

**The Role of Temporality on Organizational Performance
During an Environmental Crisis in the Swiss Private
Banking Industry**

DISSERTATION
of the University of St.Gallen,
School of Management,
Economics, Law, Social Sciences,
International Affairs and Computer Science,
to obtain the title of
Doctor of Philosophy in Management

submitted by

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Dissertation no. 5289

D-Druck Spescha, St.Gallen, 2023

The University of St.Gallen, School of Management, Economics, Law, Social Sciences, International Affairs and Computer Science, hereby consents to the printing of the present dissertation, without hereby expressing any opinion on the views herein expressed.

St.Gallen, October 24, 2022

The President:

Prof. Dr. Bernhard Ehrenzeller

Acknowledgements

First and foremost, I would like to thank my supervisor, Prof. Dr. Dr. Tomi Laamanen for his invaluable feedback and continuous support. I am grateful for the opportunity to conduct research in the banking industry, which has been, for many years, my industry sector of choice. In addition, I would like to sincerely thank my second advisor, Prof. Gerry McNamara, PhD, for his detailed suggestions and advice to help improve this dissertation.

Moreover, I want to acknowledge the excellent proofreading services that were provided by senior editors at American Journal Experts and The Writeplace.

Last but not least, very special thanks are due to my beloved parents who have unconditionally supported me along the way. Ever since I can remember, they have put my needs first and sacrificed more than I can ever give back.

Alexander Janotte
St.Gallen, June 2022

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List of Abbreviations

AEoI	Automatic Exchange of Information
AOM	Academy of Management
AUM	Assets under Management
BAM	Behavioral Agency Model
BvD	Bureau van Dijk
CEO	Chief Executive Officer
COVID-19	Coronavirus Disease 2019
cv	Coefficient of variation
DoJ	Department of Justice
FATCA	Foreign Account Tax Compliance Act
GER	Germany
ICC	Interclass correlation coefficient
LIE	Liechtenstein
LIWC	Linguistic Inquiry and Word Count
LR	Likelihood ratio
LTS	Letter to Shareholders
KPMG	Klynveld Peat Marwick Goerdeler
M&A	Mergers & Acquisitions
n.s.	Not significant
NZZ	Neue Zürcher Zeitung
OECD	Organisation for Economic Co-operation and Development
PH	Proportional Hazard
ROA	Return on Assets
ROE	Return on Equity
RQ	Research Question
SD	Standard deviation
SMS	Strategic Management Society
SOE	State owned enterprise
S&P	Standard & Poor's
TMT	Top Management Team
U.K.	United Kingdom
U.S.	United States

VIF	Variance Inflation Factor
WM	Wealth management
ZTPI	Zimbardo Time Perspective Inventory

Abstract

To advance what we know about the role of subjective time in strategic management, I study the impact of top management's temporal foci from an upper echelons perspective. In this dissertation, I aim to provide novel insights regarding (a) the effects of temporal foci on organizational performance, (b) the interplay of temporal focus and objective temporality, (c) the interplay of temporal focus and affectivity and (d) the role of temporal foci during an environmental crisis.

Three empirical studies are presented herein, all of which are situated in the private banking industry. Due to the fall of banking secrecy in Switzerland and Liechtenstein, the private banks under study have been confronted with a major discontinuity at the industry level. Study 1 examines the effects of top management's temporal and regulatory foci on firm survival. Adopting a dynamic perspective, I assess how these relationships evolve over time as institutional change gradually unfolds. Study 2 examines the joint effects of top management's temporal and affective foci on organizational performance. Applying the micro-level construct of temporal attitude to strategy research, I acknowledge that positive and negative affect provide important triggers for past- and future-oriented strategic action. Study 3 introduces successor CEOs' temporal foci as a cognitive contingency to the succession-performance relationship. I argue that these temporal foci influence the liability of newness that is typically associated with executive succession because they either strengthen or weaken successors' adaptability to their new positions as CEOs as well as their contributions to the knowledge base of top management teams (TMTs).

Zusammenfassung

Um die Rolle subjektiver Zeit im strategischen Management besser zu verstehen, untersuche ich den Einfluss des Zeitfokus aus einer Upper-Echelons-Perspektive. Mit dieser Dissertation ziele ich darauf ab, neue Erkenntnisse über (a) die Auswirkungen des Zeitfokus auf die organisatorische Performance, (b) das Zusammenspiel von Zeitfokus und objektiver Zeit, (c) das Zusammenspiel von Zeitfokus und Affektivität sowie (d) die Rolle des Zeitfokus während einer Krise im Unternehmensumfeld zu gewinnen.

Es werden drei empirische Studien vorgestellt, die alle im Privatbankensektor angesiedelt sind. Durch den Fall des Bankgeheimnisses in der Schweiz und in Liechtenstein waren die untersuchten Privatbanken mit einer erheblichen branchenweiten Veränderung konfrontiert. Studie 1 untersucht die Auswirkungen von Zeit- und Regulationsfokus des oberen Managements auf das Überleben von Unternehmen. Indem ich eine dynamische Perspektive einnehme, untersuche ich, wie sich diese Beziehungen im Laufe der Zeit entwickeln, da sich der institutionelle Wandel allmählich vollzieht. Studie 2 untersucht die gemeinsamen Effekte von Zeit- und Affektfokus des oberen Managements auf die organisatorische Performance. Indem ich das Mikrokonstrukt der zeitlichen Haltung in der Strategieforschung anwende, erkenne ich an, dass positiver und negativer Affekt wichtige Anstöße für vergangenheits- und zukunftsorientiertes strategisches Handeln liefern. Studie 3 führt die Zeitfokuse von CEO-Nachfolgern als kognitive Abhängigkeit in die Beziehung zwischen Nachfolge und Performance ein. Ich argumentiere, dass diese Zeitfokuse die Nachteiligkeit der Neuheit beeinflussen, die typischerweise mit ihrer Nachfolge verbunden wird, da diese die Anpassungsfähigkeit der Nachfolger an ihre neuen Positionen als CEOs sowie ihren Beitrag zur Wissensbasis der TMTs entweder stärken oder abschwächen.

1. General Introduction

1.1 Background

Executives find themselves at the boundary between their organizations and the external environment. Through the process of interpretation, they recognize and translate environmental demands into strategic action (Daft & Weick, 1984). Almost 40 years ago, Hambrick and Mason (1984) proposed a theoretical perspective to shed light on upper echelons. Building upon their grounding work, scholars have since reported that a substantial proportion of variance in organizational performance is attributable to the characteristics of CEOs and their TMTs (Quigley & Hambrick, 2015; Wang, Holmes, Oh, & Zhu, 2016).

As stressed in recent reviews, the impact of demographic attributes of executives are well understood today. Such attributes include, but are not limited to their tenure (Finkelstein & Hambrick, 1990; Hambrick, Geletkanycz, & Fredrickson, 1993; Miller, 1991; Miller & Shamsie, 2001; Simsek, 2007), gender (Daily, Certo, & Dalton, 1999; Dezsö & Ross, 2012; Zhang & Qu, 2016), educational background (Bantel & Jackson, 1989; Gomulya & Boeker, 2014; Thomas, Litschert, & Ramaswamy, 1991), work experience (Georgakakis & Ruigrok, 2017; Herrmann & Datta, 2006), prestige (D'Aveni, 1990; Hayward, Rindova, & Pollock, 2004) and network ties (Westphal & Milton, 2000). This proliferation of research on demographics is not surprising because demographics are relatively easy to observe.

Over the past decade, strategy scholars became increasingly interested in the potential role of managerial psychology. Initially, they continued to rely on conventional demographics as proxies for psychological constructs. Wally and Baum (1994), for example, applied education as a proxy for an executive's cognitive ability. Despite the advantages of data availability, however, such demographics are rather noisy indicators (Datta & Rajagopalan, 1998; West & Meyer, 1998). To expand the methodological arsenal available for measuring psychological constructs, management scholars adopted the techniques of content analysis and psychological scales. We have seen a nascent, but steadily growing stream of strategy research on managerial cognition and emotions, such as regulatory focus (Gamache, Neville, Bundy, & Short, 2020), extraversion (Malhotra, Reus, Peng Cheng, & Roelofsen, 2018), empathy (König, Graf-Vlachy, Bundy, & Little, 2020) and narcissism (Patel & Cooper, 2014).

In addition to these constructs, subjective temporality emerged as a particularly important construct (Shipp & Jansen, 2021). As a recent review by Tang, Richter, and Nadkarni (2019) shows, strategic decision-makers differ across a wide range of temporal biases. Nadkarni, Chen, and Chen (2016), for example, studied how top management's temporal depth affects a firm's level of competitive aggressiveness. Chen and Nadkarni (2017) examined the relationship between time urgency and corporate entrepreneurship in greater depth. Souitaris and Maestro (2010) shed light on top management's polychronicity, finding it to enhance both speed and comprehensiveness of strategic decision-making.

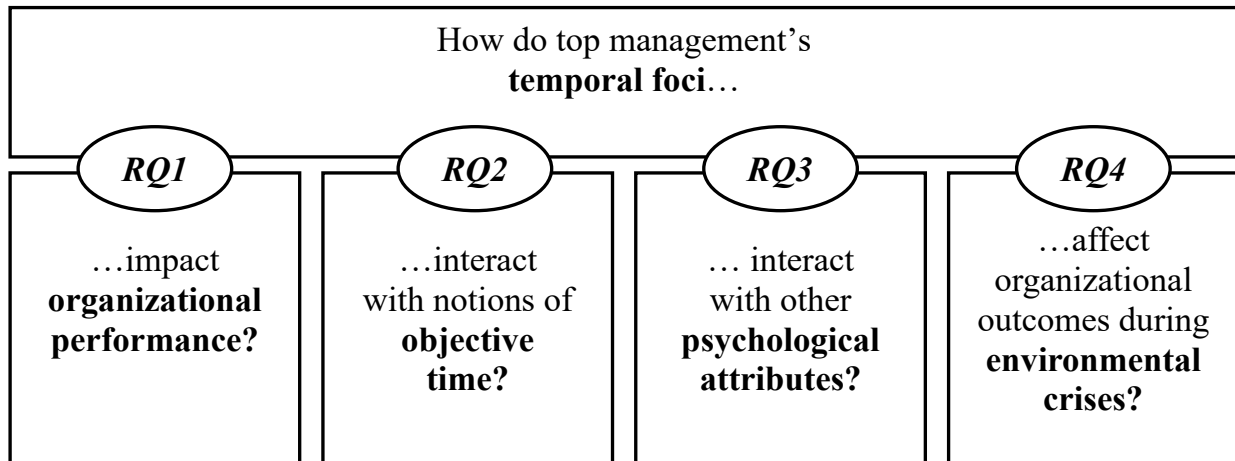
In recent years, the notion of *temporal focus* attracted particular scholarly attention. According to temporal focus theory (Shipp, Edwards, & Lambert, 2009), it refers to an individual's "allocation of attention to the past, present, and future" (2). As stressed by Zimbardo and Boyd (1999), a *balanced* temporal focus enables managers to seamlessly switch from one temporal focus to another. Most of them, however, develop a *biased* temporal focus that overemphasizes two of the three temporal foci (Shipp et al., 2009). If managers have a strong past focus, for example, they reflect on memories and prior experience to inform their actions while those with a high future focus engage in strategic foresight and speculate about future eventualities.

Top management's temporal foci represent strong cognitive biases. As prior strategy research illustrates, temporal focus theory provides a nuanced understanding of strategic decision-making and its outcomes. DesJardine and Shi (2021), for instance, found CEO temporal foci to partially reverse predictions of the behavioral agency model (BAM). Depending on incentive schemes in place, they either encourage or undermine strategic risk-taking in the present or future. Similarly, Back, Rosing, Dickler, Kraft, and Bausch (2020) reported that top management's temporal foci moderate the link between strategic change and firm performance because managers may either apply or disregard prior experience related to strategy implementation. Not surprisingly, scholars reported temporal foci to influence a range of strategic behaviors, such as mergers and acquisitions (DesJardine & Shi, 2021; Gamache & McNamara, 2019), strategic change (Back et al., 2020; Tuncdogan & Dogan, 2020) and corporate innovation (Nadkarni & Chen, 2014; Yadav, Prabhu, & Chandy, 2007). To advance what we know about the impact of subjective temporality on strategic decision-making, I take a closer look at top management's temporal foci.

1.2 Research Questions

With this dissertation, I want to contribute to the management literature in four major ways. Figure 1 summarizes the overarching research questions, all of which are related to temporal focus theory.

Figure 1: Summary of Research Questions



First, management scholars applied temporal focus theory to different steps in the sensemaking process, ranging from managerial attention to strategic action (Daft & Weick, 1984). Gamache and McNamara (2019), for instance, argued that top management's temporal foci influence how executives perceive and filter information. In their recent study, they found that CEOs with a strong past orientation were likely to attend to negative media coverage regarding prior strategic announcements while the opposite holds true for CEOs with a strong future orientation. Apart from their impacts on managerial attention and issue interpretation, top management's temporal foci motivate different kinds of strategic action. DesJardine and Shi (2021), for example, found that CEO present orientation moderates the relationship between CEO compensation and strategic risk-taking. Similarly, West and Meyer (1998) reported that entrepreneurs who have a strong future orientation seek strategic change in their new ventures.

Surprisingly, there has been relatively little research on how top management's temporal foci affect organizational performance. To the best of my knowledge, the recent study by Back et al. (2020) is the only one that sheds light on how temporal foci affect firm profitability. Therein, the authors found that high levels of CEO past

orientation strengthen the link between strategic change and accounting performance while high levels of CEO future orientation weaken this link. As of today, I am not aware of any study which has empirically tested the impact of top management's temporal foci on firm survival.

In this dissertation, I aim to illuminate the link between top management's temporal foci and these two constructs of firm performance. In Study 1, I shed light on their effect on organizational survival. In Studies 2 and 3, I examine the impact of temporal foci on profitability.

Research Question 1: *How do top management's temporal foci impact organizational performance?*

Second, the management literature remained relatively silent regarding the interplay between subjective and objective temporality, even though the two factors are conceptually intertwined (Dawson & Sykes, 2019; Johnsen & Holt, 2021; Shipp & Cole, 2015; Shipp & Jansen, 2021). This is surprising because neither temporal foci themselves nor their effects on organizational outcomes are necessarily constant over time. Shipp and Cole (2015), for example, argued that “a completely temporal view with both objective and subjective time” (251) would provide a fine-grained understanding of the strategic phenomena in play. In their recent study, Shipp and Jansen (2021) explicitly called for management research on “the mutual impact of objective and subjective time” (317). To address this call, I study the joint effects of top management's temporal foci and objective time in two major ways.

On the one hand, I acknowledge that top management's temporal foci may vary over time. Although prior strategy research has typically referred to them as stable individual dispositions (e.g., DesJardine & Shi, 2021; Mohammed & Harrison, 2013), their state-like component has been well-established in psychology and behavioral science (Rush & Grouzet, 2012; Shipp & Aeon, 2019). If individuals are confronted with major environmental discontinuity, they may temporarily switch from their dispositional to a more suitable temporal focus (Holman & Silver, 2005). In line with this argument, Jansen and Shipp (2019) found that employees adjust their subjective perceptions of temporal fit in response to changes in the workplace. In light of these empirical findings, I treat top management's temporal foci as a combination of a dispositional trait and a malleable state (Mohammed & Marhefka, 2020).

On the other hand, the strength of their effects may vary over time because temporal foci are affected by contextual factors. Management scholars have already started to examine a range of contingencies, such as industry dynamism (Back et al., 2020; Nadkarni & Chen, 2014) and incentive schemes (DesJardine & Shi, 2021). Thus far, however, they have not examined objective time as such a potential contingency, neither linear clock time nor cyclical event time (Shipp & Jansen, 2021). Yet, we may not assume that the effects of top management's past and future foci remain constant once time elapses or critical events take place. The study by Kaplan and Orlikowski (2013) is a noteworthy exception, shedding light on how employees resolve conflicting interpretations regarding organizational past, present and future during a sudden environmental change.

Given this relative paucity of research, I aim to examine the interplay of subjective and objective time in greater depth. In Study 1, I theorize and find that the effects of top management's temporal foci develop in predictable patterns during a major industry-level discontinuity because institutional change gradually unfolds. Accordingly, I incorporate clock time as a moderator of the relationship between temporal orientation and organizational survival. In Study 3, I examine the effects of temporal foci on organizational performance during CEO succession events that mark sudden punctuations in the history of the firm and divide the continuous passage of time into shorter episodes.

Research Question 2: *How do top management's temporal foci interact with different notions of objective time?*

In addition to their interplay with objective time, past and future orientation may be contingent on other psychological attributes, which is partially reflected in seemingly inconclusive empirical findings (e.g., Kooij, Kanfer, Betts, & Rudolph, 2018; Park et al., 2017). Scholars argued, for example, that temporal focus theory is relatively blind to emotional valence. Following this argument, future research should examine top management's temporal and affective foci together (Dane & George, 2014; Levasseur, Shipp, Fried, Rousseau, & Zimbardo, 2020). Past-oriented cognition may encompass positive, nostalgic thoughts as well as negative, ruminative ones (Zimbardo & Boyd, 1999). Similarly, future-oriented cognition may elicit not only positive, hopeful feelings but also negative, worrisome ones as individuals speculate about future eventualities (Carelli, Wiberg, & Wiberg, 2011).

To provide a fine-grained understanding of temporal biases in strategic decision-making, Study 2 examines top management's temporal and affective foci in concert. To the best of my knowledge, it is among the first studies in which the micro-level concept of temporal attitude is applied to strategy research.

