QRJ0902027>

Boyer, B., Pannese, D. A., & Iannone, P. (2023). Wirecard and Potential U.S. Audit Issues. *Journal of Forensic and Investigative Accounting*.

Brown, P. A. (2008). A Review of the Literature on Case Study Research. *Canadian Journal for New Scholars in Education*, 1(1), 1–13.

Brunzel, J. (2021). Overconfidence and narcissism among the upper echelons: a systematic literature review. *Management Review Quarterly*, 71(3). <https://doi.org/10.1007/s11301-020-00194-6>

Cabral, Â. M. R., Carvalho, F. M. P. O., & Ferreira, J. A. V. (2020). International Strategic Management: A Conceptual Model with Top Managers' Emotional Intelligence, Cultural Intelligence, and Networking. *Information*, 11(12), 577. <https://doi.org/10.3390/info11120577>

Carozza, D. (2021, March). Wirecard's house tumbles. *Fraud Magazine*. <https://www.acfe.com/fraud-magazine/all-issues/issue/article?s=2021-marapr-cover-wirecard>

Chira, I., Adams, M., & Thornton, B. (2011). Behavioral Bias Within The Decision Making Process. *Journal of Business & Economics Research (JBER)*, 6(8). <https://doi.org/10.19030/jber.v6i8.2456>

Choi, I., Nisbett, R. E., & Norenzayan, A. (1999). Causal Attribution Across Cultures: Variation and Universality. In *Psychological Bulletin* (Vol. 125, Issue 1).

Choo, K. R., & Putt, J. (2008). Money laundering risks of prepaid stored value cards. *Trends & Issues in Crime and Criminal Justice*, 363.

Dale, S. (2015). Heuristics and biases: The science of decision-making. *Business Information Review*, 32(2). <https://doi.org/10.1177/0266382115592536>

Das, T. K., & Teng, B. S. (1999). Cognitive biases and strategic decision processes: An integrative perspective. In *Journal of Management Studies* (Vol. 36, Issue 6). <https://doi.org/10.1111/1467-6486.00157>

Davies, P. (2020, June 22). Wirecard Says Missing \$2 Billion Probably Doesn't Exist. *The Wall Street Journal*.

Davies, P. J. (2020, June). Markus Braun: Storyteller Behind Wirecard's Rise and Fall. *The Wall Street Journal*. <https://www.wsj.com/articles/markus-braun-storyteller-behind-wirecards-rise-and-fall-11592592549>

DiMaggio, P. J., & Powell, W. W. (1983). The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review*, 48(2), 147–160. <https://doi.org/10.2307/2095101>

Dunning, D. (2011). The Dunning–Kruger Effect. In *Advances in Experimental Social Psychology* (Vol. 44, pp. 247–296). <https://doi.org/10.1016/B978-0-12-385522-0.00005-6>

Ehrlinger, J., Readinger, W. O., & Kim, B. (2016). Decision-Making and Cognitive Biases. *Encyclopedia of Mental Health: Second Edition*, 5–12. <https://doi.org/10.1016/B978-0-12-397045-9.00206-8>

European Commission. (2019). *Digital Economy and Society Index (DESI) - 2019 Country Report: Germany*.

FinTech Futures. (2017, March). *Wirecard completes Citi Prepaid acquisition*. FinTech Futures. <https://www.fintechfutures.com/m-a/wirecard-completes-citi-prepaid-acquisition>

Flyvbjerg, B. (2006). Five Misunderstandings About Case-Study Research. *Qualitative Inquiry*, 12(2), 219–245. <https://doi.org/10.1177/1077800405284363>

Gabbioneta, C., Greenwood, R., Mazzola, P., & Minoja, M. (2013). The influence of the institutional context on corporate illegality. *Accounting, Organizations and Society*, 38(6–7). <https://doi.org/10.1016/j.aos.2012.09.002>

Galaskiewicz, J. (1985). Interorganizational Relations. In *Source: Annual Review of Sociology* (Vol. 11). <https://www.jstor.org/stable/2083295>

Galasso, A., & Simcoe, T. S. (2011). CEO overconfidence and innovation. *Management Science*, 57(8). <https://doi.org/10.1287/mnsc.1110.1374>

Gaya, H., & Smith, E. (2016). Developing a Qualitative Single Case Study in the Strategic Management Realm: An Appropriate Research Design? *International Journal of Business Management and Economic Research*, 7, 529–538.

George, A. L. (2019). *Case Studies and Theory Development: The Method of Structured, Focused Comparison*. https://doi.org/10.1007/978-3-319-90772-7_10

German Bundestag. (2021). *Final report of the Wirecard Committee of Inquiry*.