Research Question 3: *How do top management's temporal foci interact with other psychological attributes?*

Finally, I strive to deeply understand the impact of top management's temporal foci during corporate crises (Bundy, Pfarrer, Short, & Coombs, 2017). Episodes of crisis represent a particularly interesting research context in which to examine the role of managerial characteristics because they pose high job demands on executives (Hambrick, Finkelstein, & Mooney, 2005). According to Bundy et al. (2017), crisis scenarios create such a setting which is characterized by high levels of mental stress and emotional tension.

As of today, the literature on crisis management is relatively mature regarding the role of top management demographics (e.g., Dowell, Shackell, & Stuart, 2011; Westphal & Milton, 2000; Zuniga-Vicente & Vicente-Lorente, 2006). Accordingly, scholarly attention has recently shifted towards the cognitive and emotional attributes of CEOs and TMT members. In early studies, researchers primarily stressed the importance of resiliency (Gittell, Cameron, Lim, & Rivas, 2006; Kahn, Barton, & Fellows, 2013). In the last couple of years though, scholarly interest expanded to other psychological attributes, such as empathy (König et al., 2020), purpose (Jiang, 2021) and shared fear (Vuori & Huy, 2016). The recent COVID-19 pandemic offered an exceptional opportunity to study the impact of managerial psychology in the midst of a global and cross-industry crisis.

Surprisingly, there is still a relative paucity of research on the role of top management's temporal biases during episodes of crisis. As outlined above, scholars have already examined the effects of temporal foci in dynamic environments (Back et al., 2020; Nadkarni & Chen, 2014) but not during a major discontinuity, which has put the survival of an entire industry population at risk. Hence, the three studies of my dissertation are situated in an environment of discontinuity and change, which I describe in detail in the subsequent paragraph.

Research Question 4: *How do top management's temporal foci affect organizational outcomes during environmental crises?*

1.3 Research Context

Each of the three studies enclosed in this dissertation is situated in the Swiss and Liechtenstein private banking industry. I deliberately choose this research context because the effects of temporal biases are particularly evident during an industry-level discontinuity, such as the fall of banking secrecy.

For nearly a century, the private banks under study enjoyed relative environmental stability. As noted by Collardi (2012), Article 47 of the Federal Act on Banks and Savings Banks threatened employees at these private banks with imprisonment if they disclosed client information to foreign tax authorities. Not surprisingly, private banks in Switzerland and Liechtenstein had the reputation of being safe havens for the taxable income of foreign citizens (Überbacher & Scherer, 2020). Accordingly, foreign governments have long accused them of helping wealthy citizens commit tax fraud.

In 2007, a whistleblower provided the U.S. Department of Justice (DoJ) with evidence of illegal business practices at a major Swiss bank. Confronted with a potential indictment, the Swiss parliament ratified an agreement that enabled the bank to transmit information about 4,500 clients to U.S. authorities (NZZ, 2017). In the following years, it had to adopt multiple international standards to exchange data on foreign banking clients. In 2014, the Foreign Account Tax Compliance Act (FATCA) entered into force. As of 2016, the Swiss government also adopted the Automatic Exchange of Information (AEOI) under the OECD Common Reporting Standard. This regulatory discontinuity put intense pressure on private banks as they were confronted with a severe decline in assets under management (AUM). Since the financial crisis, the median return on equity (ROE) has declined from 13.1% to a minimum of only 3.1% in 2013 (KPMG, 2015). Since then, the performance “remained very low” (KPMG, 2015: 26), accompanied by a widening gap between strong performers and loss-making institutions. The struggle of the private banks is further illustrated by their shrinking population from 173 in 2007 to 117 in 2016 (KPMG, 2016).

Taken together, the Swiss and Liechtenstein private banking industry represents a particularly suitable research context in which to test hypotheses on organizational profitability and survival. Beyond this unique research context, I expect the findings of this dissertation to be generalizable to firms operating in relatively mature industries or those experiencing episodes of regulatory transformation.

1.4 Methodology

In this dissertation, I draw on well-established techniques of content analysis (Duriau, Reger, & Pfarrer, 2007). From a content analysis perspective, it can be assumed that language reflects managerial psychology. Specifically, the frequency of particular words in a firm's announcements and financial reports is an indicator of higher-level constructs (Huff, 1990). Content analysis is particularly suitable for measuring constructs that are difficult to observe and operate outside the awareness of executives, such as their temporal foci. Moreover, it avoids issues related to social desirability bias (Uhlmann et al., 2012). Due to the increasing availability of computer-aided text analysis software, the numbers of studies using content analysis techniques has increased substantially over recent years (e.g., Pennebaker, Boyd, Jordan, & Blackburn, 2015). In strategy research, these techniques are frequently applied to measure top management's temporal foci (DesJardine & Shi, 2021; Gamache & McNamara, 2019; Nadkarni & Chen, 2014).

To measure top management's temporal foci, I draw on letters to shareholders (LTSs) from Swiss and Liechtenstein private banks. The literature contains lengthy discussions on the potential weaknesses related to this approach (e.g., Abrahamson & Hambrick, 1997; Graf-Vlachy, Bundy, & Hambrick, 2020). Yet, LTSs are particularly suitable for longitudinal analyses. They are published in regular time intervals and relatively consistent concerning format, scope and target audience over time (Barr, 1998; Barr, Stimpert, & Huff, 1992; Eggers & Kaplan, 2009). Moreover, Eggers and Kaplan (2009) reported that there were considerable changes in the length, content and style of LTSs upon executive succession. Hence, we can assume that executives are closely involved in shaping and reviewing their content (Bowman, 1984).

Despite the relative secrecy of many private banks in Switzerland and Liechtenstein, I was able to gather a nearly complete sample that covers around 85% of the private banking population. To collect as many of their annual reports as possible, I tapped into a range of public and proprietary data sources. These included investor relations departments, corporate websites, internet archives (i.e., Wayback Machine), financial databases (i.e., Bureau van Dijk's Orbis Bank Focus, Standard & Poor's Global Market Intelligence) and public libraries. Moreover, I had access to a proprietary database maintained by KPMG, a global audit firm that has maintained a fruitful working relationship with the Institute of Management for many years.

1.5 Structure

As outlined in Table 1, my dissertation encompasses three empirical studies, all of which are centered on temporal focus theory.

Study 1 examines how top management's temporal and regulatory foci affect firm survival during industry-level discontinuity. Adopting a dynamic perspective, I argue that their effects evolve over time as discontinuous change gradually unfolds. As theorized, I find that past orientation reduces survival prospects, but this effect becomes weaker over time. Moreover, top management's regulatory foci affect survival in distinct ways, but their effects vary in terms of their strength and direction over time. In Study 1, I emphasize more than just the important role of managerial cognition during environmental crises. Following recent calls in the literature, I also shed light on the interplay of temporal foci, regulatory foci and clock time. I presented the study at the *81st Annual Meeting of the Academy of Management* in August 2021.

Study 2 is among the first to examine top management's temporal and affective foci in concert. Applying the construct of temporal attitude to strategy research, I argue that positive and negative affect provide motivational cues for past- and future-oriented action. In line with our theorization, nostalgia (positive past focus) and worry (negative future focus) are both negatively related to profitability. Study 2 provides a more fine-grained understanding of the link between top management's temporal biases and organizational profitability. Moreover, it may help mitigate the cognition-emotion divide in strategy research. The study was selected as a *Finalist* for the *Best Proposal Award* of the SMS Strategy Process Interest Group at the *41st SMS Annual Conference* in September 2021.

Finally, Study 3 introduces successor CEOs' temporal foci as a cognitive contingency to the succession-performance relationship. Because temporal foci represent a strong cognitive bias, I argue that they influence the adaptive capacity levels of successor CEOs. I theorize and find that successor CEOs with strong past orientation are positively related to post-succession performance while the opposite holds for their counterparts with strong future orientation. The study may help extend the nascent stream on subjective temporality in succession research. Moreover, it integrates temporal foci and event time because succession events mark sudden punctuations in the history of a firm. Study 3 was recently accepted for presentation at the *82nd Annual Meeting of the Academy of Management* in August 2022.

Table 1: Summary of Studies

	Study 1		Study 2		Study 3	
Title	The Role of Temporal Focus and Regulatory Focus During an Industry Discontinuity		Beyond Past and Future: The Role of Top Management's Temporal Attitude on Organizational Performance		Back or Forth? The Role of Successor CEOs' Temporal Focus on Post-Succession Firm Performance	
Classification	Empirical		Empirical		Empirical	
Research Question	How do <i>temporal and regulatory foci</i> influence firm <i>survival during an unfolding industry-level discontinuity</i> ?		How do <i>temporal and affective foci jointly</i> influence firm <i>profitability</i> ?		How do <i>temporal foci</i> moderate the <i>succession-performance relationship</i> ?	
Theoretical Perspectives	- Temporal focus - Regulatory focus		- Temporal focus - Affective focus		- Temporal focus - Executive succession	
Findings	- Past focus reduces firm survival, but the effect becomes weaker once institutional change unfolds - Promotion (prevention) focus enhances (reduces) firm survival once institutional change unfolds		- Nostalgia (positive past focus) and worry (negative future focus) are negatively related to firm profitability		- Successor CEOs high on past (future) focus strengthen (weaken) post-succession firm performance	
Contributions	- Advances our understanding of the link between temporal biases and firm survival - Sheds light on interplay of temporal focus (subjective) and clock time (objective) - Advances our understanding of temporal and motivational biases during corporate crises		- Advances our understanding of the link between temporal biases and firm profitability - Applies concept of temporal attitude to strategy research - Helps mitigate the cognition-emotion divide in strategy research - Advances our understanding of temporal and emotional biases during corporate crises		- Introduces temporal focus as a contingency in the succession-performance relationship - Broadens stream on temporal biases in succession research - Sheds light on interplay of temporal focus (subjective) and event time (objective) - Advances our understanding of temporal biases during corporate crises	
Submission Status	- Accepted at the <i>Academy of Management's</i> Annual Meeting (2021)		- Accepted at the <i>Strategic Management Society's</i> Annual Conference (2021) - Selected as <i>Finalist</i> for the <i>Best Proposal Award</i> (2021) of the SMS Strategy Process Interest Group		- Accepted at the <i>Academy of Management's</i> Annual Meeting (2022)	

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2. The Role of Temporal Focus and Regulatory Focus During an Industry Discontinuity (*Study 1*)

Temporal focus and regulatory focus help explain how managerial cognition guides strategic action. Despite the growing interest in these two constructs, scholars have not examined how top management's temporal and regulatory foci affect organizational mortality during a major industry-level discontinuity. Adopting a dynamic perspective, we argue that their effects evolve over time as institutional change gradually unfolds. Based on a unique sample of 99 private banks in Switzerland and Liechtenstein from 2007 to 2016, we find that temporal and regulatory foci influence organizational mortality in distinct ways. Top management's past focus increases the likelihood of mortality during an institutional change, but this positive effect becomes weaker once a new dominant logic has been established. Managers with a strong promotion focus reduce the likelihood of mortality once the institutional change starts to unfold. In contrast, executives high on prevention focus reduce mortality at the inception of uncertainty, but this negative effect turns positive over time. Our findings provide novel insights into the hidden temporal patterns of temporal and regulatory foci during discontinuous change.

Keywords: Temporal focus; regulatory focus; upper echelons; discontinuity; time

2.1 Introduction

Temporal focus (Bluedorn, 2002; Shipp et al., 2009) and regulatory focus (Higgins, 1997) have been established as two important constructs in strategy research. They help explain differences in managerial attention, information processing and, ultimately, strategic action. Temporal focus theory, on the one hand, acknowledges that managers differ in their attention to past, present and future (Shipp et al., 2009). Regulatory focus theory, on the other hand, explains how managers focus on different sides of the outcome distribution, as they are motivated by maximum and minimum goals (Crowe & Higgins, 1997; Higgins, Roney, Crowe, & Hymes, 1994).

Despite the growing interest in these two constructs, scholars have not examined how top management's temporal and regulatory foci affect firm performance during a major industry-level discontinuity. This is surprising, as managerial cognition matters especially under high job demands (Hambrick et al., 2005). During a major institutional change, however, we may not expect the effects of top management's temporal and regulatory foci to remain constant as environmental uncertainty is gradually resolved. Instead, their effectiveness may vary over time, depending on the respective level of environmental fit. Earlier studies found similar evidence for other attributes of managerial psychology. Narcissistic CEOs, for example, typically face greater losses at the beginning of a crisis but recover more quickly once environmental uncertainty is resolved (Patel & Cooper, 2014).

To study how the effects of top management's temporal and regulatory foci evolve during an environmental crisis, we propose explicitly incorporating clock time into theorizing. Adopting such a "completely temporal view" (Shipp & Cole, 2015: 237), we are able to provide a more fine-grained understanding of their hidden temporal patterns. To date, a handful of studies have illustrated how temporal focus theory benefits from a closer integration with clock time. Park et al. (2017) reported that temporal foci evolve over an individual's life. Presenting similar evidence, Jansen and Shipp (2019) found that many employees adjust their subjective perceptions of temporal fit over time. Moreover, scholars speculated about the interplay of top management's regulatory foci and clock time. Drawing on regulatory fit theory (Higgins, 2000), they suspected regulatory foci to be beneficial at different stages of the business cycle (Higgins & Pinelli, 2020), team life cycle (Marks, Mathieu, & Zaccaro, 2001) or entrepreneurial journey (Brockner, Higgins, & Low, 2004; Tumasjan & Braun, 2012).

Even though state-like components of temporal foci (Holman & Silver, 2005; Park et al., 2017; Rush & Grouzet, 2012; Shipp & Aeon, 2019) and regulatory foci (Kark & Van Dijk, 2019; Shah, Higgins, & Friedman, 1998; Wallace & Chen, 2006) are well established in psychology and behavioral science, management scholars typically regard these constructs as stable individual dispositions (e.g., Ahmadi, Khanagha, Berchicci, & Jansen, 2017; DesJardine & Shi, 2021; Gamache et al., 2020; Kammerlander, Burger, Fust, & Fueglistaller, 2015; Mohammed & Harrison, 2013). We find that a substantial portion of variance in top management's temporal and regulatory foci is due to fluctuations within executives over time. Accordingly, we treat them as a combination of a dispositional trait and a malleable state.

To test our hypotheses, we draw on a unique sample of 99 private banks in Switzerland and Liechtenstein. From 2007 through 2016, these private banks were confronted with high uncertainty regarding the future viability of banking secrecy, which had equipped them with a decade-long competitive advantage. As stressed by Überbacher and Scherer (2020), this uncertainty passed away gradually as the institutional change unfolded in multiple waves. Starting with the global financial crisis in 2007, many private banks in Switzerland and Liechtenstein were indicted for their roles in aiding wealthy individuals' efforts to commit tax fraud. The period of uncertainty ended in 2016 when the government agreed to adopt the Automatic Exchange of Information (AEOI) with the OECD. During the 10-year study period, executives at private banks had to choose between secrecy-oriented (*past focus*) and tax-compliant business practices (*future focus*), as explained by Collardi (2012). In addition, they had to choose between strategic risk-taking to seize potential gains (*promotion focus*) and conservative risk management to avoid potential losses (*prevention focus*). Using a nearly complete sample of the population under study, we examine the effects of temporal and regulatory foci on organizational mortality. We choose mortality as our dependent variable, as it is a robust measure of firm performance, particularly during episodes of institutional change (Richard, Devinney, Yip, & Johnson, 2009).

As theorized, we find the effects of temporal and regulatory foci to change in terms of their strength over the course of the unfolding institutional change. Specifically, managers high on past orientation are associated with a higher likelihood of organizational mortality, but this effect becomes less pronounced once a new dominant logic has been established. Top management's promotion orientation does not increase

the likelihood of mortality at early stages of discontinuity, but the effect turns negative once the institutional change starts to unfold. Conversely, prevention orientation initially reduces the likelihood of mortality, but this negative effect turns positive at later stages of crisis.

Our study contributes to strategy research in three major ways. First, it extends the literature on temporality in strategy research (Shipp & Jansen, 2021; Tang et al., 2019). Top management's temporal foci have recently gained traction in the management literature, since scholars have studied their impact on mergers and acquisitions (DesJardine & Shi, 2021; Gamache & McNamara, 2019), strategic change (Back et al., 2020; Tuncdogan & Dogan, 2020) and new product introductions (Nadkarni & Chen, 2014; Yadav et al., 2007). Relatively few studies, however, have examined the interplay of top management's temporal foci and clock time, although both constructs are conceptually intertwined (Dawson & Sykes, 2019; Johnsen & Holt, 2021; Shipp & Cole, 2015; Shipp & Jansen, 2021). We hope that our study helps build intellectual bridges between subjective and objective notions of time.

Second, we contribute to upper echelons theory (Hambrick & Mason, 1984). Previous studies have examined how top management's temporal and regulatory foci influence accounting performance (Back et al., 2020; Hmieleski & Baron, 2008; Wallace, Little, Hill, & Ridge, 2010). To the best of our knowledge, there is a relative paucity of research on the link between temporal foci, regulatory foci and organizational survival. As organizational survival is an "unambiguous phenomenon" (Barnett & Carroll, 1987: 406), it is typically regarded as a robust performance measure, especially in times of institutional change (Richard et al., 2009).

Third, our study extends what we know about the role of executive characteristics in times of corporate crises (Bundy et al., 2017). Thus far, scholars have studied top management's temporal and regulatory foci using industry dynamism as an important contingency factor (Back et al., 2020; Hmieleski & Baron, 2008; Nadkarni & Chen, 2014; Wallace et al., 2010; Zhang, Gong, & Jia, in press). To the best of our knowledge, however, there has been little research on the role of temporal and regulatory foci during an environmental crisis. Hence, we examine their effects during a major institutional change putting the survival of the private banks under study at severe risk. Due to the erosion of banking secrecy in Switzerland and Liechtenstein, one-third of the original population disappeared during the 10-year study period (KPMG, 2016).

2.2 Theoretical Background

2.2.1 Temporal focus

Shipp et al. (2009) conceptualized temporal focus as an individual's "allocation of attention to the past, present, and future" (2). In this study, we refer to temporal focus as a combination of a dispositional trait and a malleable state (Mohammed & Marhefka, 2020). Thus far, strategy scholars have often regarded top management's temporal foci as stable individual differences (e.g., DesJardine & Shi, 2021; Mohammed & Harrison, 2013), as these are shaped by national culture and education (Bluedorn, 2002; Guo, Ji, Spina, & Zhang, 2012). Recently, numerous studies have challenged this assumption, finding temporal foci to vary substantially across contexts and over time (Rush & Grouzet, 2012; Shipp & Aeon, 2019). If individuals are confronted, for example, with a major discontinuity, they may switch to a temporal focus that fits the situational demands (Holman & Silver, 2005; Jansen & Shipp, 2019).

Nadkarni and Chen (2014) presented evidence that the three temporal foci are independent constructs. For example, scoring low on past focus is not equivalent to scoring high on future focus. Moreover, temporal foci differ with respect to their nature. As noted by Zimbardo and Boyd (1999), past and future orientation are conceptualized as *top-down* constructs, while present orientation needs to be regarded as a *bottom-up* construct. "Between the abstract, psychological constructions of prior past and anticipated future events", they noted, "lies the concrete, empirically centered representation of the present" (1272). This perspective is based upon earlier work by Markus and Nurius (1986). They argued that we construct and compare possible selves (i.e., past or future) to our actual self (i.e., present), which serves as a reference point. Put differently, we interpret the present primarily by comparing it with past experiences and future eventualities. Hence, we devote our analysis to top management's temporal foci on the past and future. Following the approach in Gamache and McNamara (2019), we perform supplementary analyses to search for any potential effects related to top management's present orientation.

Past orientation, on the one hand, is related to the reflection upon past events and traditions (Zimbardo & Boyd, 1999). Individuals with a strong past orientation think about the past to inform their subsequent actions (e.g., Karniol & Ross, 1996). Consistently, Gamache and McNamara (2019) found CEO past orientation to strengthen

the impact of negative media coverage regarding a firm's past acquisitions on future acquisition activity. Likewise, marketing scholars found consumers high on past orientation to be more sensitive to past-related product information, such as brand heritage (Pecot, Merchant, Valette-Florence, & De Barnier, 2018).

Given their rigid mindset, individuals with a strong past orientation are deeply invested in the status quo and prefer continuity over adaptation (e.g., Briker, Walter, & Cole, 2020; Rabinovich & Morton, 2012). Past-oriented managers are unlikely to disrupt operations or alienate other organizational members, as they appreciate the history of their firms (Thoms, 2004). On a negative note, however, they may fall prey to an overgeneralization bias, as they "overemphasize similarities and underemphasize differences between the past and current context" (Nadkarni & Chen, 2014: 1812). Accordingly, past focus enhances the speed of new product introductions in stable environments but not in dynamic environments (Nadkarni & Chen, 2014).

On the other hand, future orientation refers to the imagination of future possibilities (Zimbardo & Boyd, 1999). Since individuals with a strong future focus perceive the future to be detached from the past, they disregard the potential associated with experiential learning. Accordingly, they are less effective in refining existing operations (Nadkarni & Chen, 2014). Instead, future-oriented managers are highly adaptable and open to new experiences (Kooij et al., 2018; Zacher, 2014; Zimbardo & Boyd, 1999). Tuncdogan and Dogan (2020), for instance, found that managers with a strong future focus are more likely to pursue exploration than exploitation activities. In new ventures, future-oriented TMTs are associated with higher levels of strategic change (West & Meyer, 1998). In line with these findings, high levels of future orientation accelerate product launches in dynamic industries but not in stable industries (Nadkarni & Chen, 2014; Yadav et al., 2007).

Moreover, managers high on future orientation typically operate on longer strategic planning horizons (Das, 1987). Not surprisingly, they prioritize tasks that go beyond immediate requirements (Foo, Uy, & Baron, 2009) and show proactive behaviors at work, such as organizational citizenship (Strobel, Tumasjan, Spörrle, & Welpe, 2013). Contrary to predictions of the BAM, managers with a strong future orientation engage in strategic risk-taking, as they do not endow current but prospective wealth (DesJardine & Shi, 2021).

Despite the increasing interest in top management's temporal foci, only a handful of studies examined how their effects vary over time. This is surprising, as we may not assume that the effects of past and future orientation remain constant once time elapses or critical events take place. Park et al. (2017), for instance, reported that temporal foci develop in patterns over an individual's life. Other scholars examined the interplay of temporal focus and event time. Jansen and Shipp (2019) found that employees adjust their subjective perceptions of retrospect, present and anticipated fit in response to changes in the workplace. Similarly, Kaplan and Orlikowski (2013) studied how employees resolve conflicting interpretations regarding organizational past, present and future during a sudden environmental punctuation.

Taken together, we know surprisingly little about the potentially hidden temporal patterns related to top management's temporal foci. As an institutional change unfolds gradually, however, we would suspect the temporal fit of top management's past and future foci to vary over the course of an environmental crisis. Accordingly, we propose to examine the interplay of past focus, future focus and clock time during a major industry-level discontinuity.

2.2.2 Regulatory focus

Regulatory focus refers to the degree of engagement with two self-regulatory systems, namely, promotion and prevention focus (Higgins, 1997). Building on the hedonic principle, regulatory focus theory states that individuals approach pleasure and avoid pain. Unlike prospect theory (Kahneman & Tversky, 1979), however, it recognizes different types of pleasure and pain.

Promotion focus, on the one hand, is related to advancement needs (Higgins, 1997). While individuals high on promotion orientation experience the presence of positive outcomes as pleasure, they experience the absence of such outcomes as pain (Higgins et al., 1994). Accordingly, they adopt approach strategies to reduce the discrepancy between their current state and these positive end states. In contrast, prevention orientation is related to security needs. Individuals with a strong prevention focus are geared toward the presence and absence of negative outcomes. They deploy avoidance tactics to increase the discrepancy between their current state and these potentially negative outcomes.

Regulatory foci are conceptualized as independent constructs. Accordingly, managers may be high on promotion and prevention focus or low on both (Lanaj, Chang, & Johnson, 2012). Similar to temporal foci, regulatory foci are not entirely dispositional but malleable (Gamache, McNamara, Mannor, & Johnson, 2015; Higgins & Pinelli, 2020). Their chronic component is shaped by socialization (Johnson, Smith, Wallace, Hill, & Baron, 2015), while their situational component is affected by different contextual factors, such as leadership style (Kark & Van Dijk, 2019) and work climate (Wallace & Chen, 2006). Strategy scholars, however, typically regard regulatory foci primarily as stable individual differences (Ahmadi et al., 2017; Gamache et al., 2020; Kammerlander et al., 2015). Since the situational component has been relatively under-researched, our study addresses explicit calls to “consider the malleability of state regulatory focus” (Johnson et al., 2015: 1522).

Regarding their impact on strategic decision-making, regulatory foci differ in important ways. Crowe and Higgins (1997) found that individuals with a strong promotion focus are typically associated with a higher risk propensity, while those high on prevention focus are risk averse. Accordingly, managers high on promotion orientation are geared toward new product launches (Spanjol, Tam, Qualls, & Bohlmann, 2011) and mergers and acquisitions (Gamache et al., 2015). If they have a strong prevention focus, however, they are more likely to shy away from such expansionary strategies due to higher levels of diligence and caution. Recently, Zhang et al. (in press) shed additional light on the dark side of organizational behavior, finding that managers with a strong promotion focus also enhance environmental misconduct. Conversely, those high on prevention orientation are negatively associated with such misconduct due to disproportionate losses they would incur if caught.

Building on these findings, scholars reported different preferences for change and stability. Liberman, Idson, Camacho, and Higgins (1999) found that individuals high in promotion focus are open to change. Accordingly, they are positively related to a firm’s exploration and exploitation activity (Ahmadi et al., 2017; Kammerlander et al., 2015; Tuncdogan & Dogan, 2020). Individuals high in prevention focus are more committed to the status quo (Liberman et al., 1999). According to Scholer, Zou, Fujita, Stroessner, and Higgins (2010), however, they may opt for change instead of stability if they feel that change caters to their need for security. Hence, the findings on the link of prevention focus and openness to change are partially inconclusive and contradictory.

Moreover, regulatory foci differ in terms of their preference for speed and accuracy (Förster, Higgins, & Bianco, 2003). Promotion orientation increases speed at the expense of accuracy, whereas the opposite holds for prevention orientation. Accordingly, Das and Kumar (2011) proposed that managers with a strong promotion orientation need less time to reach agreements in strategic alliances, as they are less concerned about potentially opportunistic partner behavior. Managers with a strong prevention orientation, on the other hand, need more time and are less willing to share sensitive information.

Finally, regulatory foci affect how managers perceive and filter information (Förster & Higgins, 2005). Entrepreneurs with a strong promotion focus are more likely to recognize opportunities (Brockner et al., 2004; Tumasjan & Braun, 2012). Employees high in prevention orientation are more sensitive to emerging threats and are therefore well suited as competitive intelligence analysts (McMullen, Shepherd, & Patzelt, 2009). Additionally, Gamache et al. (2020) reported that managers with a high promotion focus engage in stakeholder initiatives providing opportunities to build stronger connections. A prevention focus sensitizes them to initiatives that represent threats and urge them to show accountability.

Two studies also examined the link between top management's regulatory foci and firm performance. While promotion orientation increases performance, the opposite holds for prevention orientation (Hmieleski & Baron, 2008; Wallace et al., 2010). Based on regulatory fit theory (Higgins, 2000), however, their effects are contingent on the level of environmental dynamism. Accordingly, we would suspect their regulatory fit to vary over the course of an environmental crisis, as the level of uncertainty is resolved over time. Indeed, prior research indicated that top management's regulatory foci are effective at different points in time, such as different stages of the entrepreneurial journey (Brockner et al., 2004; Tumasjan & Braun, 2012). Promotion focus enables entrepreneurs to initially recognize an opportunity, while prevention focus sensitizes them to potential problems at a later stage. Similarly, Higgins and Pinelli (2020) speculated on their fit "at different stages of the business cycle" (44).

To the best of our knowledge, however, there has been little research regarding the hidden temporal patterns of regulatory foci during a major industry-level discontinuity. Hence, we propose to study the joint effects of promotion focus, prevention focus and clock time during a major institutional change.

2.3 Hypotheses

2.3.1 Temporal focus

During episodes of environmental crisis, top management's temporal foci may affect organizational mortality in distinct ways. This is because past and future foci differ regarding their patterns of information search and, consequently, their preferences for stability and adaptation (e.g., Karniol & Ross, 1996). As institutional change gradually unfolds, we expect that the effectiveness of top management's temporal foci develops in predictable patterns over time.

Managers with a strong past focus typically attend to past-related information for strategic decision-making (Gamache & McNamara, 2019). However, they pay less attention to new stimuli (Nadkarni & Chen, 2014). During a major discontinuity, these executives are unlikely to detect institutional change in a timely manner, as they rely on outdated information. Therefore, we expect them to increase organizational mortality. We suspect this positive effect to become weaker over time. Once the environment starts to converge, lower levels of scanning may no longer invalidate but accelerate strategic decision-making. Indeed, executives high on past focus are associated with faster opportunity recognition and fewer delays in new product launches in stable environments (Nadkarni & Chen, 2014).

Relatedly, CEOs with a strong past orientation are deeply invested in established routines and the status quo (Briker et al., 2020; Rabinovich & Morton, 2012). They hold on to traditional business practices, although these practices are increasingly challenged. Accordingly, they may enhance the likelihood of organizational mortality in times of corporate crisis. Once a new dominant logic has been established, however, CEOs with a strong past focus are typically more skilled to oversee the continuous improvement of the new business practices (Nadkarni & Chen, 2014). Therefore, we expect the positive effect on mortality to become less pronounced at later stages of crisis.

In conclusion, top management's past focus may increase the likelihood of organizational mortality. Because institutional change gradually unfolds, we expect this positive effect to become weaker over the course of an environmental crisis.

Hypothesis 1: *Past focus (a) increases organizational mortality during industry-level discontinuity, but (b) this positive effect becomes weaker over time.*

When executives have a strong future focus, in contrast, they scan the environment more rigorously for new stimuli because they assume the future to be detached from the past (Nadkarni & Chen, 2014; Yadav et al., 2007). During episodes of environmental crisis, we expect them to make better strategic decisions, as they are likely to detect new stimuli. Their future focus may therefore reduce organizational mortality. Over time, however, this positive effect may become less pronounced. As environmental uncertainty is gradually resolved, extensive scanning is no longer a prerequisite for organizational survival. Executives with a strong future focus may therefore rather complicate and slow down the strategic planning process without reaping the same benefits as under high uncertainty (Nadkarni & Chen, 2014).

Moreover, executives with strong future foci are likely to mandate strategic change (Foo et al., 2009; West & Meyer, 1998). As long as environmental uncertainty is high, managers with strong future foci may reduce the likelihood of organizational mortality, as they abandon traditional business practices, which are no longer viable. Once the uncertainty passes away, however, they continue to experiment with radical ideas and strategic alternatives (Hurst, Rush, & White, 1989), even though the new dominant logic has already taken shape. Therefore, we expect the negative effect of top management's future orientation on mortality to become weaker over time.

Accordingly, we expect that top management's future foci reduce the likelihood of organizational mortality during an environmental crisis. However, this negative effect may become weaker over time because institutional change gradually unfolds.

Hypothesis 2: *Future focus (a) reduces organizational mortality during industry-level discontinuity, but (b) this negative effect becomes weaker over time.*

2.3.2 Regulatory focus

Additionally, we craft hypotheses on the potential effects of top management's regulatory foci during an industry-level discontinuity. Specifically, we argue that promotion and prevention foci affect organizational mortality in distinct ways because they differ in their attention to gains and losses (Higgins, 1997) and their risk propensity (Crowe & Higgins, 1997). Drawing on regulatory fit theory (Higgins, 2000), we argue that their effectiveness varies over the course of an environmental crisis.

CEOs high on promotion orientation are focused on the positive side of the outcome distribution (Higgins et al., 1994). Because they are indifferent between losses and non-losses, they pay less attention to negative stimuli related to potential threats. During a major discontinuity, managers with strong promotion foci may increase organizational mortality, since they are more likely to overlook critical information needed to initiate corrective action. Once the discontinuity gradually unfolds, this liability may become less pronounced. Their lack of attention to negative stimuli frees up capacity to recognize and seize potential opportunities within the new dominant logic of the business (Brockner et al., 2004; Tumasjan & Braun, 2012). Therefore, the positive effect of promotion orientation on mortality may become weaker over time.

Moreover, CEOs with strong promotion foci are geared toward strategic risk-taking (Gamache et al., 2015; Spanjol et al., 2011). During a major discontinuity, we suspect this may increase organizational mortality because it understates the likelihood of large losses, even though associated risks are substantial. Their excessive risk-taking may deplete organizational resources, which could otherwise have provided a reserve for unforeseen developments. Over time, their positive effect on mortality may become less pronounced. As time elapses, CEOs with a strong promotion focus no longer disproportionately understate risks of severe losses since these are in decline. Instead, they adequately assess the likelihood of big wins and mobilize resources to capitalize on these opportunities.

In conclusion, we expect that managers with strong promotion foci increase the likelihood of organizational mortality during an environmental crisis. However, this positive effect may become weaker over time as environmental uncertainty is gradually resolved.

Hypothesis 3: *Promotion focus (a) increases organizational mortality during industry-level discontinuity, but (b) this positive effect becomes weaker over time.*

On the other hand, CEOs high in prevention orientation are focused on the negative side of the outcome distribution (Higgins et al., 1994). During episodes of corporate crisis, they pay special attention to potential threats, as these represent negative stimuli (Brockner et al., 2004; McMullen et al., 2009). Accordingly, we expect them to reduce organizational mortality, as they possess critical information to take timely corrective action. Once the dark clouds have faded away, however, executives

high on prevention focus remain overly focused on negative stimuli. As they are indifferent between gains and non-gains, CEOs with a strong prevention focus are at risk of overlooking potential opportunities (Tumasjan & Braun, 2012). As such behavior undermines their firms' competitiveness, we expect the negative effect of prevention focus to become weaker at later stages of crisis.

Furthermore, CEOs with strong prevention foci are risk averse (Crowe & Higgins, 1997). In risky markets, these CEOs may assess the likelihood of severe losses more adequately than their promotion-oriented counterparts. As stressed by Scholer et al. (2010), executives high on prevention orientation pursue strategic action only if the gains are so substantial that they overcompensate for the associated risks. Accordingly, they protect organizational resources, which may serve as a cushion in case of severe losses. We would therefore expect them to reduce organizational mortality during industry-level discontinuity. However, we suspect this negative effect to become weaker over time. Once the uncertainty has passed away, executives with a strong prevention focus continue to avoid strategic risk-taking, although the risk of severe losses has substantially declined. They continue to block resources that could be invested more productively.