Gino, F. (2015). Understanding ordinary unethical behavior: Why people who value morality act immorally. In *Current Opinion in Behavioral Sciences* (Vol. 3). <https://doi.org/10.1016/j.cobeha.2015.03.001>

Grabner, I., & Moers, F. (2013). Management control as a system or a package? Conceptual and empirical issues. *Accounting, Organizations and Society*, 38(6–7), 407–419. <https://doi.org/10.1016/J.AOS.2013.09.002>

Grant, P. R. (1992). Ethnocentrism between groups of unequal power in response to perceived threat to social identity and valued resources. *Canadian Journal of Behavioural Science*, 24(3). <https://doi.org/10.1037/h0078735>

Grant, P. R., & Brown, R. (1995). From Ethnocentrism to Collective Protest: Responses to Relative Deprivation and Threats to Social Identity. *Social Psychology Quarterly*, 58(3). <https://doi.org/10.2307/2787042>

Gumsheimer, T., Hecker, M., & Kruger, T. (2015). *Digital Germany*.

Hart, P. (1991). Irving L. Janis' Victims of Groupthink. *Political Psychology*, 12(2), 247. <https://doi.org/10.2307/3791464>

Healy, P. M., & Palepu, K. G. (2003). The fall of enron. *Journal of Economic Perspectives*, 17(2). <https://doi.org/10.1257/089533003765888403>

Ho, P. H., Huang, C. W., Lin, C. Y., & Yen, J. F. (2016). CEO overconfidence and financial crisis: Evidence from bank lending and leverage. *Journal of Financial Economics*, 120(1). <https://doi.org/10.1016/j.jfineco.2015.04.007>

Hofstede, G. (1984). International Differences in Work-Related Values. In *International Differences in Work-Related Values*.

Hornsey, M. J., & Imani, A. (2004). Criticizing Groups from the Inside and the Outside: An Identity Perspective on the Intergroup Sensitivity Effect. In *Personality and Social Psychology Bulletin* (Vol. 30, Issue 3, pp. 365–383). <https://doi.org/10.1177/0146167203261295>

Invernizzi, A. C., Menozzi, A., Passarani, D. A., Patton, D., & Viglia, G. (2017). Entrepreneurial overconfidence and its impact upon performance. *International Small Business Journal: Researching Entrepreneurship*, 35(6). <https://doi.org/10.1177/0266242616678445>

Jakubeit, R. (2021). *The Wirecard scandal and the role of BaFin A case for unifying capital markets supervision in the European Union*.

Jo, H., Hsu, A., Llanos-Popolizio, R., & Vergara-Vega, J. (2021). Corporate Governance and Financial Fraud of Wirecard. *European Journal of Business and Management Research*, 6(2), 96–106. <https://doi.org/10.24018/ejbmr.2021.6.2.708>

Johansson, R. (2007). On case study methodology. *Open House International*, 32(3). <https://doi.org/10.1108/ohi-03-2007-b0006>

Jolley, M. (2024, August). *How the Wirecard scandal happened: Case study*. Transparently.

Jones, S. (2025, June). How Wirecard's Jan Marsalek went from fraudster to spy. *Financial Times*.

Karen Freifeld. (2015). Ernst & Young settles with N.Y. for \$10 million over Lehman auditing. *Reuters*. <https://www.reuters.com/article/business/ernst-young-settles-with-ny-for-10-million-over-lehman-auditing-idUSKBN0N61SL/>

Knight, B. (2021, April). Angela Merkel defends lobbying for Wirecard. *DW*. <https://www.dw.com/en/angela-merkel-defends-lobbying-for-disgraced-wirecard/a-57312230>

Kocher, R., & Meissner, P. (2024, February). *Report shows Germany lacks digital strategy*. <https://escp.eu/es/news/report-shows-germany-lacks-digital-strategy?>

Langenbucher, K., Leuz, C., Krahn, J. P., & Pelizzon, L. (2020). *What are the wider supervisory implications of the Wirecard case?*

Levy, G., & Razin, R. (2019). Echo Chambers and Their Effects on Economic and Political Outcomes. In *Annual Review of Economics* (Vol. 11). <https://doi.org/10.1146/annurev-economics-080218-030343>

Li, Z., & Zhang, Y. (2022). CEO Overconfidence and Corporate Innovation Outcomes: Evidence From China. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.760102>

Macintyre, A. (2015). *An empirical examination of the consequences of national pride: analyses of survey and experimental data*. Queensland University of Technology.

McCrum, D. (2020). Wirecard: the timeline. *Financial Times*.

McCrum, D. (2022). *Money Men: A Hot Start-Up, A Billion-Dollar Fraud, A Fight for the Truth*. Penguin Random House.

McCrum, D. (2019, April). Wirecard relied on three opaque partners for almost all its profit. *Financial Times*. <https://www.ft.com/content/a7b43142-6675-11e9-9adc-98b1d35a056>

McCrum, D., & Palma, S. (2019, March). Wirecard's problem partners. *The Financial Times*. <https://www.ft.com/content/cd12395e-4fb7-11e9-b401-8d9ef1626294>

Mihet, R. (2013). Effects of culture on firm risk-taking: A cross-country and cross-industry analysis. *Journal of Cultural Economics*, 37(1). <https://doi.org/10.1007/s10824-012-9186-2>

Minkov, M., & Kaasa, A. (2022). Do dimensions of culture exist objectively? A validation of the revised Minkov-Hofstede model of culture with World Values Survey items and scores for 102 countries. *Journal of International Management*, 28(4), 100971. <https://doi.org/10.1016/J.INTMAN.2022.100971>

Möllers, T. M. J. (2021). The Wirecard accounting scandal in Germany, and how the financial industry failed to spot it. *The International Lawyer*, 54(3).

Orlandi, T. (2021). *The Wirecard case: Challenges for German and European Supervision*. LUISS University.

Piwohar-Sulej, K. (2022). Sustainable development and national cultures: a quantitative and qualitative analysis of the research field. In *Environment, Development and Sustainability* (Vol. 24, Issue 12). <https://doi.org/10.1007/s10668-021-02011-w>

Prentice, R. (2023, May 1). *THE WIRECARD FRAUD AND NETWORKS OF THE OBLIVIOUS*. Ethics Unwrapped. <https://ethicsunwrapped.utexas.edu/the-wirecard-fraud-and-networks-of-the-oblivious>

Reuters. (2023, April). *EY fined, banned from some audits in Germany over Wirecard scandal*.

Robbins, S. P., & Judge, T. A. (2021). Organizational behavior (updated 18th edition). Pearson.

Roese, N. J., & Vohs, K. D. (2012). Hindsight Bias. *Perspectives on Psychological Science*, 7(5). <https://doi.org/10.1177/1745691612454303>

Russo, E. J., & Shoemaker, P. J. (1992). Managing Overconfidence. *Sloan Management Review*, 33(2).

Schaefer, P. S., Williams, C. C., Goodie, A. S., & Campbell, W. K. (2004). Overconfidence and the Big Five. *Journal of Research in Personality*, 38(5). <https://doi.org/10.1016/j.jrp.2003.09.010>

Schenkenhofer, J. (2022). Hidden champions: a review of the literature & future research avenues. *Management Review Quarterly*, 72(2). <https://doi.org/10.1007/s11301-021-00253-6>

Securities and Markets Stakeholder Group. (2021). *Own initiative overview report on the Wirecard case*.

Sezer, O., Gino, F., & Bazerman, M. H. (2015). Ethical blind spots: Explaining unintentional unethical behavior. In *Current Opinion in Psychology* (Vol. 6). <https://doi.org/10.1016/j.copsyc.2015.03.030>

Sikka, P. (2009). Financial crisis and the silence of the auditors. *Accounting, Organizations and Society*, 34(6–7), 868–873. <https://doi.org/10.1016/J.AOS.2009.01.004>

Sikka, P., Filling, S., & Liew, P. (2009). The audit crunch: Reforming auditing. In *Managerial Auditing Journal* (Vol. 24, Issue 2). <https://doi.org/10.1108/02686900910924554>

Simon, H. A. (1993). Decision Making: Rational, Nonrational, and Irrational. *Educational Administration Quarterly*, 29(3). <https://doi.org/10.1177/0013161X93029003009>

Taub, B. (2023). How the biggest fraud in German history unravelled. *The New Yorker*. <https://www.newyorker.com/magazine/2023/03/06/how-the-biggest-fraud-in-german-history-unravelled>

Taylor, B., & Francis, K. (2013). Qualitative Research in the Health Sciences. In *Qualitative Research in the Health Sciences: Methodologies, Methods and Processes*. Routledge. <https://doi.org/10.4324/9780203777176>

Uhlig, P., & Busvine, D. (2019). Wirecard hires KPMG for independent audit after FT allegations. *Reuters*. <https://www.reuters.com/article/technology/wirecard-hires-kpmg-for-independent-audit-after-ft-allegations-idUSKBN1X00I9/>

Weber, E. U., & Morris, M. W. (2010). Culture and judgment and decision making: The constructivist turn. In *Perspectives on Psychological Science* (Vol. 5, Issue 4, pp. 410–419). <https://doi.org/10.1177/1745691610375556>

Whetten, D. A. (1981). Interorganizational Relations: A Review of the Field. *The Journal of Higher Education*, 52(1), 1. <https://doi.org/10.2307/1981150>

Wirecard. (2017). *Annual Report 2017*. Wirecard AG. <https://www.wirecard.com/wp-content/uploads/2020/12/Annual-Report-2017.pdf>