Accordingly, top management's prevention foci may reduce the likelihood of organizational mortality. Because environmental uncertainty is gradually resolved, we expect that this negative effect becomes weaker over the course of an environmental crisis.

Hypothesis 4: *Prevention focus (a) reduces organizational mortality during industry-level discontinuity, but (b) this negative effect becomes weaker over time.*

2.4 Methodology

2.4.1 Sample

We tested our hypotheses on a unique sample of private banks in Switzerland and Liechtenstein between 2007 and 2016. These private banks experienced a turbulent 10-year period characterized by a high level of uncertainty regarding the future of banking secrecy. As noted by Überbacher and Scherer (2020), banking secrecy was of utmost importance for private banks in Switzerland and Liechtenstein, as it provided them with a competitive advantage over foreign banking institutions. Uncertainty regarding the viability of their secrecy-oriented business models was initially triggered by the U.S. Department of Justice in 2007, as it started a public investigation against a large Swiss bank accused of having supported U.S. citizens in committing tax fraud. In subsequent years, the number of investigations conducted by foreign law enforcement authorities and corresponding indictments of private banks increased considerably (Überbacher & Scherer, 2020). Since institutional changes unfolded in multiple waves, the uncertainty regarding the viability of traditional business models gradually decreased. Starting in 2014, the private banks under study had to disclose account information of U.S. clients to the U.S. Internal Revenue Service in accordance with the FATCA. By 2017, the AEOI under the OECD Common Reporting Standard entered into force, which marked the end of banking secrecy.

Our sample of private banks was taken from the official annual records of the Swiss National Bank and the Liechtenstein Bankers Association. To construct a homogeneous sample, we excluded three kinds of banking institutions. First, we removed all cantonal, regional, and savings banks, as these institutions are state- or community-owned. Second, we excluded banks that have been active in segments other than private banking and wealth management. Third, we removed all banks whose banking license had been granted after the start of the study period. In total, we recorded 1,121 years for 141 private banks.

As a second step, we collected annual reports for 2007 to 2016 from S&P's Global Market Intelligence and BvD's Orbis Bank Focus to obtain the banks' financial data and letters to shareholders (LTSs). Missing reports were also searched for in public libraries, collected from corporate websites or requested from investor relations departments. To construct the final data set, we removed observations if their

corresponding letters to shareholders were not in English or not authentic (i.e., associated with CEO or chairman). Additionally, we imposed a minimum length of 250 words per LTS.

Since annual reports had been more difficult to obtain for dissolved banks, we tested for a potential sampling bias. For a total of 1,121 firm years, we collected 689 LTSs, of which 211 were attributable to dissolved banks (30.6%). A total of 432 LTSs were missing or excluded, of which 137 were associated with dissolved banks (31.7%). A Kolmogorov-Smirnov two-sample test provided confidence that the share of dissolved banks in our sample does not significantly differ from that in the total population. After dropping cases with missing information, our final sample comprises 669 observations related to 99 private banks.

2.4.2 Variables

2.4.2.1 Dependent variable

We coded organizational mortality as a binary variable that equals 1 if the corresponding bank terminated its wealth management operations during a given year and 0 otherwise. Consistent with prior studies on the survival of banking institutions (e.g., Haveman, 1992; Wischnevsky, 2004; Zuniga-Vicente & Vicente-Lorente, 2006), we treated liquidations, mergers and acquisitions in the same way. In their study on the survival of banks, Wheelock and Wilson (2000) found that proximity to bankruptcy is associated with an increased likelihood of a bank being sold. Likewise, Haveman (1992) argued that “outright organizational dissolution is not a likely outcome” (59) in the banking industry, as regulators are afraid of potential turmoil. In line with this argument, we counted only 11 cases of liquidation, while 23 banks left the industry through M&A. All of these cases resulted in the discontinuation of banking licenses.

2.4.2.2 Independent variables

To measure temporal and regulatory foci, we built on established content analysis techniques (Duriau et al., 2007). As language reflects cognitive constructs, the frequency of specific words in LTSs serves as a proxy of these foci (Huff, 1990). Unlike surveys and interviews, content analysis mitigates issues related to retrospective and social desirability bias (Eggers & Kaplan, 2009; Uhlmann et al., 2012). LTSs are well

suited for our analyses due to their consistency in terms of format, audience, and publication intervals (e.g., Barr et al., 1992). To conduct automated coding, we used the Linguistic Inquiry and Word Count (LIWC) text analysis software package (Pennebaker et al., 2015).

Specifically, we measured top management's temporal foci as the percentage of past- and future-oriented words in the private banks' LTSs. We applied the dictionaries developed by Pennebaker et al. (2015), as these have already been used in strategy research (DesJardine & Shi, 2021; Gamache & McNamara, 2019; Nadkarni & Chen, 2014). They contain 341 past-oriented words (e.g., *were*), 424 present-oriented words (e.g., *are*) and 97 future-oriented words (e.g., *will*). Their concurrent and predictive validity have been tested by the authors. In the same way, we operationalized top management's regulatory foci as the percentages of promotion- and prevention-oriented words. We applied the dictionaries used by Gamache et al. (2015), which contain 27 promotion-oriented words (e.g., *growth*) and 25 prevention-oriented words (e.g., *security*). The content, convergent and discriminant validity of these dictionaries have been established.

To date, strategy scholars have typically operationalized top management's temporal and regulatory foci as stable individual differences (e.g., Ahmadi et al., 2017; DesJardine & Shi, 2021; Gamache et al., 2020; Kammerlander et al., 2015; Mohammed & Harrison, 2013). Our study, however, acknowledges that temporal and regulatory foci may also have a situational component. As prior research shows, they are affected by contextual factors and vary over time (Gamache et al., 2015; Johnson et al., 2015; Mohammed & Marhefka, 2020).

To further substantiate this claim, we assessed the stability of our measures of temporal and regulatory focus. First, we computed their coefficients of variation following an approach described in DesJardine and Shi (2021). As expected, we found that the coefficients of prevention focus ($cv = 0.49$), promotion focus ($cv = 0.33$) and future focus ($cv = 0.34$) fluctuate more than those of total word count ($cv = 0.25$) and other organizational characteristics, such as equity margin ($cv = 0.30$) and market diversification ($cv = 0.21$).

Second, as in Gamache et al. (2015), we specified five hierarchical regressions on past focus, future focus, promotion focus, prevention focus and total word count, each with the individual CEO as a level 2 predictor. Table 2 presents the corresponding

regression outputs. Based on significant likelihood ratio tests ($p < 0.01$), we may conclude that a substantial portion of variance operates between executives across all models. Relatively low intraclass correlation coefficients of temporal and regulatory foci, however, indicate that the majority of variance resides *within* executives (Gamache et al., 2015; Rush & Grouzet, 2012). In contrast, the variance of total word count predominantly operates *between* executives.

Table 2: Hierarchical Regression at CEO-Level^a

Variables	(1) Past focus	(2) Future focus	(3) Promotion focus	(4) Prevention focus	(5) LTS word count
Constant	2.50***	0.80***	1.10***	0.50***	1.41***
Likelihood ratio (LR) test	127.54***	129.69***	105.20***	56.64***	726.30***
Between variance	0.49	0.27	0.31	0.17	0.97
Within variance	0.58	0.32	0.44	0.29	0.44
ICC	0.42	0.42	0.33	0.26	0.83

^a $N = 669$ *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

Third, we inspected the correlations between temporal foci, regulatory foci and clock time. We found that past focus ($\rho = -0.13$, $p < 0.01$), future focus ($\rho = -0.08$, $p < 0.05$) and prevention focus ($\rho = -0.06$, $p < 0.10$) were weakly but significantly correlated with clock time. Taken together, these findings provide support that top management's temporal and regulatory foci need to be operationalized as a combination of a dispositional trait and a malleable state. Accordingly, we measured both constructs on an annual basis.

As we applied a dynamic perspective, we also incorporated clock time directly into our model using the number of years that had passed since the inception of uncertainty.

2.4.2.3 Control variables

The relationship under study may also be confounded by other characteristics of private banks (e.g., Berger & Mester, 1997; Deyoung & Hasan, 1998). Hence, we controlled for past performance using ROE, which is a common performance measure of private banks. We also controlled for equity margin as total equity over total assets. We measured growth as the percentage change in the banks' net income. We controlled for bank size using the logarithm of total assets. Moreover, we controlled for the region

in which a bank was domiciled. This categorical variable was coded as 1 for German-speaking cantons, 2 for French-speaking cantons, and 3 for Italian-speaking cantons. We controlled for ownership through a dichotomous variable that equals 1 if a bank was owned by a foreign consortium or family and 0 otherwise. Finally, we also controlled for market diversification using the logarithm of foreign branches and banking subsidiaries as well as service diversification using 1 – Herfindahl-Hirschman Index of seven distinct income categories of private banks.

With respect to individual shareholder letters, we followed prior research in controlling for total word count. To control for the level of complexity, we measured the percentage of words with more than six characters. Finally, we controlled for authorship, coding this variable as 1 if LTSs were associated with a CEO, 2 if they were associated with a CEO and a chairperson and 3 if they were associated with a chairperson only. In Switzerland and Liechtenstein, strict corporate governance standards require a two-tier board system. For legal purposes, annual reports are typically signed by chairpersons, although CEOs are closely involved in shaping their content (Bowman, 1984).

At the level of the respective executives, we controlled for CEO tenure using the logarithm of the number of years a CEO had been in this position. Additionally, we controlled for CEO succession, coded as 1 if a new CEO has been appointed in a given year and 0 otherwise.

2.4.3 Analysis

To test our hypotheses, we applied a Cox proportional hazard (PH) model with time-varying covariates (Cox & Oakes, 1984), which is superior to discrete-outcome models in three important ways. First, it handles survival data more efficiently, as it considers not only the *occurrence* but also the *time* of failure (Yadav et al., 2007). Second, Cox PH models are robust to right-censoring (Kalbfleisch & Prentice, 2002). While 34 banks had been dissolved by 2017, the remaining 65 banks were still operating at the end of our study. Third, Cox regressions can handle survival data with discrete time intervals. Following Eggers and Kaplan (2009), we chose the Efron method for ties, as it approximates marginal likelihoods more accurately. As the banks appear repeatedly in the risk pools, we used robust standard errors (Lin & Wei, 1989).

PH models assume hazard rates and regression coefficients to be constant (Kalbfleisch & Prentice, 2002). Following Grambsch and Therneau (1994), we performed a Schoenfeld test to detect potential deviations from this assumption. For the model specifications including prevention focus, the PH assumption was violated, as the Schoenfeld test was significant for the interaction term of prevention focus and clock time ($p < 0.01$). Hence, we inspected the Kaplan-Meier survival plots. We found an overlap of the survival curves of managers operating on high and low prevention focus at the beginning of the study period. If we dropped 2007 from our sample, the Schoenfeld tests would turn insignificant for all predictors and their interactions with clock time. As their regression outputs did not materially differ from the original model, we kept the original 10-year study period and interpreted the effects of prevention focus as an average effect (Allison, 1995). Due to potential issues related to multicollinearity, we centered all the predictors and controls at their respective means (Aiken & West, 1996). Furthermore, continuous variables were winsorized ($p = 0.01$) to eliminate severe outliers (DesJardine & Shi, 2021; Zhang et al., in press). All the independent and control variables were lagged by one year.

2.5 Results

2.5.1 Primary analysis

Table 3 reports the descriptive statistics and pairwise correlations. The correlation table does not imply any signs of severe multicollinearity, as the correlations of the independent and control variables are generally relatively low. As expected, top management's past and future foci are only weakly correlated ($\rho = -0.10$, $p < 0.05$). Likewise, the correlation between promotion and prevention focus is moderate ($\rho = -0.17$, $p < 0.01$) which provides support for their conceptual independence (Gamache et al., 2015; Lanaj et al., 2012). As previously outlined, temporal and regulatory foci are significantly but weakly correlated with clock time.

Table 4 presents the output of the Cox PH model. Figure 2 shows the interaction plot of top management's past focus and clock time. Figure 3 presents the interaction plots of their regulatory foci and clock time.

Our theorizing suggests that past orientation increases organizational mortality (H1a), but this positive effect may become weaker over time as institutional change gradually unfolds (H1b). In Model 6, the direct effect of past orientation is positive and statistically significant ($b = 1.07$, $p < 0.01$), while its interaction term with clock time is negative and significant ($b = -0.17$, $p < 0.05$). In terms of economic magnitude, an increase in top management's past orientation by 1 standard deviation (SD) increases the hazard ratio by 266% at the beginning of the study period (cf. Figure 2), which indicates a substantially higher likelihood of organizational mortality. At the end of the study period, however, such an increase in past orientation leads to a marginal change in the hazard ratio by 18%. This implies that the initially positive effect of top management's past focus on organizational mortality is no longer present once a new dominant logic has taken hold. Taken together, these findings provide strong support for Hypotheses 1a and 1b, respectively.

In Hypothesis 2, we suggest that top management's future orientation is associated with lower organizational mortality (H2a), but this negative effect may become less pronounced over time (H2b). However, neither the direct effect of future orientation nor its interaction effect with clock time is statistically significant. Therefore, Hypotheses 2a and 2b are rejected.

Table 3: Descriptive Statistics and Pairwise Correlations^a

Variables	Mean	SD	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) Bank mortality	.05	.22	1.00										
(2) Past performance	5.49	10.83	-0.06*	1.00									
(3) Equity margin	16.3	11.01	0.01	-0.04	1.00								
(4) Growth	.01	.24	-0.09**	0.22***	-0.06	1.00							
(5) Size (logged)	20.84	1.63	-0.05	0.12***	-0.55***	0.03	1.00						
(6) Region 1 (German)	.54	.5	0.02	0.05	-0.02	-0.01	0.07*	1.00					
(7) Region 2 (French)	.33	.47	0.00	-0.01	-0.07*	0.01	0.03	-0.76***	1.00				
(8) Region 3 (Italian)	.13	.34	-0.03	-0.06	0.12***	0.00	-0.15***	-0.42***	0.03	1.00			
(9) Ownership	.67	.47	0.05	-0.08**	0.09**	0.02	-0.08**	-0.05	0.03	0.03	1.00		
(10) Market diversification (logged)	.46	.73	-0.02	-0.04	-0.28***	0.04	0.74***	-0.03	0.02	0.01	-0.15***	1.00	
(11) Service diversification	.53	.14	-0.03	-0.02	-0.32***	0.06	0.37***	0.10***	0.01	-0.17***	0.19***	0.25***	1.00
(12) LTS word count	1.46	1.11	-0.04	0.06*	-0.27***	0.00	0.29***	0.04	-0.05	0.01	-0.18***	0.34***	0.01
(13) LTS complexity	29.91	2.58	-0.03	-0.10**	-0.04	-0.01	0.11***	0.06	-0.04	-0.03	0.16***	0.05	0.06
(14) LTS authorship1 (CEO)	.03	.17	0.00	0.11***	-0.06*	-0.05	-0.06*	0.13***	-0.09**	-0.07*	-0.05	-0.08**	-0.12***
(15) LTS authorship2 (both)	.44	.5	0.01	0.05	-0.31***	0.03	0.35***	0.24***	-0.08**	-0.24***	-0.17***	0.29***	0.19***
(16) LTS authorship3 (chair)	.53	.5	-0.01	-0.09**	0.33***	-0.01	-0.33***	-0.28***	0.11***	0.26***	0.18***	-0.26***	-0.15***
(17) CEO tenure (logged)	1.36	.95	-0.05	0.17***	-0.04	0.03	-0.05	-0.18***	0.12***	0.10**	-0.08*	0.04	-0.08**
(18) CEO succession	.16	.37	0.05	-0.11***	-0.03	-0.05	0.01	0.02	0.00	-0.04	-0.01	-0.06	0.01
(19) Past focus	2.5	.75	0.11***	-0.04	0.02	-0.01	-0.04	0.00	-0.14***	0.19***	-0.09**	-0.07*	-0.01
(20) Future focus	.8	.42	0.01	0.02	-0.02	-0.02	-0.05	0.05	0.05	-0.14***	-0.08*	-0.03	-0.04
(21) Promotion focus	1.11	.54	-0.06*	0.07*	-0.11***	0.24***	0.11***	-0.06	0.07*	-0.01	0.02	0.15***	0.03
(22) Prevention focus	.49	.33	0.07*	-0.03	0.18***	-0.19***	-0.17***	-0.04	0.06*	-0.03	-0.03	-0.15***	-0.19***
(23) Clock time	5.05	2.81	0.05	-0.23***	-0.20***	-0.05	0.16***	0.00	-0.02	0.03	-0.04	0.06	-0.01

Variables	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
(12) LTS word count	1.00											
(13) LTS complexity	0.02	1.00										
(14) LTS authorship1 (CEO)	0.03	0.10***	1.00									
(15) LTS authorship2 (both)	0.47***	0.01	-0.16***	1.00								
(16) LTS authorship3 (chair)	-0.47***	-0.05	-0.19***	-0.94***	1.00							
(17) CEO tenure (logged)	0.16***	-0.14***	0.06*	-0.04	0.02	1.00						
(18) CEO succession	-0.04	0.06	0.02	-0.07*	-0.01	-0.62***	1.00					
(19) Past focus	0.05	-0.26***	-0.07*	0.00	0.02	0.05	1.00					
(20) Future focus	0.04	-0.07*	0.05	0.05	-0.07*	0.08**	-0.10**	1.00				
(21) Promotion focus	-0.01	0.06	-0.11***	-0.11***	0.15***	0.02	-0.10***	0.02	1.00			
(22) Prevention focus	0.04	0.10**	0.11***	-0.07*	0.03	0.01	-0.01	0.03	0.03	-0.17***	1.00	
(23) Clock time	0.06	0.12***	-0.03	0.02	-0.01	0.11***	-0.04	-0.13***	-0.08**	0.04	-0.06*	1.00