Yates, J. F., Veinott, E. S., & Patalano, A. L. (2003). Hard Decisions, Bad Decisions: On Decision Quality and Decision Aiding. In *Emerging Perspectives on Judgment and Decision Research* (pp. 13–63). Cambridge University Press. <https://doi.org/10.1017/CBO9780511609978.003>

Yin, R. (2009). How to do Better Case Studies: (With Illustrations from 20 Exemplary Case Studies). In *The SAGE Handbook of Applied Social Research Methods* (pp. 254–282). SAGE Publications, Inc. <https://doi.org/10.4135/9781483348858.n8>

Yin, R. K. (2003). Case Study Research . Design and Methods. In *SAGE Publications* (Vol. 26, Issue 1). <https://doi.org/10.1097/FCH.0b013e31822dda9e>

Zacharakis, A. L., & Shepherd, D. A. (2001). The nature of information and overconfidence on venture capitalists' decision making. *Journal of Business Venturing*, 16(4), 311–332. [https://doi.org/10.1016/S0883-9026\(99\)00052-X](https://doi.org/10.1016/S0883-9026(99)00052-X)

APPENDIX

Appendix 1: Literature Search on Intercorporate Environment, National Context, and Cognitive Biases

While individual keywords produce thousands to tens of thousands of results, the number of studies linking these concepts drops sharply when the terms are combined. Across JSTOR, Scopus, and Web of Science, most combined searches return zero to low-digit results, indicating almost no work integrating all the domains. Google Scholar displays higher results, due to its broader indexing practices, but remains proportionally small compared to individual keyword searches. This indicates that research explicitly connecting the intercorporate environment and national context with cognitive biases, especially overconfidence, is highly limited (see Table 1).

| Search term | JSTOR | Scopus | Web of Science | Google Scholar |
|---|--------------|------------|----------------|----------------|
| cognitive biases | 48 822 | 38 797 | 36 750 | 402 000 |
| overconfidence | 9 494 | 5 456 | 6 243 | 9 730 |
| intercorporate environment OR interorganizational | 15 372 | 7 016 | 6 140 | 19 890 |
| "national context" OR "cultural context" | 95 942 | 50 113 | 18 163 | 83 620 |
| Intersections | | | | |
| intercorporate environment AND cognitive biases | 65 | 0 | 0 | 139 |
| intercorporate environment AND overconfidence | 8 | 0 | 0 | 31 |
| interorganizational AND cognitive biases | 1 146 | 5 | 5 | 3 320 |
| interorganizational AND overconfidence | 139 | 2 | 6 | 299 |
| Sum of two keywords combined searches | 1 358 | 7 | 11 | 3 789 |
| "national context" AND cognitive biases | 401 | 6 | 2 | 1 210 |
| "national context" AND overconfidence | 34 | 2 | 0 | 43 |
| "cultural context" AND cognitive biases | 2 303 | 92 | 40 | 13 400 |
| "cultural context" AND overconfidence | 130 | 5 | 3 | 358 |
| Sum of two keywords combined searches | 2 868 | 105 | 45 | 15 011 |
| interorganizational AND "cultural context" AND cognitive biases | 70 | 0 | 0 | 448 |
| interorganizational AND "national context" AND cognitive bias | 35 | 0 | 0 | 110 |
| interorganizational AND "cultural context" AND overconfidence | 4 | 0 | 0 | 38 |
| Sum of three keywords combined searches | 109 | 0 | 0 | 596 |

Note. Number of researches retrieved on November 30th, 2025

Table 1. Bibliometric Search Results Across Major Academic Databases

Appendix 2: Search Settings and Filters Applied Across Databases

| |
|--|
| JSTOR* |
| Link JSTOR |
| <p>Preset Settings Advanced search: All content Search modes: Boolean Content I can access</p> |
| Filters: All fields |
| Scopus* |
| Link Scopus |
| <p>Preset Settings None</p> |
| Filters: Article title, Abstract, Keywords |
| Web of Science* |
| Link WoS |
| <p>Preset Settings Search in: Web of Science Core Collection Editions: All Fielded Search</p> |
| Filters: Topic (Title, Abstract, Keyword plus, and Author keywords) |
| Google Scholar* |
| Link Google Scholar |
| <p>Preset Settings Review article</p> |

*Note. Research retrieved on November 30th, 2025

Table 2. Search Settings and Filters Applied Across Databases

Appendix 3: Mechanism Linking Intercorporate Environment, National Context, and Overconfidence in Wirecard

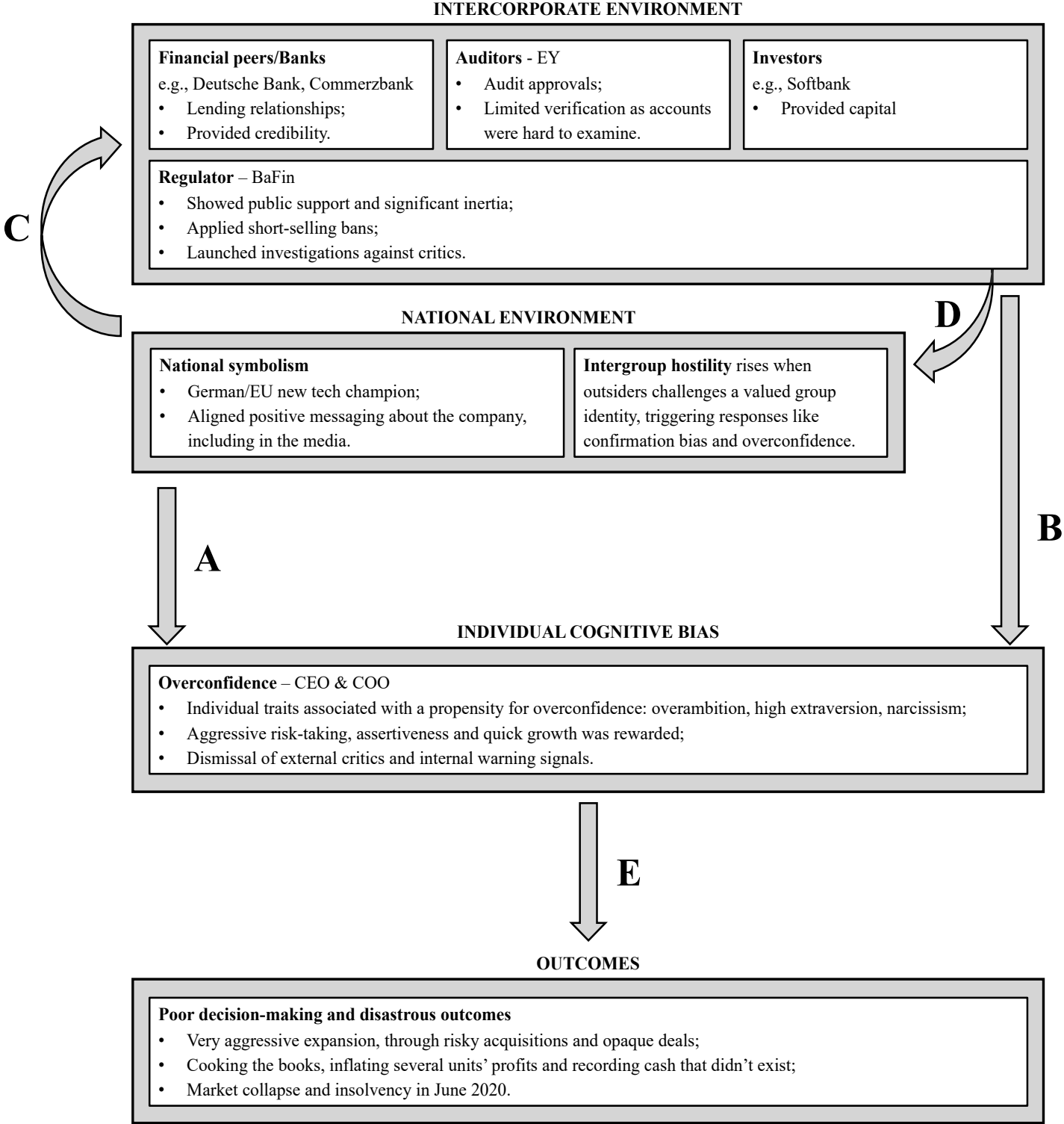


Figure 1. Interaction of Intercorporate and National Environments in Amplifying Overconfidence and Shaping Wirecard’s Decisions

Note.

This figure illustrates the mechanism through which intercorporate and national environments interacted, reinforcing overconfidence, and shaping Wirecard's decision outcomes.

A. National validation and reinforcement: National pride and media framing delegitimized external critics, including short-sellers and foreign journalists. Criticism was seen as hostility, which increased defensive reactions and triggered overconfidence.

B. Legitimacy and institutional alignment: When banks, auditors, BaFin, and investors presented aligned signals (e.g., confidence, approvals, and funding), these worked as proof that the company was sound. In turn, this reduced scrutiny and boosted Wirecard's executives' confidence.

C. National pressures: Germany's national environment generated pressures towards conformity, reinforcing the belief that Wirecard was the new German/EU technological champion. This cultural positioning made dissent costly, encouraging shareholders to align with the dominant success narrative.

D. Intercorporate feedback: The convergence within the intercorporate environment (banks, investors, auditors, and the regulator) fed directly into the broader cultural narrative. Their collective confidence and alignment with Wirecard amplified national pride and increased intergroup hostility.

E. Bias expression and decision outcomes: Overconfidence manifested in aggressive risk-taking, opaque third-party agreements, accounting manipulation, and ultimately insolvency.