^a $N = 669$; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$; two-tailed tests

Table 4: Cox PH Model on Bank Mortality^a

Variables	(1) Controls	(2) Past focus	(3) Future focus	(4) Promotion focus	(5) Prevention focus	(6) Full model
Control variables						
Past performance	0 (.02)	.01 (.02)	0 (.02)	.01 (.02)	.01 (.02)	.02 (.02)
Equity margin	-.02 (.02)	-.02 (.02)	-.02 (.02)	-.03 (.02)	-.04 (.02)	-.04* (.02)
Growth	-1.73* (.98)	-1.77* (1.08)	-1.63* (.96)	-1.66* (.99)	-1.51 (.96)	-1.47 (1.07)
Size (logged)	-.4** (.2)	-.48** (.2)	-.43** (.22)	-.43** (.21)	-.44** (.22)	-.62*** (.23)
Region2 (French)	-.02 (.39)	.07 (.39)	-.01 (.4)	-.03 (.39)	-.11 (.41)	-.01 (.44)
Region3 (Italian)	-.58 (.7)	-.78 (.68)	-.58 (.71)	-.62 (.72)	-.41 (.69)	-.63 (.7)
Ownership	.68 (.47)	.88** (.4)	.65 (.49)	.68 (.49)	.59 (.46)	.84* (.45)
Market diversification (logged)	.58 (.43)	.79* (.48)	.62 (.48)	.64 (.44)	.67 (.44)	1.1** (.54)
Service diversification	-1.04 (1.47)	-1.13 (1.25)	-.9 (1.47)	-.99 (1.48)	-.12 (1.48)	-.17 (1.39)
LTS word count	-.22 (.2)	-.2 (.18)	-.21 (.19)	-.15 (.2)	-.18 (.2)	-.12 (.17)
LTS complexity	-.07 (.06)	-.03 (.06)	-.07 (.06)	-.06 (.07)	-.11 (.08)	-.07 (.08)
LTS authorship2 (both)	.28 (.56)	.33 (.59)	.22 (.55)	.44 (.54)	.86 (.59)	1.1* (.66)
LTS authorship3 (chair)	-.15 (.63)	-.17 (.63)	-.2 (.63)	.17 (.63)	.48 (.63)	.76 (.7)
CEO tenure (logged)	-.16 (.24)	-.16 (.26)	-.17 (.25)	-.16 (.25)	-.12 (.25)	-.19 (.28)
CEO succession	.3 (.54)	.27 (.56)	.28 (.55)	.24 (.55)	.51 (.57)	.31 (.61)
Independent variables						
Past focus		.97*** (.24)				1.07*** (.26)
Past focus x Clock time		-.2*** (.07)				-.17** (.07)
Future focus			-.05 (.46)			.39 (.48)
Future focus x Clock time			.11 (.16)			.05 (.14)
Promotion focus				-.39 (.42)		-.43 (.46)
Promotion focus x Clock time				-.22** (.11)		-.18 (.12)
Prevention focus					.36 (.7)	.24 (.76)
Prevention focus x Clock time					.5** (.23)	.5** (.22)
Pseudo R-squared	.06	.12	.06	.07	.10	.17

^a N = 669; robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.10

Figure 2: Interaction Plot of Past Focus and Clock Time^a

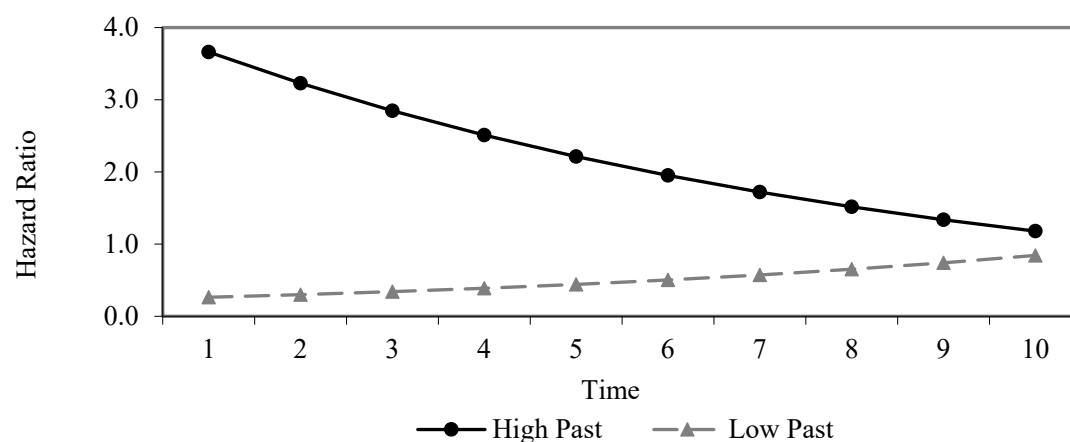
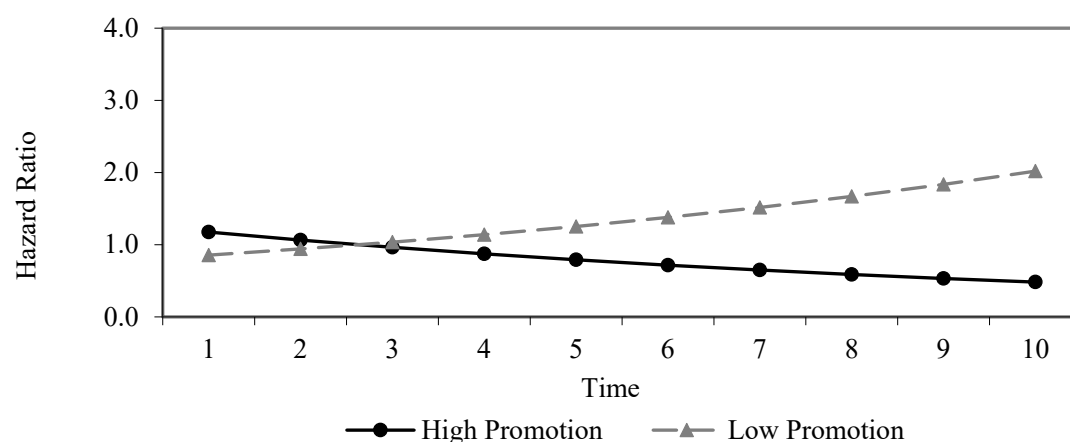
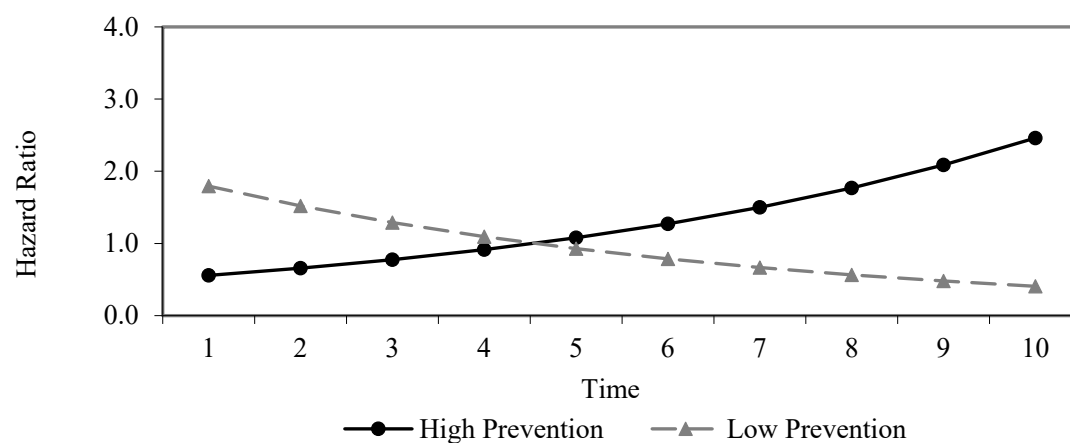


Figure 3: Interaction Plots of Regulatory Foci and Clock Time^a

(a) Promotion focus



(b) Prevention focus



^a High values = mean + 1 SD; low values = mean - 1 SD; clock time in years since inception of uncertainty

According to Hypothesis 3, we suggest that top management's promotion orientation increases organizational mortality (H3a), but this positive effect is reduced over time (H3b). In Model 4, the direct effect of promotion focus is insignificant, but its interaction term with clock time is negative and statistically significant ($b = -0.22$, $p < 0.05$). In Model 6, however, this interaction term becomes marginally insignificant ($b = -0.18$, n.s.). Accordingly, the findings reject Hypothesis 3a but marginally support Hypothesis 3b. At the beginning of the study period, an increase in top management's promotion orientation by 1 SD has only little impact on the hazard ratio (cf. Figure 3a). At the end of the study period, however, the hazard ratio drops by 52%, indicating a lower rate of organizational mortality. In light of these marginally insignificant findings, we ran a series of supplementary analyses to further investigate the effect of top management's promotion orientation on organizational mortality.

Finally, we suggest that prevention orientation is associated with a lower likelihood of organizational mortality (H4a), but this negative effect may become less pronounced over time (H4b). While the direct effect is not significant, its interaction term is positive and statistically significant ($b = 0.50$, $p < 0.05$). As shown in Figure 3b, an increase in top management's prevention focus by 1 SD decreases the initial hazard ratio by 44%. By the end of the study period, such an increase boosts the hazard ratio by 146%. Hence, the effects of top management's prevention focus are not only reduced but reversed once the uncertainty regarding the future viability of traditional business models is resolved. In conclusion, the findings reject Hypothesis 4a but strongly support Hypothesis 4b.

2.5.2 Supplementary analyses

We conducted a series of supplementary analyses to ensure that our findings are robust to potential biases and model adjustments.

2.5.2.1 Temporality

To test the robustness of the time-varying effects, we split the original sample into an early stage (2007-2011) and a late stage (2012-2016). Table 5 reports log-rank tests for equality of the survivor functions. Table 6 presents split-sample Cox regression outputs.

Table 5: Log-rank Tests on Bank Mortality, incl. Sample Split^a

Variables	Global mean sample split		Year-specific mean sample split	
	Early stage (2007-2011)	Late stage (2012-2016)	Early stage (2007-2011)	Late stage (2012-2016)
Past focus	4.46**	0.88	6.42**	0.29
Future focus	0.02	0.15	0.03	0.02
Promotion focus	2.70	8.50***	0.40	6.40**
Prevention focus	1.09	7.38***	3.41*	8.94***

^a *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

Table 6: Cox PH Model on Bank Mortality, incl. Sample Split^a

Variables	Early stage (2007-2011)			Late stage (2012-2016)		
	(1) Temporal focus	(2) Regulatory focus	(3) Full model	(4) Temporal focus	(5) Regulatory focus	(6) Full model
Control variables						
Past performance	.05** (.02)	.03* (.02)	.06** (.02)	-.02 (.03)	-.03 (.03)	-.02 (.03)
Equity margin	0 (.02)	-.02 (.02)	0 (.02)	-.01 (.03)	-.04 (.03)	-.05 (.04)
Growth	-1.71 (1.81)	-2.14 (1.99)	-2.01 (1.97)	-2.14* (1.17)	-1.17 (1.19)	-.75 (.98)
Size (logged)	-.5 (.38)	-.36 (.32)	-.48 (.39)	-.45 (.28)	-.39 (.34)	-.54 (.41)
Region2 (French)	.27 (.51)	.22 (.49)	.28 (.52)	-.17 (.52)	-.38 (.72)	-.54 (.8)
Region3 (Italian)	-.3 (.76)	-.05 (.71)	-.32 (.76)	-1.51 (1.36)	-1.19 (1.59)	-1.64 (1.63)
Ownership	.68 (.58)	.46 (.59)	.71 (.61)	.53 (.7)	1.09 (1.01)	1.35 (1.09)
Market diversification (logged)	1.3 (1.01)	.68 (.74)	1.19 (1)	.56 (.58)	.69 (.59)	1.06 (.76)
Service diversification	-2.43 (2.46)	-2.52 (2.45)	-2.25 (2.56)	.8 (2.05)	.69 (2.04)	.85 (2.1)
LTS word count	-.22 (.32)	-.37 (.4)	-.14 (.34)	.01 (.26)	.24 (.27)	.28 (.31)
LTS complexity	.03 (.06)	-.01 (.09)	.04 (.06)	-.09 (.11)	-.17 (.14)	-.13 (.14)
LTS authorship2 (both)	19.29 (0)	19.52*** (.65)	19.28 (0)	-.37 (.75)	1.07 (1.04)	1 (1.09)
LTS authorship3 (chair)	18.91*** (.61)	18.98 (0)	18.89*** (.62)	-.55 (.92)	1.18 (1.21)	1.41 (1.23)
CEO tenure (logged)	-.77 (.6)	-.55 (.42)	-.74 (.59)	.15 (.3)	.53* (.3)	.41 (.34)
CEO succession	.05 (.86)	.21 (.76)	.07 (.84)	-.1 (1)	.41 (1.03)	.27 (.98)
Independent variables						
Past focus	1.35*** (.35)		1.36*** (.36)	.24 (.34)		.58 (.37)
Future focus	.3 (.75)		.25 (.78)	.3 (.66)		.86 (.72)
Promotion focus		.36 (.46)	.28 (.59)		-1.88** (.9)	-2.09** (.91)
Prevention focus		-.45 (.93)	-.75 (1.03)		1.89*** (.68)	2.24*** (.67)
Pseudo R-squared	.21	.11	.22	.11	.22	.24
N	382	382	382	287	287	287

^a Robust standard errors in parentheses; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

In Table 5, the survivor functions of high and low levels of past orientation are significantly different from each other in the early stage ($\chi^2 = 4.46$, $p < 0.05$) but not in the late stage. During the late stage, the survivor functions of high promotion ($\chi^2 = 8.50$, $p < 0.01$) and high prevention focus ($\chi^2 = 7.38$, $p < 0.01$) are significantly different from their low-level equivalents. As temporal and regulatory foci are moderately correlated with clock time, the results could be biased. Hence, we performed additional tests based on year-specific mean splits that yielded similar results.

As shown in Table 6, the split-sample Cox regression results are consistent with the previously reported results. Past orientation is negatively and significantly associated with organizational mortality during the early stage ($b = 1.36$, $p < 0.01$) but not during the late stage (cf. Models 3 + 6). As Model 6 shows, promotion orientation predicts a significant drop in organizational mortality during the late stage ($b = -2.09$, $p < 0.05$), while prevention orientation leads to a significant increase ($b = 2.24$, $p < 0.01$).

2.5.2.2 Endogeneity

In this study, we acknowledged that top management's temporal and regulatory foci may be situationally affected by environmental or organizational characteristics, such as past performance (Holman & Silver, 2005; Jansen & Shipp, 2019; Kark & Van Dijk, 2019; Shah et al., 1998; Wallace & Chen, 2006). To address potential issues related to endogeneity, we followed a two-step approach as described in Chen and Nadkarni (2017). As a first step, we ran four regressions, one for each temporal and regulatory focus. In addition to accounting performance, we incorporated client asset performance, net income growth and equity margin as predictors. As expected, changes in performance significantly predict future orientation ($b = -0.26$, $p < 0.10$) and promotion orientation ($b = 0.29$, $p < 0.10$). Equity margin is significantly related to prevention orientation ($b = 0.60$, $p < 0.01$) and promotion orientation ($b = -0.40$, $p < 0.05$). Net income growth is significantly associated with promotion orientation ($b = 0.20$, $p < 0.05$). As a second step, we incorporated the predicted temporal and regulatory foci as endogeneity controls into the original Cox PH model. Table 7 shows the adjusted Cox regression outputs. As expected, these outputs are consistent with our previously reported ones.

2.5.2.3 Present focus

Top management's present orientation is regarded as a bottom-up construct, as it serves as a reference point for past and future foci. Accordingly, we did not speculate about the potential effects of present orientation on organizational mortality. To substantiate this claim, we added the direct effect of present focus as well as its interaction term with clock time to our original Cox PH model (cf. Table 8). Neither are these effects statistically significant, however, nor do these additional terms change the previously reported results.

2.5.2.4 Sample boundaries

Finally, we investigated the robustness of our results to potential adjustments of the sample population. Table 9 presents these linear regression outputs. First, we changed the beginning of the 10-year study period to 2008. Second, we included banks that were also active in other domains, such as commercial and investment banking. Third, we added LTSs which we have translated from German to English. Finally, we excluded all private banks that were domiciled in the principality of Liechtenstein. None of these adjustments, however, had a material impact on our previously reported effects, except for the fact that the interaction between promotion focus and clock time became significant in each of these model specifications.

Table 7: Cox PH Model on Bank Mortality, incl. Endogeneity Controls^a

Variables	(1) Controls	(2) Past focus	(3) Future focus	(4) Promotion focus	(5) Prevention focus	(6) Full model
Control variables						
Past performance	0 (.02)	.01 (.02)	0 (.02)	.01 (.02)	0 (.02)	.02 (.02)
Equity margin	.02 (.05)	.01 (.03)	.02 (.05)	.01 (.06)	.01 (.05)	0 (.04)
Growth	-2.14** (1.02)	-1.91** (.95)	-2.06** (1.01)	-2.1* (1.08)	-1.88* (1.05)	-1.64 (1.05)
Size (logged)	-.47** (.21)	-.59*** (.22)	-.49** (.22)	-.52** (.22)	-.48** (.22)	-.72*** (.25)
Region2 (French)	-.11 (.41)	-.02 (.42)	-.1 (.41)	-.12 (.4)	-.21 (.43)	-.09 (.45)
Region3 (Italian)	-.71 (.74)	-.78 (.7)	-.66 (.74)	-.76 (.77)	-.53 (.71)	-.63 (.71)
Ownership	.81* (.47)	1.05** (.41)	.8* (.48)	.81 (.51)	.73 (.47)	1.08** (.47)
Market diversification (logged)	.63 (.45)	.87* (.51)	.64 (.48)	.72 (.45)	.7 (.45)	1.15** (.54)
Service diversification	-1.38 (1.35)	-1.45 (1.15)	-1.25 (1.36)	-1.36 (1.39)	-.62 (1.34)	-.84 (1.34)
LTS word count	-.27 (.2)	-.26 (.18)	-.26 (.2)	-.2 (.21)	-.23 (.2)	-.18 (.17)
LTS complexity	-.05 (.07)	-.05 (.08)	-.05 (.07)	-.05 (.08)	-.09 (.09)	-.07 (.09)
LTS authorship2 (both)	.64 (.56)	.8 (.64)	.55 (.53)	.89 (.59)	1.43* (.74)	1.89** (.79)
LTS authorship3 (chair)	.08 (.59)	.04 (.62)	0 (.58)	.46 (.63)	.94 (.71)	1.28* (.76)
CEO tenure (logged)	-.07 (.26)	-.12 (.28)	-.1 (.27)	-.08 (.27)	0 (.27)	-.12 (.29)
CEO succession	.39 (.6)	.35 (.6)	.36 (.6)	.33 (.61)	.65 (.63)	.43 (.65)
Endogeneity control (past)	21.69 (24.1)	8.71 (27.02)	21.3 (24.46)	21.8 (24.89)	26.24 (25.69)	12.22 (29.73)
Endogeneity control (future)	15.59 (22.89)	4.32 (25.94)	14.85 (23.18)	16.14 (23.98)	21.93 (24.02)	9.33 (28.03)
Endogeneity control (promotion)	1 (8.73)	-4.74 (9.19)	.9 (8.75)	1.43 (9.33)	3.6 (8.95)	-2.74 (9.76)
Endogeneity control (prevention)	6.52 (23.57)	-4.36 (25.35)	5.92 (23.52)	7.67 (25.19)	11.57 (24.43)	-2 (27.26)
Independent variables						
Past focus		.94*** (.24)				1.06*** (.26)
Past focus x Clock time		-.22*** (.08)				-.2*** (.08)
Future focus			.12 (.44)			.56 (.48)
Future focus x Clock time			.08 (.15)			-.01 (.13)
Promotion focus				-.41 (.46)		-.4 (.5)
Promotion focus x Clock time				-.24** (.11)		-.21* (.12)
Prevention focus					.25 (.75)	.04 (.86)
Prevention focus x Clock time					.5** (.26)	.5* (.26)
Pseudo R-squared	.08	.14	.08	.10	.11	.19

^a N = 631; robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.10

Table 8: Cox PH Model on Bank Mortality, incl. Present Focus^a

Variables	(1) Controls	(2) Present focus	(3) Full model
Control variables			
Past performance	0 (.02)	0 (.02)	.02 (.02)
Equity margin	-.02 (.02)	-.03 (.02)	-.05** (.02)
Growth	-1.73* (.98)	-1.8** (.91)	-1.53 (1.04)
Size (logged)	-.4** (.2)	-.43** (.21)	-.6*** (.23)
Region2 (French)	-.02 (.39)	-.08 (.4)	-.07 (.45)
Region3 (Italian)	-.58 (.7)	-.79 (.68)	-.7 (.68)
Ownership	.68 (.47)	.67 (.45)	.83* (.44)
Market diversification (logged)	.58 (.43)	.63 (.47)	1.04* (.55)
Service diversification	-1.04 (1.47)	-1.45 (1.36)	-.58 (1.42)
LTS word count	-.22 (.2)	-.19 (.2)	-.09 (.19)
LTS complexity	-.07 (.06)	-.07 (.06)	-.07 (.08)
LTS authorship2 (both)	.28 (.56)	.32 (.55)	1.24* (.68)
LTS authorship3 (chair)	-.15 (.63)	-.14 (.6)	.89 (.7)
CEO tenure (logged)	-.16 (.24)	-.14 (.26)	-.17 (.27)
CEO succession	.3 (.54)	.39 (.6)	.35 (.61)
Independent variables			
Past focus			.96*** (.26)
Past focus x Clock time			-.19*** (.07)
Present focus		-.28 (.19)	-.2 (.23)
Present focus x Clock time		.05 (.07)	-.03 (.09)
Future focus			.56 (.59)
Future focus x Clock time			.07 (.16)
Promotion focus			-.46 (.45)
Promotion focus x Clock time			-.19 (.13)
Prevention focus			.2 (.74)
Prevention focus x Clock time			.51** (.22)
Pseudo R-squared	.06	.07	.18

^aN = 669; robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.10

Table 9: Cox PH Model on Bank Mortality, incl. Modified Sample Boundaries^a

Variables	(1) Period (2008-2017)	(2) Business Model (incl. WM + Other)	(3) Language (incl. GER)	(4) Domicile (excl. LIE)
Control variables				
Past performance	.03 (.02)	0 (.01)	.01 (.02)	.03 (.02)
Equity margin	-.05* (.03)	-.03* (.02)	-.01 (.02)	-.06** (.02)
Growth	-1.8 (1.22)	-1.34 (.86)	-1.4* (.83)	-1.69 (1.09)
Size (logged)	-.69*** (.24)	-.43** (.18)	-.3 (.19)	-.8*** (.24)
Region2 (French)	.21 (.42)	.23 (.39)	.26 (.39)	-.07 (.44)
Region3 (Italian)	-.66 (.75)	-.45 (.68)	-.33 (.62)	-.64 (.7)
Ownership	.78 (.5)	.73 (.45)	.58 (.41)	1.05** (.49)
Market diversification (logged)	1.23** (.55)	.53 (.43)	.71 (.47)	1.11** (.55)
Service diversification	.47 (1.52)	-.98 (1.36)	.13 (1.6)	.17 (1.28)
LTS word count	-.05 (.17)	-.01 (.19)	-.06 (.19)	-.13 (.2)
LTS complexity	-.07 (.08)	-.08 (.07)	-.01 (.07)	-.07 (.08)
LTS authorship2 (both)	1.1 (.77)	.63 (.57)	.04 (.58)	1.83** (.73)
LTS authorship3 (chair)	.93 (.77)	.04 (.61)	-.15 (.6)	1.13 (.7)
CEO tenure (logged)	-.16 (.29)	-.24 (.25)	-.21 (.29)	-.19 (.3)
CEO succession	.52 (.63)	-.01 (.57)	0 (.55)	.22 (.66)
Independent variables				
Past focus	.97*** (.28)	.84*** (.25)	.86*** (.24)	1*** (.28)
Past focus x Clock time	-.17* (.09)	-.18** (.08)	-.1 (.06)	-.18** (.08)
Future focus	.41 (.49)	-.03 (.53)	.23 (.43)	.39 (.49)
Future focus x Clock time	.1 (.16)	.12 (.15)	.04 (.11)	.03 (.14)
Promotion focus	-.58 (.53)	-.21 (.42)	-.39 (.38)	-.61 (.45)
Promotion focus x Clock time	-.3* (.18)	-.21* (.11)	-.29** (.12)	-.23* (.12)
Prevention focus	.01 (.59)	-.14 (.73)	-.02 (.63)	.26 (.74)
Prevention focus x Clock time	.87*** (.19)	.49** (.24)	.45** (.19)	.46** (.21)
Pseudo R-squared	.21	.15	.14	.19
N	633	841	782	606

^a Robust standard errors in parentheses; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

2.6 Discussion

When CEOs and TMTs are confronted with a major discontinuity at the industry level, their temporal and regulatory foci serve as catalysts for organizational survival. As theorized, we found that top management's past orientation leads to higher levels of mortality during an institutional change, but this positive effect becomes weaker over time as environmental uncertainty is gradually resolved. Moreover, top management's regulatory foci are significantly related to organizational mortality, yet with opposite signs. We found that top management's promotion orientation reduces the likelihood of organizational mortality once an institutional change starts to unfold. In contrast, a prevention orientation is negatively related to organizational mortality at the inception of uncertainty, but this negative effect becomes positive as time passes.

In contrast to our theorizing, we found that future orientation has been unrelated to organizational mortality. There are different possible explanations for this unexpected finding. For instance, future orientation may not operate in isolation of top management's promotion and prevention foci. Indeed, Strobel et al. (2013) found promotion and prevention foci to mediate the link between future orientation and organizational citizenship behaviors. Following their argumentation, managers with a strong future focus may imagine the future through the lens of either promotion- or prevention-oriented goals. A recent study by Tuncdogan and Dogan (2020) reported similar evidence, but with causality being reversed. They theorized and found that top management's future focus mediates the relationship between regulatory foci and a firm's exploration activity.

Applying these findings to the research context of Swiss and Liechtenstein private banking, executives with a strong future orientation may anticipate future eventualities in distinct ways. Depending on their respective regulatory foci, they may either apply approach tactics to establish and expand their banks' tax-compliant business (*future-oriented promotion*) or draw on avoidance tactics to reduce and eliminate risks related to secrecy-oriented business practices (*future-oriented prevention*). Since top management's promotion and prevention foci work in opposite directions, we speculate that the joint effects of temporal and regulatory foci help explain the partially inconclusive findings regarding the link between future orientation and organizational mortality.

2.6.1 Theoretical implications

We believe that our study has important implications for management theory. First, it contributes to the nascent stream on *subjective* temporality (Shipp & Jansen, 2021; Tang et al., 2019). Thus far, strategy scholars have applied temporal focus theory to mergers and acquisitions (DesJardine & Shi, 2021; Gamache & McNamara, 2019), strategic change (Back et al., 2020; Tuncdogan & Dogan, 2020) and corporate innovation (Nadkarni & Chen, 2014; Yadav et al., 2007). Neither the effects on mortality nor its role during environmental crises have been studied yet. To address this research gap, we argued and found that past focus reduces survival prospects during a major industry-level discontinuity, but this effect becomes less pronounced once the new dominant logic of the business has been established. The relationship between future focus and mortality appears to be more complex than hypothesized.

Second, the study advances our understanding of *objective* temporality. Despite a considerable increase in the number of longitudinal studies, many of these controlled for temporal effects through year dummies only. The study by Patel and Cooper (2014) on the effectiveness of narcissistic CEOs during episodes of crisis constitutes a noteworthy exception. Distinguishing between crisis and post-crisis periods, the authors made objective time a cornerstone of their theorizing. As expected, they found that CEO narcissism weakens firm performance at the beginning of a crisis, while the opposite holds during post-crisis periods. Similarly, our study assessed the effectiveness of top management's temporal and regulatory foci over the course of an unfolding institutional change. As theorized, the effects of temporal and regulatory foci have not been constant but evolved in predictable patterns over time.

Even though subjective and objective time are conceptually intertwined, the literature remains relatively silent regarding their interplay (Dawson & Sykes, 2019; Johnsen & Holt, 2021; Shipp & Cole, 2015; Shipp & Jansen, 2021). Only recently, management scholars have started to examine both constructs together, for instance, in terms of how entrepreneurs manage temporal urgency and clock time (Branzei & Fathallah, 2021), how temporal schemata help employees make sense of organizational temporal structures (Shipp & Richardson, 2021) and how temporal reflexivity resolves inter-organizational tensions in temporal structures (Reinecke & Ansari, 2015). As one of the first studies integrating subjective and objective time, our study echoes frequent calls for more conceptual and empirical research on their joint effects.

Third, we contribute to a nuanced picture of the benefits and costs of top management's regulatory foci. Prior strategy research typically viewed promotion orientation as an advantage but prevention orientation as a liability (Hmieleski & Baron, 2008; Wallace et al., 2010). Zhang et al. (in press) provide a noteworthy exception. Looking at the dark side of organizational behavior, they reported top management's promotion focus to enhance environmental misconduct, while prevention focus reduces such misconduct. In line with these results, we did not find top management's promotion focus to be an advantage in early stages of crisis because it underestimates the risk of potential losses. Once the institutional change started to unfold, however, a promotion focus was positively related to organizational survival. Similarly, we did not find a prevention focus to be a liability during early stages of discontinuous change since it prevents excessive risk-taking. Once a new dominant logic was established, however, a prevention focus was positively related to organizational mortality.

Fourth, our study acknowledges that temporal and regulatory foci are a combination of a dispositional trait and a malleable state. To date, management scholars have typically considered them stable individual differences (e.g., Ahmadi et al., 2017; DesJardine & Shi, 2021; Gamache et al., 2020; Kammerlander et al., 2015; Mohammed & Harrison, 2013). This is surprising because numerous studies in the fields of psychology and behavioral science reported temporal foci (Holman & Silver, 2005; Jansen & Shipp, 2019; Rush & Grouzet, 2012; Shipp & Aeon, 2019) and regulatory foci (Kark & Van Dijk, 2019; Shah et al., 1998; Wallace & Chen, 2006) to be situationally induced. Drawing on LTSs, we presented evidence that a substantial share of variance in temporal and regulatory foci is attributable to temporal fluctuations within individual managers. We hope our study encourages scholars to adopt longitudinal research designs with a repeated measurement of temporal and regulatory foci.

Fifth, our study informs upper echelons theory (Hambrick & Mason, 1984). While executive characteristics in general explain a substantial proportion of variance in firm performance (e.g., Wang et al., 2016), we emphasize the necessity to study the role of top management's temporal and regulatory foci. Despite the increasing interest in these constructs, previous research has predominantly focused on their effects on accounting performance (Back et al., 2020; Hmieleski & Baron, 2008; Wallace et al., 2010). This is surprising since mortality is regarded as a robust performance measure that alleviates potential issues related to reverse causality (Richard et al., 2009).

Finally, the findings extend what we know about the role of executive characteristics during corporate crises (Bundy et al., 2017). In recent years, scholars have become increasingly interested in the role of managerial psychology. König et al. (2020), for example, presented a novel theory regarding the role of CEO empathy during organizational crises. Likewise, Vuori and Huy (2016) shed light on the mechanisms of shared fear. To the best of our knowledge, the effects of top management's temporal foci (Back et al., 2020; Nadkarni & Chen, 2014) and regulatory foci (Hmieleski & Baron, 2008; Wallace et al., 2010; Zhang et al., in press) have been studied in dynamic industries but not during a major industry-level discontinuity that put organizational survival at severe risk.

In this respect, our study also informs evolutionary theory. Specifically, we contribute to long-lasting debates between selection and adaptation theories. The former argues that managerial cognition does not matter for survival since organizational rigidity inhibits strategic change (e.g., Hannan & Freeman, 1989). In contrast, our findings support the latter theorizing that effective management enhances survival prospects in the context of discontinuous change (e.g., Lawrence & Lorsch, 1967; Pfeffer & Salancik, 1978).

2.6.2 Limitations and directions for future research

The results of this study should be evaluated in light of a number of limitations that highlight opportunities for future research.

First, the use of LTSs to extract cognitive constructs has attracted widespread criticism, even though it has become increasingly common in strategy research (Gamache et al., 2015; Laamanen & Wallin, 2009; Nadkarni & Narayanan, 2007; Surroca, Prior, & Tribó Giné, 2014). Specifically, LTSs have been accused of being written by public relations departments instead of CEOs (e.g., Barr et al., 1992). Bowman (1984) noted, however, that executives spend a considerable amount of time shaping the content of these letters. Eggers and Kaplan (2009) reported material changes in the length, content and style of LTSs after the appointment of a new CEO. As few of the Swiss and Liechtenstein private banks under study were publicly listed, supplementary data for further triangulation were exceptionally scarce. Future research may therefore replicate our study using alternative sources of textual data, such as press releases and earnings calls (Graf-Vlachy et al., 2020).

Second, the size of our sample was limited by the number of private banking institutions in Switzerland and Liechtenstein. We observed, however, that other studies have performed survival analyses on similarly sized samples (e.g., Eggers & Kaplan, 2009; Huang, Souitaris, & Barsade, 2019). Moreover, our sample features nearly complete coverage of this unique population. Nevertheless, we encourage future research to replicate our study in other populations and demonstrate the generalizability of our findings across research contexts. In particular, the effect of future orientation on organizational mortality warrants further investigation.

Third, we did not craft hypotheses regarding a potential interplay of top management's temporal focus and regulatory foci. This is because we were concerned that three-way interactions of temporal foci, regulatory foci and clock time could be driven by relatively few observations. As noted above, we acknowledge that the effects of temporal foci may be dependent on whether managers work toward maximum or minimum goals. Managers high on past orientation may choose to opportunistically expand the traditional business to reap potential gains (*backward-looking promotion*) or shy away from new business practices to avoid potential losses (*backward-looking prevention*). If managers have a strong future focus, they may be motivated to increase revenues from new business to reap potential gains (*future-oriented promotion*) or eliminate risks associated with traditional business to avoid potential losses (*future-oriented prevention*). Therefore, we call for future research that systematically integrates temporal and regulatory focus theories.