Appendix 4: Full Profiles of Wirecard Executives

| Executive | Profile |
|--|---|
| <p>CEO</p> <p>Markus Braun</p> | <p>Markus Braun was born in Vienna in 1969 to a middle-class family. He studied to be a computer scientist and worked as a consultant at KPMG before joining Wirecard. He served as the company’s Chief Executive Officer from 2002 until his resignation on June 2020. In 2007, he became Wirecard’s largest shareholder (Davies, 2020; McCrum, 2022).</p> <p>Braun positioned himself as a technological visionary and championed for a world where cash would be obsolete, all money would be processed digitally. His persona was very well curated – from the way he dressed to Wirecard’s annual reports – all to emphasize his grandiose ambition and desire to leave a legacy. A black turtleneck was a must in his wardrobe, a clear nod to Apple’s founder Steve Jobs, symbol of power and innovation. On the other hand, each year Wirecard’s annual reports would include his composed portrait along with inspirational statements about digital transformation. These reports were also filled with confident forecasts and guarantees of transparency (Wirecard, 2017). Retrospectively, these communications worked less as financial disclosures but more as storytelling tools, crafting an idea of credibility while hiding Wirecard’s structural weaknesses, and instruments of self-promotion.</p> <p>Under Braun’s leadership, Wirecard rapidly became a member of the Dax index – being briefly valued at over €24 billion. His management style has been characterized by journalists and trial testimony as highly hierarchical. When faced with criticism, Braun would quickly dismiss it, too often portraying it as jealousy or envy. He would also cast suspicions around critics, including FT journalists, claiming they were on a mission to take down Wirecard rather reporting a legitimate concern. Oliver Bellenhaus, an early Wirecard employee and head of Wirecard’s largest unit in Dubai, testified to this highly toxic work environment devoid of psychological safety. He claimed Braun was obsessed with rapid growth and that “Braun called the shots, and when he said something, it was done his way” (McCrum, 2022, p. 309).</p> |

| | |
|--------------------------------|--|
| <p>COO Jan Marsalek</p> | <p>Jan Marsalek, born in Vienna in 1980, joined Wirecard in 2000. Despite lacking formal education or experience outside the company, he quickly rose through its ranks. In 2010, he is appointed Chief Operating Officer, and becomes responsible for Wirecard’s global operations, particularly the company’s activities in Asia (McCrum, 2022). Marsalek was widely described as a cunning, charismatic man. He was a great communicator, charming, and very approachable – people felt at ease next to him. Yet he was also overconfident and prone to risky decisions (McCrum, 2022; Jones, 2025). With Wirecard’s COO, it was never about the means but rather about the end. As a young man, he looked up to the also young tycoon Jesse Willms, a college drop-out who made fortune through pirated software, seeing in him a model of success achieved by bending the rules (Clark, 2014; McCrum, 2022). He also displayed a highly competitive, vengeful attitude. His ambition often led him to disregard ethical and legal constraints, as when he wanted to hire Nelson Burtneck, indicted in the U.S. for money-laundering, solely because of his contacts within the online gambling industry (McCrum, 2022). Outside work, Marsalek hanged with oligarchs, individuals with ties to the far-right, and intelligence communities (McCrum, 2022; Diehl et al., 2024). His admiration for Vladimir Putin and Donald Trump, combined with a taste for luxury, revealed narcissistic and authoritarian trends – traits often linked to overconfidence and distorted risk perception (Brunzel, 2021). Following Wirecard’s collapse in June 2020, Marsalek was suspended and sacked shortly after. Within days he disappeared. As of 2025, he remains a fugitive wanted by German authorities on charges of fraud and market manipulation (Jones, 2025).</p> |
|--------------------------------|--|