Fourth, our study has built on top management's collective temporal foci (Tang et al., 2019; West & Meyer, 1998) and regulatory foci (Johnson et al., 2015; Kark & Van Dijk, 2019; Zhang et al., in press). In other words, we treated top management's temporal and regulatory foci as aggregate constructs. To offer a more fine-grained understanding, future strategy research may examine how the diversity in top management's temporal and regulatory foci affects organizational survival. Temporal focus diversity, for example, has been reported to enhance levels of knowledge creation (Gibson, Waller, Carpenter, & Conte, 2007) and strategic change (West & Meyer, 1998). Similarly, regulatory focus diversity increases a team's effectiveness in new product introduction (Spanjol et al., 2011). Taken together, we call for future research to examine the role of incongruence in top management's temporal and regulatory foci during a major industry-level discontinuity in greater depth.

Finally, our study accentuates the need for a new construct that could be labeled ‘temporal fit’. Shipp and Jansen (2011) called for such a construct almost a decade ago. Since then, little progress has been made. The lack of a coherent framework impedes our ability to explain how subjective temporality influences the effectiveness of employees, leaders and entire organizations. According to our understanding, temporal fit should be conceptualized as a multi-level construct applying to temporal features at the team (Briker et al., 2020; Mohammed & Harrison, 2013; Mohammed & Nadkarni, 2011; Mohammed & Nadkarni, 2014), organizational (Crossan, Cunha, Vera, & Cunha, 2005; DesJardine & Shi, 2021) and environmental levels (Nadkarni & Chen, 2014; Nadkarni et al., 2016; Saraiva & Iglesias, 2016).

2.6.3 Conclusion

During a major industry-level discontinuity, top management’s temporal and regulatory foci affect firm survival in distinct ways. Adopting a dynamic perspective, we provide a more nuanced understanding of how the effects of temporal and regulatory foci evolve over the course of an unfolding institutional change. We hope that our study encourages a lively stream of future research on top management’s temporal and regulatory foci as well as their potentially hidden temporal patterns.

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3. Beyond Past and Future: The Role of Top Management's Temporal Attitude on Organizational Performance (*Study 2*)

Despite the increasing scholarly interest in top management's temporal foci, scholars acknowledged that temporal focus theory is relatively blind to emotional valence. To provide a fine-grained understanding of the impact of temporal biases on organizational performance, we examine top management's temporal and affective foci in concert. Applying the notion of temporal attitude to strategy research, we argue that managers with a strong past orientation may act with *nostalgia* (positive past) or *regret* (negative past). Similarly, managers with a strong future orientation may anticipate the future with *hopefulness* (positive future) or *worry* (negative future). Drawing on a unique sample of private banks in Switzerland and Liechtenstein, we find that both nostalgia (positive past) and worry (negative future) reduce organizational performance during a major industry-level discontinuity. Our study contributes to upper echelons theory because it improves our understanding of top management's temporal and affective foci in strategy research.

Keywords: Temporal focus; temporal attitude; upper echelons; discontinuity; emotion

3.1 Introduction

The notion of temporal focus was established almost 70 years ago. Lewin (1951) referred to temporal focus as “the totality of the individual’s views of his psychological future and psychological past existing at a given time” (75). Since then, it has become an increasingly relevant construct in management research (Shipp & Jansen, 2021). Scholars have examined the impact of top management’s temporal foci on a range of strategic behaviors, such as mergers and acquisitions (DesJardine & Shi, 2021; Gamache & McNamara, 2019), strategic change (Back et al., 2020; Tuncdogan & Dogan, 2020) and new product introductions (Nadkarni & Chen, 2014; Yadav et al., 2007).

Micro-level research suggests, however, that past and future foci may not be regarded as unitary constructs because they are relatively blind to emotional valence (Carelli et al., 2011; Kooij et al., 2018; Park et al., 2017; Zimbardo & Boyd, 1999). Instead, we argue that temporal focus and affective focus may work in combination. Past experiences, for example, may be shaded positively or negatively (Karniol & Ross, 1996). Drawing on theories of mood-congruent learning, Staw and Cohen-Charash (2005) discussed the interplay between memory and affective focus in organizations. Accordingly, positive affect primes individuals towards positive memories, whereas negative affect accentuates negative ones. Similarly, the future may be regarded as a projection space for positive or negative feelings. In their study on affective forecasting, Dane and George (2014) blended future-oriented cognition and affective focus. Borrowing from earlier work by Markus and Nurius (1986), they argued that individuals imagine the future by constructing hoped-for and feared selves.

To provide a nuanced view of temporal focus theory, we propose applying the micro-level construct of temporal attitude to strategy research. Originally introduced by Nuttin (1985), temporal attitude has been conceptualized as the “affective attitude of an individual towards his personal past, present, and future” (91). From an upper echelons perspective (Hambrick & Mason, 1984), top management’s temporal and affective foci jointly guide managerial attention and information processing. Temporal orientation, on the one hand, make executives channel their attention towards a particular temporal domain – the past or the future. Affective focus, on the other hand, sets the tone for the kind of information executives pay attention to within this temporal domain – positive or negative ones.

Applying the classification by Shipp et al. (2009), we draw on a framework with four distinct temporal attitudes. Managers high in past orientation may operate based on *nostalgia* (positive past attitude) or *regret* (negative past attitude). In strategic decision-making, nostalgia may channel their attention to past accomplishments to be repeated in the future, whereas regret primes them to avoid past errors (Karniol & Ross, 1996). On the contrary, managers high in future orientation may think about the future with *hopefulness* (positive future attitude) or *worry* (negative future attitude). Hope encourages visionary thinking and the recognition of strategic alternatives (Snyder et al., 1991), whereas worry undermines strategic thought (Borkovec, Robinson, Pruzinsky, & DePree, 1983).

Top management's temporal foci are regarded as *cognitive* biases while their temporal attitudes are combinations of a *cognitive* activity and an *affective* state. Prior research in the fields of psychology and behavioral science supports this argument. Nostalgia, for example, is typically described as the mental process of remembering accompanied by bitter-sweet feelings of happiness (Hepper, Sedikides, Wildschut, & Ritchie, 2012). Similarly, worry refers to the mental activity of problem-solving directed toward negative eventualities and producing emotional discomfort (Dugas, Gosselin, & Ladouceur, 2001). Hence, temporal attitudes may help mitigate "the traditional divide between cognition and emotion" (Huy, 2011: 1407) in strategy research.

Drawing on a unique sample of 93 private banks in Switzerland and Liechtenstein between 2007 and 2016, we study the impact of temporal attitudes on organizational performance. We choose this research context because the effects of managerial cognition and affect are particularly evident under the high job demands in an environmental crisis (Hambrick et al., 2005). The private banks under study experienced a turbulent 10-year period that ultimately led to the fall of banking secrecy in Switzerland and Liechtenstein. As reflected in the high number of indictments of private banks by foreign law enforcement agencies, the banks were confronted with extensive regulatory pressure (Überbacher & Scherer, 2020). We find that top management's temporal attitudes influence organizational performance in distinct ways. As theorized, nostalgia (positive past) and worry (negative future) are negatively related to firm performance. In contrast to our expectations, the coefficients of regret (negative past) and hopefulness (positive future) are positive but statistically insignificant.

Our study makes three contributions to the management theory. First, it contributes to the important link between upper echelons and organizational performance (Hambrick & Mason, 1984). As of today, the literature regarding top management's demographics and firm performance is relatively mature. Therefore, scholarly interest has started to shift towards aspects of managerial psychology (e.g., Gamache et al., 2020; König et al., 2020; Malhotra et al., 2018). Surprisingly, there is relatively little research on how top management's temporal biases affect organizational performance (Back et al., 2020; Nadkarni et al., 2016). In this regard, our study may help improve the general understanding of the link between executives' temporal biases and organizational performance.

Second, we extend the literature on subjective temporality in strategy research (Shipp & Jansen, 2021; Tang et al., 2019). Among different notions of subjective temporality, temporal focus emerged as a particularly important one (Back et al., 2020; DesJardine & Shi, 2021; Gamache & McNamara, 2019; Nadkarni & Chen, 2014). Despite its relative popularity, there have been calls to examine top management's temporal foci and affective foci together (Dane & George, 2014; Levasseur et al., 2020). Applying the notion of temporal attitude (Nuttin, 1985) to strategy research, we aim to provide a nuanced understanding of temporal biases in strategic decision-making. We believe the concept of temporal attitude may help resolve some of the seemingly inconclusive findings related to temporal focus theory (DesJardine & Shi, 2021; Park et al., 2017; Tuncdogan & Dogan, 2020).

Third, our study contributes to a relatively nascent stream of research on managerial emotionality and affectivity (Ashkanasy, Humphrey, & Huy, 2017). Scholars have stressed the importance of emotional regulation (Huy & Zott, 2019; Vuori & Huy, in press) and affective leadership (Seo et al., 2012), especially during episodes of transformation and change. Although positive and negative affect have attracted some scholarly interest, complex emotional states, such as nostalgia, regret, hope and worry, remained relatively under-researched (Barsade & Gibson, 2007; Gooty, Gavin, & Ashkanasy, 2009). To address this paucity of research, we blend top management's affective and temporal foci. As outlined above, nostalgia, regret, hope and worry are typically described as combinations of a cognitive activity and an affective state. Accordingly, we may help strengthen the intellectual bridges between managerial cognition and emotion.

3.2 Theoretical Background

3.2.1 Temporal focus

According to its most widely accepted definition, temporal focus refers to the “allocation of attention to the past, present, and future” (Shipp et al., 2009: 2). Because executives are hardly aware of their temporal foci (Zimbardo & Boyd, 1999), temporal foci represent strong cognitive biases that affect their attention, information processing and strategic decision-making. Drawing on empirical findings in the fields of psychology and behavioral science, we regard temporal foci as a combination of a dispositional trait and a malleable state (Mohammed & Marhefka, 2020). On the one hand, they have a relatively stable component, which is primarily shaped by national culture and education (Bluedorn, 2002; Guo et al., 2012). On the other hand, temporal foci can be affected by situational contingencies and vary over time (Holman & Silver, 2005; Rush & Grouzet, 2012; Shipp & Aeon, 2019).

Moreover, scholars acknowledged that temporal foci differ regarding their basic functionality. According to Zimbardo and Boyd (1999), past and future foci are *top-down* constructs while present focus is a *bottom-up* construct. “Between the abstract, psychological constructions of prior past and anticipated future events,” they noted, “lies the concrete, empirically centered representation of the present” (1272). This perspective was inspired by Markus and Nurius (1986) who argued that we compare possible selves (i.e., past or future) to our actual selves (i.e., present), which serve as our reference points. Accordingly, the theorizing in this study is focused on top management’s past and future orientation. In our supplementary analyses, we also tested for possible effects related to present orientation.

On the one hand, managers with a strong *past orientation* draw on their memories and past experiences to inform their actions. Quite intuitively, CEO past focus moderates the relationship between negative media coverage regarding their firm’s past acquisitions and its future acquisition activity (Gamache & McNamara, 2019). Likewise, past-oriented consumers are more sensitive to past-related product information, such as brand heritage (Pecot et al., 2018). Because executives rely on prior knowledge to successfully implement strategic change initiatives, Back et al. (2020) found that managers with a strong past orientation strengthen the link between strategic change and performance. Yet, past orientation may also fall prey to overgeneralization

bias. Nadkarni and Chen (2014), for instance, reported that high levels of CEO past focus accelerate new product launches in stable industries but delay such launches in dynamic industries.

When managers have a strong *future orientation*, on the other hand, they assume that the future is detached from the past. Accordingly, they prioritize tasks beyond immediate requirements (Foo et al., 2009) and engage in proactive behaviors, such as organizational citizenship (Strobel et al., 2013). Moreover, CEOs with a strong future orientation take greater strategic risks in the present (DesJardine & Shi, 2021) because they do not endow current but prospective wealth. Accordingly, executives with a strong future focus are more likely to pursue exploration than exploitation activities (Tuncdogan & Dogan, 2020). They enhance the level of strategic change in new ventures (West & Meyer, 1998), as well as the speed of product launches in dynamic environments (Nadkarni & Chen, 2014; Yadav et al., 2007). On a negative note though, managers with a strong future orientation weaken the change-performance relationship, because they neglect opportunities for experiential learning and alienate organizational members (Back et al., 2020).

3.2.2 Affective focus

The notion of affective focus refers to the totality of an individual's "emotions, moods, temperament, and other [...] constructs associated with positive or negative feelings" (Ashkanasy & Ashton-James, 2005: 225). If objects are perceived as positive or negative, they encompass strong motivational cues, triggering subsequent action. Neutral objects, in contrast, are deemed to be less important than positive and negative objects.

Like temporal foci, affective foci combine elements of a dispositional trait and a malleable state (Barsade & Gibson, 2007; Gooty et al., 2009). On the one hand, scholars regarded them as affective traits, which represent stable individual differences (Delgado-García & De La Fuente-Sabaté, 2010; Momtaz, 2021). On the other hand, they emphasized their transient nature, conceptualizing and measuring them as affective states (Bartels et al., 2022; Liu, Song, Li, & Liao, 2017). Following arguments related to affective events theory (Weiss & Cropanzano, 1996), we acknowledge that moods may be situationally induced and affected by organizational and environmental characteristics.

Thus far, affective foci have been extensively studied in the field of organizational behavior (Amabile, Barsade, Mueller, & Staw, 2005; George & Zhou, 2007). Under the umbrella term of affective leadership, scholars examined the role of affective foci in the leader-follower relationship (Seo et al., 2012; Van Knippenberg & van Kleef, 2016). Despite the relevance of top management's affective foci for strategic decision-making, they received only a little attention in strategy research (Barsade, Ward, Turner, & Sonnenfeld, 2000; Delgado-García & De La Fuente-Sabaté, 2010; Momtaz, 2021). This paucity of research is striking because affective foci are related to information processing and decision-making in distinct ways.

As noted by Elsbach and Barr (1999), individuals with high levels of *positive affect* are accustomed to applying heuristics and cognitive shortcuts. Accordingly, positive affect encourages fast and efficient decision-making (Staw & Barsade, 1993). Managers with a positive affect are particularly suited to complex decisions as these require cognitive simplification. Moreover, they are suitable for exploration-related tasks. Amabile et al. (2005) and George and Zhou (2007), for instance, found a positive association of positive affect with creativity at work. Similarly, Baron and Tang (2011) reported a positive relationship between positive affect and innovation, whereas Delgado-García and De La Fuente-Sabaté (2010) found a negative relationship between CEO positive affect and strategic conformity.

In contrast, individuals with high levels of *negative affect* apply structured decision-making protocols (Elsbach & Barr, 1999). Accordingly, negative affect helps them mitigate cognitive biases, such as escalation of commitment (Hodgkinson & Healey, 2011). In line with the sadder-but-wiser hypothesis (Staw & Barsade, 1993), individuals with high levels of *negative affect* are more effective in tasks requiring attention to detail, such as product compliance and operational excellence. Au, Chan, Wang, and Vertinsky (2003), for example, found that negative affect among foreign exchange traders enhances the accuracy of their decision-making. Moreover, strategy scholars have argued that top management's negative affect undermines divergent thinking. Delgado-García and De La Fuente-Sabaté (2010), for instance, found that CEOs with strong negative affect enhance strategic conformity. Momtaz (2021) added further evidence to this argument. In his study of initial coin offerings, he reported that CEOs with high levels of negative affect choose underpricing levels that are in line with those of industry peers.

3.2.3 Temporal Attitude

As stressed in micro-level research, temporal foci are relatively blind to emotional valence (Kooij et al., 2018; Park et al., 2017). To provide a nuanced view of the role of top management's temporal biases in strategic decision-making, we propose applying the notion of temporal attitude to strategy research. The concept of temporal attitude is well established because it was introduced nearly 40 years ago. As proposed by Nuttin (1985), it refers to the "affective attitude of an individual towards his personal past, present, and future" (91). Nuttin (1985) acknowledged that temporal and affective foci need to be considered in combination because individuals remember the past and anticipate the future in positive or negative manners.

Prior research typically related past orientation to negative affect (Gamache & McNamara, 2019; Mohammed & Marhefka, 2020; Shipp & Aeon, 2019). Despite this general tendency, Shipp et al. (2009) assumed that "thinking about the past is not necessarily pleasant or unpleasant" (11). Drawing on theories of mood-congruent learning, Staw and Cohen-Charash (2005) acknowledged that past-oriented cognition does not channel an individual's attention exclusively towards negative memories. Instead, executives may be better at learning either positive or negative material, depending on their affective foci. Empirical findings in psychology and behavioral science confirmed this perspective. Applying exploratory principal component and confirmatory factor analyses, Zimbardo and Boyd (1999) found that past orientation consists of a past-positive and a past-negative component. Accordingly, these authors acknowledged that individuals with a strong past orientation "may be nostalgic and positive or ruminative, traumatic, aversive, and negative" (1272). In this regard, they also developed the Zimbardo Time Perspective Inventory (ZTPI), which encompasses both positive past items (e.g., *"It gives me pleasure to think about the past"*) and negative past items (e.g., *"I think about the bad things that have happened to me in the past"*).

Future orientation, on the other hand, has been typically associated with positive affect (Mohammed & Marhefka, 2020; Shipp & Aeon, 2019). Linking future focus exclusively to positive affect, however, may be equally misleading. Dane and George (2014), for example, explored the role of affective forecasting in organizations. They acknowledged that strategic foresight may involve not only positive feelings towards future eventualities but also negative ones. Similarly, Markus and Nurius (1986)

suggested that individuals imagine the future through the construction of possible selves, either in the form of hoped-for or feared selves. As argued by Norem and Illingworth (1993), pessimists are even more likely than their optimistic counterparts to construct such possible selves. In line with these conceptual arguments, Carelli et al. (2011) were among the first researchers to present empirical evidence that future orientation needs to be decomposed into a future-positive and a future-negative factor. Extending the original work by Zimbardo and Boyd (1999), they offered an adjusted version of the ZTPI that includes items of positive future orientation (e.g., “*I keep working at difficult, uninteresting tasks if they will help me get ahead*”) and negative future orientation (e.g., “*I do not know how I will be able to fulfill my goals in life*”).