Table 3. Full profiles of Wirecard’s CEO and COO

Appendix 5: Wirecard AG's Timeline

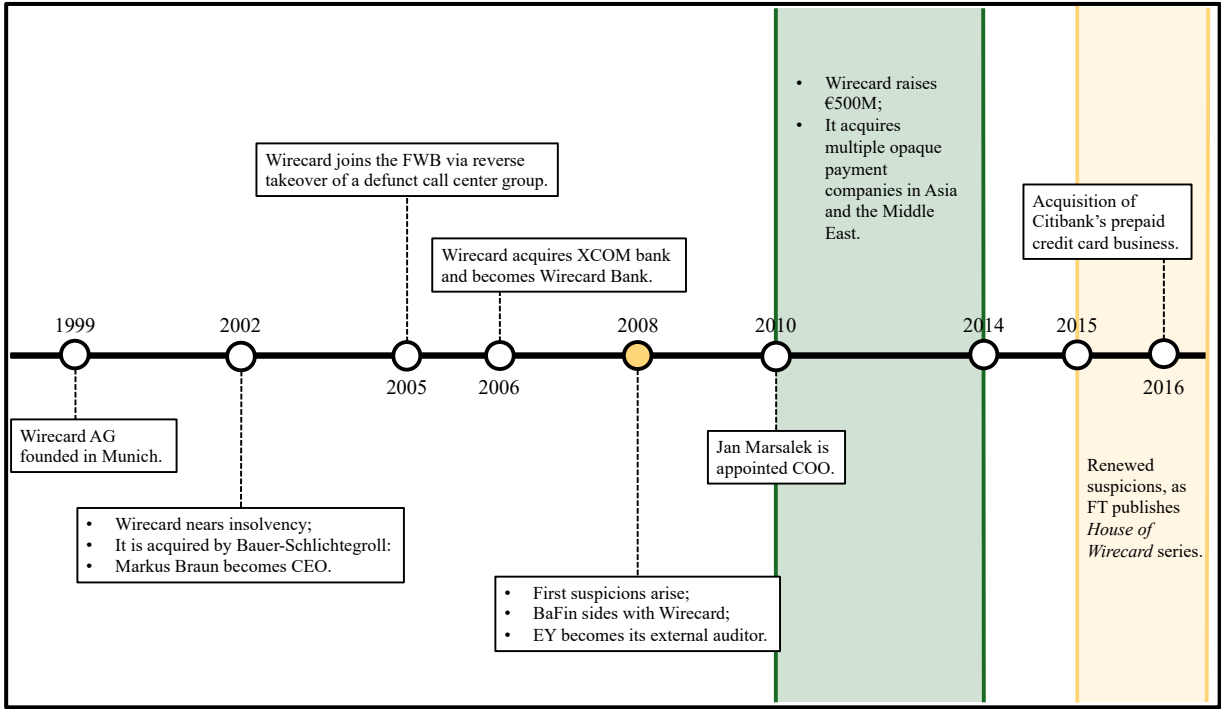


Figure 2. Wirecard Timeline 1999-2016

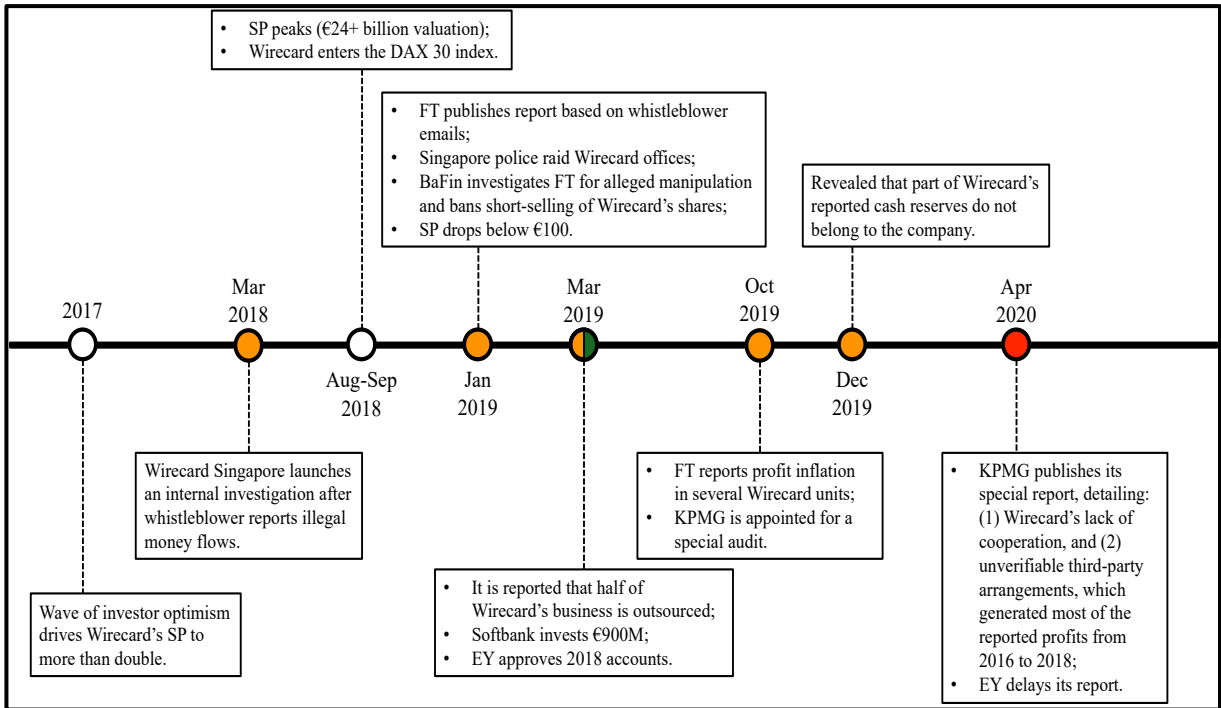


Figure 3. Wirecard Timeline 2017-Apr. 2020

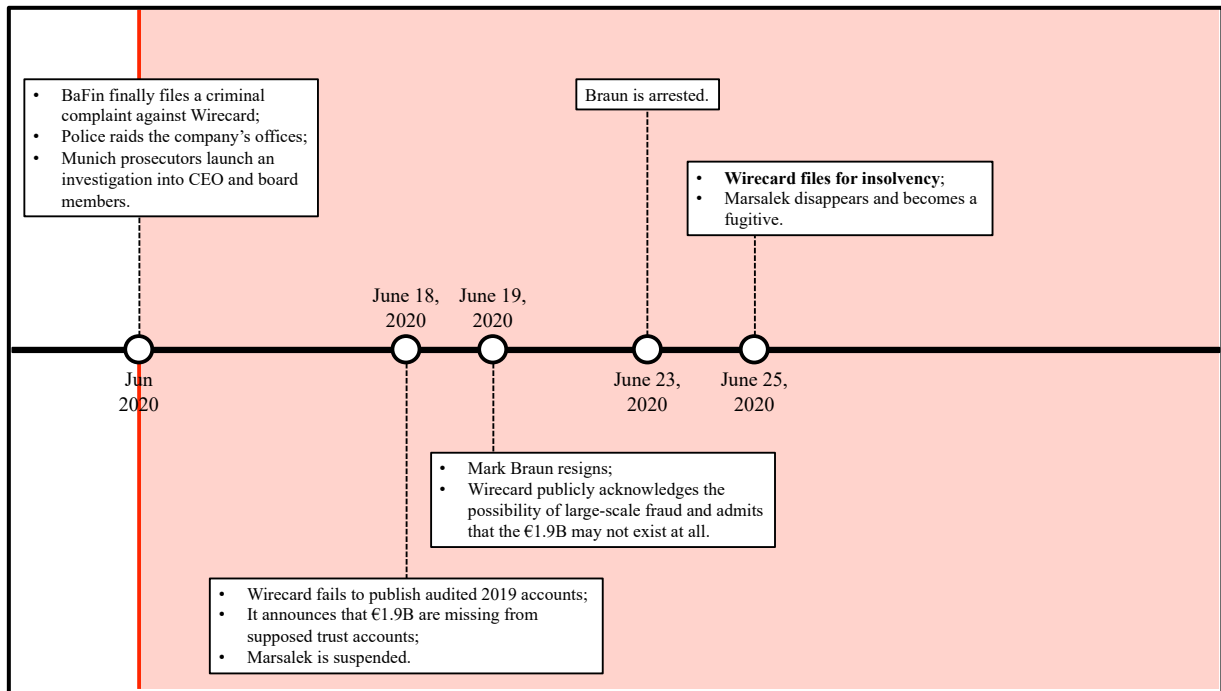


Figure 4. Wirecard Timeline Apr-Jun 25, 2020

Appendix 6: Concrete Practical Implications by Actor

| Actor | Practical Implications | Basis in the Wirecard Case |
|-------------------|---|---|
| Regulators | Introduce mandatory escalation protocols for credible allegations (e.g., mandatory investigations within 60 days); Establish mixed supervisory teams (e.g., financial + accounting + IT specialists) for fintech oversight. | Repeated regulatory inaction and misdirected enforcement by BaFin, including investigations into critics; Deference to audit approvals and limited capacity to assess complex structures. |
| Auditors | Mandatory audit firm rotation every 3 to 5 years for high-risk clients; Require full access to all foreign escrow accounts; Prohibit accepting unsigned confirmations from third parties unless verified independently. | Intercorporate pressure weakened auditors’ skepticism; Audit normalization of opaque third-party arrangements and approval of unverifiable balances. |
| Investors | Incorporate forensic accounting checks into due diligence for major investments; Apply skepticism to extraordinary growth claims, documenting counterhypothesis and testing alternative explanations; Trigger mandatory reassessment when credible external allegations appear. | Investor reliance on reputational signals from auditors, regulators, and financial peers; Validation effects from SoftBank’s investment. |
| Companies | Conduct a detailed review before extending credit or entering strategic partnerships with companies relying on opaque third-party arrangements and make that information public; Develop red-flag matrices for unusual profitability or growth patterns. | Banks (Deutsche Bank and Commerzbank) acting as reputational endorsers within the action set; Tolerance of extreme growth narratives. |

| | | |
|----------------------------------|---|---|
| Media & Civil Society | Create long-term investigation teams protected from commercial or political pressure; Coordinate with international outlets to reduce vulnerability to national pushback or legal intimidation; Invest in financial literacy initiatives that support informed public scrutiny. | Targeting of journalists and critics, defensiveness toward foreign scrutiny, and partial alignment of German media with corporate narratives. |
|----------------------------------|---|---|

Table 4. Practical Implications of the Wirecard Case for Key Actors