Building on these micro-level findings, we regard temporal attitude as a combination of temporal and affective foci. Based on the conceptualization in Shipp et al. (2009), Figure 4 presents a framework of four distinct temporal attitudes: (1) *nostalgia* (positive past), (2) *regret* (negative past), (3) *hopefulness* (positive future) and (4) *worry* (negative future).

Figure 4: Typology of Temporal Attitudes

		Past	Temporal Focus	Future
Affective Focus	Positive	Nostalgia (Positive Past Attitude)		Hopefulness (Positive Future Attitude)
	Negative	Regret (Negative Past Attitude)		Worry (Negative Future Attitude)

Psychology research supports the conceptualization of the four temporal attitudes as blends of a cognitive activity and an emotional state. Hepper et al. (2012), for instance, stressed that *nostalgia* encompasses both elements of remembering (cognitive) and happiness (affective). Instead of being deemed an emotion, *regret* is, rather, considered a “hot cognition” (Beike, Markman, & Karadogan, 2009: 386) because it

blends rumination (cognitive) with sadness over missed opportunities (affective). The same logic also applies to positive and negative attitudes toward the future. As noted by Snyder et al. (1991), *hopefulness* combines the reflection upon pathways (cognitive) with a positive motivational state (affective). In contrast, Dugas et al. (2001) described *worry* as a mental activity of problem-solving (cognitive) producing emotional discomfort (affective) when confronted with negative eventualities.

Depicted in the upper-left cell of Figure 4, *nostalgia* refers to the “positively toned evocation of a lived past” (Davis, 1979: 18). When managers have a positive attitude towards the past, they are receptive to positive memories and experiences (Bower, 1981; Staw & Cohen-Charash, 2005). As noted by Karniol and Ross (1996), “positive memories remind people of their past accomplishments and provide cues for how to attain future success” (609). Not surprisingly, managers with a positive past attitude strive to repeat past accomplishments. To the best of our knowledge, there has been relatively little research on nostalgia in the field of strategic management. Instead, marketing scholars examined the influence of nostalgia on customer behavior, such as willingness to pay (Lasaleta, Sedikides, & Vohs, 2014) and patience (Huang, Huang, & Wyer, 2016).

In contrast, *regret* is defined as a “negative, cognitively based emotion that we experience when realizing or imagining that our present situation would have been better had we acted differently” (Zeelenberg, 1999: 326). Like their nostalgic counterparts, regretful managers channel attention to memories and past experiences but especially negative ones (Staw & Cohen-Charash, 2005). As noted by Zeelenberg (1999), they engage in counterfactual thinking to learn from their past errors and avoid them in the future. Multiple researchers identified an impact of regret on repurchase decisions and the switching behavior of consumers (Inman & Zeelenberg, 2002; Tsiros & Mittal, 2000). Surprisingly little attention has been paid to regret in management research. The recent study by Verbruggen and De Vos (2020) on regret for career inaction represents a noteworthy exception.

Turning to positive future attitudes, *hopefulness* is the “perceived capability to derive pathways to desired goals, and motivate oneself via agency thinking to use those pathways” (Snyder, 2002: 249). As noted by Beike et al. (2009), hopeful individuals are particularly sensitive to opportunities because such opportunities represent alternative pathways to success. They are unlikely, however, to focus their attention exclusively on

positive information. Given the broad attention span typically associated with positive affect, hopeful managers focus at least some of their attention on upcoming threats. Interestingly, they regard such negative stimuli as challenges, which they believe they can overcome (Snyder et al., 1991). Accordingly, Huy (1999) related the hopefulness of employees to increased levels of persistence and mobilization during episodes of radical change. Indeed, recent studies revealed that hopefulness is associated with transformational leadership (Peterson, Walumbwa, Byron, & Myrowitz, 2009) and performance at work (Peterson & Byron, 2008; Reichard, Avey, Lopez, & Dollwet, 2013). In the context of new ventures, scholars also examined the impact of hopefulness on entrepreneurial risk perception (Podoyntsyna, Van der Bij, & Song, 2012) and escalations of commitment (Huang et al., 2019).

Alternatively, individuals with a strong future focus may experience *worry*, which is defined as a “chain of thoughts and images, negatively affect-laden and relatively uncontrollable” (Borkovec et al., 1983: 10). Individuals with such a negative future attitude tend to monitor their environments more rigorously than others (Davey, Hampton, Farrell, & Davidson, 1992). Although they channel particular attention to threat-related stimuli, they are at risk of overlooking potential opportunities (Bar-Haim, Lamy, Pergamin, Bakermans-Kranenburg, & van Ijzendoorn, 2007; Eysenck, Derakshan, Santos, & Calvo, 2007; Kouchaki & Desai, 2015). Prior research regarding the relationship between worry and performance at work is partially inconclusive (Cheng & McCarthy, 2018; McCarthy, Trougakos, & Cheng, 2016; Yip, Levine, Brooks, & Schweitzer, 2020). In the context of strategic decision-making, the role of worry remained relatively under-researched. Instead, management scholars dedicated some attention to anxiety (Mannor, Wowak, Bartkus, & Gomez-Mejia, 2016) and fear (Vuori & Huy, 2016), both of which are inextricably linked to the construct of worry (Borkovec et al., 1983; Tallis, Eysenck, & Mathews, 1992). Mannor et al. (2016), for instance, reported that CEOs with high levels of job anxiety pursue low-risk strategic initiatives because they try to avoid the potential threats associated with strategic risk-taking.

In the subsequent section, we draw on micro- and macro-level research to craft hypotheses regarding the link between temporal attitudes and firm performance during an environmental crisis.

3.3 Hypotheses

3.3.1 Nostalgia

When managers look back on past experiences with positive affect, their memories are colored with nostalgia (Holak & Havlena, 1998). During environmental crises, such a positive past attitude is a liability in strategic decision-making.

First, a positive past attitude accentuates tendencies towards strategic inertia at the expense of corrective action. Numerous studies reveal that there is a positive link between strategic change, on the one hand, and profitability and survival prospects, on the other hand (Haveman, 1992; Nadkarni & Herrmann, 2010; Zuniga-Vicente & Vicente-Lorente, 2006), especially during environmental crises. Managers with positive past attitudes, however, suffer from over-commitment bias (Hodgkinson & Healey, 2011) because they are overly optimistic and blinded by past accomplishments (Cheung et al., 2013). Accordingly, nostalgic managers are at risk of preventing and delaying strategic renewal, which may ultimately undermine organizational performance.

Second, managers with positive past attitudes may overlook important environmental stimuli. Drawing on mood-as-information theory, Schwarz and Clore (2003) argued that positive affect signals to executives that rigorous environmental scanning is not necessary. As suggested by the mood-congruence principle, nostalgic managers pay close attention to positively-toned information (Bower, 1981). As a result, positive affect may narrow their attention span and reinforce low levels of environmental monitoring. This may cast doubt on the ability of nostalgic managers to formulate effective coping strategies and secure firm performance during an environmental crisis (Garg, Walters, & Priem, 2003).

Third, nostalgic managers are characterized by high levels of energy (Zimbardo & Boyd, 1999), which is considered a prerequisite for corrective action. However, when people are confronted with a discontinuous change, nostalgia may elicit a “feeling of powerlessness to recreate or return to the past” (Holak & Havlena, 1998: 222). Instead of boosting executives’ faith in the future, nostalgia may, therefore, undermine it. Accordingly, we assume that a positive past attitude is dysfunctional and reduces firm performance in times of major industry-level discontinuity.

Hypothesis 1a: *Nostalgia (positive past attitude) is negatively related to firm performance during environmental crises.*

3.3.2 Regret

When managers with strong past foci feel uncomfortable about their memories, they experience regret (Staw & Cohen-Charash, 2005). Following Zeelenberg (1999), we emphasize the “rationality and functionality of regret” (325), especially during an environmental discontinuity.

First, regretful individuals apply counterfactual thinking to learn from past errors of commission (Zeelenberg, 1999). This manifests in ruminations about the strategic alternatives they could have chosen. Consistent with the sadder-but-wiser hypothesis (Elsbach & Barr, 1999; Staw & Barsade, 1993), regretful managers may develop a fine-grained understanding of their strategic choices. Their negative past attitudes spur organizational learning, which is a prerequisite for restoring environmental fit and securing positive firm performance (Crossan & Berdrow, 2003; Elliott & Smith, 2006), especially during an environmental crisis.

Second, their negative attitudes towards the past mitigate cognitive biases in strategic decision-making, such as the escalation of commitment (Ku, 2008). As noted by Zeelenberg (1999), this is because regret “motivates us to engage in reparative action” and “to undo the cause of the regret” (335). Regretful thinking in consumers, for example, has been reported to be positively related to switching behavior (Zeelenberg & Pieters, 1999) but negatively related to repurchase intentions (Tsiros & Mittal, 2000). Accordingly, we expect that managers with negative past attitudes are more likely than others to promote strategic renewal and restore environmental fit in the presence of an industry-level discontinuity.

Finally, we assume that a negative attitude towards the past motivates managers to intensify the efforts related to information search (Shani & Zeelenberg, 2007; Summerville, 2011). This is because they have “more interest in learning about foregone possibilities” (Summerville, 2011: 1523). As reported by Shani and Zeelenberg (2007), they do not discriminate against positive or negative information. Given such enhanced environmental scanning, regretful managers make better-informed strategic decisions than others. Accordingly, we expect that their negative past attitudes enhance organizational performance during times of major discontinuity at the industry level.

Hypothesis 1b: *Regret (negative past attitude) is positively related to firm performance during environmental crises.*

3.3.3 Hopefulness

When individuals think positively about the future, they display hopefulness (Snyder et al., 1991). We argue that such a positive future attitude improves strategic decision-making in times of industry-level discontinuity.

Positive affect instills cognitive flexibility and creativity in individuals (Isen, Nowicki, & Daubman, 1987). In managers with strong future foci, it may accentuate the capacity for visionary thinking, as well as the propensity for exploration (Fredrickson, 2001). Indeed, hopeful managers are better able to identify strategic alternatives than others, especially when facing obstacles (Snyder et al., 1991). Hence, we expect a positive future attitude to enhance strategic flexibility (Nadkarni & Herrmann, 2010; Nadkarni & Narayanan, 2007), renewal (Haveman, 1992; Zuniga-Vicente & Vicente-Lorente, 2006), and ultimately, organizational performance.

Moreover, hopefulness is related to high levels of resiliency (Snyder et al., 1991). Particularly within crises, resiliency is an enabler of positive adjustment and recovery (Kahn et al., 2013). Because hopeful managers obtain a larger number of strategic alternatives, they also perceive “greater subjective internal certainty despite objective external uncertainty” (Huang et al., 2019: 1859). Similarly, Podoynitsyna et al. (2012) reported hope to reduce levels of perceived entrepreneurial risk. Given their high levels of resiliency and risk propensity, we assume hopeful managers are more effective in dealing with environmental change than others.

As proposed by Huy (1999), hope also enhances organizational mobilization during episodes of radical change. Foo et al. (2009), for instance, revealed that positive affect leads to an increase in the work efforts exerted by future-oriented entrepreneurs. In addition to themselves, leaders with positive future attitudes instill high motivation in their subordinates because these subordinates regard them as being capable of mandating change (Peterson et al., 2009). Hopefulness enhances both transformational leadership (Peterson et al., 2009) and performance at work (Peterson & Byron, 2008; Reichard et al., 2013). Especially in times of uncertainty, positive leadership leads to increased levels of firm performance (Brockner & James, 2008; Waldman, Ramírez, House, & Puranam, 2001). Accordingly, we hypothesize that hopeful managers enhance firm performance during times of industry-level discontinuity.

Hypothesis 2a: *Hopefulness (positive future attitude) is positively related to firm performance during environmental crises.*

3.3.4 Worry

When negative emotions regarding the future outweigh the positive ones, individuals experience worry (Borkovec et al., 1983). Despite high degree of awareness of threat-related stimuli, we suspect worriers to be less effective in preventing such threats than others (Barclay & Kiefer, 2019).

First, negative affect undermines the ability of future-oriented managers to engage in visionary thinking (Byron & Khazanchi, 2011). Instead, it primes them towards strategic conformity (Delgado-García & De La Fuente-Sabaté, 2010; Momtaz, 2021). In line with these arguments, Mannor et al. (2016) found that anxious executives surround themselves with supportive team members. Such social buffering detaches them from reality and restricts their ability to effectively respond to a crisis (Brockner & James, 2008). As predicted by threat rigidity theory (Staw, Sandelands, & Dutton, 1981), we expect that managers with negative future attitudes delay strategic renewal and undermine organizational performance.

Second, worry and future anxiety lead to dysfunctional organizational behaviors, such as rule-breaking (Kouchaki & Desai, 2015; Lee, Kim, Park, & Sohn, 2016). Instead of engaging in transformational leadership, supervisors with high levels of future anxiety employ power strategies (Zaleski, 1996) and abusive supervision tactics (Xi, He, Fehr, & Zhao, 2022). Such a lack of relationship building and maintenance, however, thwarts their efforts to secure pre-crisis performance levels (Gittell et al., 2006). As a result, we expect that managers with negative future attitudes reduce organizational performance in times of change and transformation.

Third, worrying elicits “distracting, negative thoughts,” which typically lead to “difficulty in focusing attention on a task” (Borkovec et al., 1983: 13). Accordingly, worry may diminish the ability of managers to formulate effective coping strategies. As reported by Mannor et al. (2016), executives with negative attitudes towards the future pursue low-risk strategic initiatives, even though these strategies may not be effective. Due to their negative thoughts, worriers have low confidence in their problem-solving abilities (Joormann & Stöber, 1997) and low tolerance for uncertainty (Dugas et al., 2001). Especially in episodes of change and uncertainty, this may undermine not only their ability to respond to a crisis but also firm performance.

Hypothesis 2b: *Worry (negative future attitude) is negatively related to firm performance during environmental crises.*

3.4 Methodology

3.4.1 Sample

We tested our hypotheses on a unique sample of private banks in Switzerland and Liechtenstein between 2007 and 2016. During this 10-year period, these private banks were confronted with the gradual erosion of banking secrecy in Switzerland and Liechtenstein. In 2007, a whistleblower provided the U.S. DoJ with evidence of illegal business practices at a major Swiss bank that had helped wealthy U.S. citizens commit tax fraud. During the following years, there was an increasing number of indictments of private banks in Switzerland and Liechtenstein under the umbrella of the Swiss Bank Program. In 2016, the federal government voted to adopt the AEOI standard with the OECD, marking the end of the long-defended banking secrecy.

We chose this research context because we expected top management's temporal and affective foci to have the strongest impacts during a major industry-level discontinuity (Hambrick et al., 2005). As stressed by Überbacher and Scherer (2020), banking secrecy was of the utmost importance for the private banks under study. In essence, it safeguarded their business models, which were geared towards secrecy and privacy, and gave them a sustainable competitive advantage over foreign wealth managers. As soon as traditional business models came under pressure, the industry experienced a sharp decline in AUM and organic growth rates fell to close to zero. Bank executives have been confronted with increasing compliance and legal costs to resolve lawsuits filed against their institutions. Not surprisingly, accounting performance plummeted from double-digit levels at the beginning of the study period to levels around 4% by the end (KPMG, 2015).

We gathered our sample of private banks from the official records of the Swiss National Bank and the Liechtenstein Bankers Association. To construct a homogeneous sample, we removed regional and savings banks because these banks are state- or community-owned. Second, we excluded banks that were active in segments other than private banking based on the mandatory disclosure of business operations in their financial reporting. Third, we removed private banks that received their banking licenses after the beginning of the study. In total, we gathered data about 141 private banks during the study period of 10 years from 1,121 annual reports.

Next, we collected the annual reports of the included private banks through BvD's Orbis Bank Focus and S&P's Global Market Intelligence databases. We searched for missing reports in public libraries and on corporate websites or requested them directly from the respective investor relations departments. Finally, we had to exclude annual reports whose LTSs were either (1) not written in English, (2) shorter than a minimum of 250 words or (3) not considered to be authentic (i.e., not co-authored by a chairman or CEO). After excluding cases with missing information, we had a final sample of 599 observations related to 93 private banks, or an average of 6.4 years per bank.

3.4.2 Variables

3.4.2.1 Dependent variable

We ran regressions on *performance*, which was operationalized as ROE because it is the profitability measure applied by the private banks themselves. However, we acknowledge that strategy scholars have also used other metrics, such as return on assets (ROA), to measure profitability (e.g., Delgado-García & De La Fuente-Sabaté, 2010; Surroca et al., 2014; Zuniga-Vicente & Vicente-Lorente, 2006). In our supplementary analyses, we performed robustness checks on ROA as an alternative performance measure.

3.4.2.2 Independent variables

Top management's *temporal foci* and *affective foci* serve as the independent variables of this study. Building on established techniques of content analysis (Duriau et al., 2007), we applied the Linguistic Inquiry Word Count (LIWC) dictionaries that were developed by Pennebaker et al. (2015) to the private banks' LTSs. These dictionaries contain 341 past-oriented words (e.g., *were*), 97 future-oriented words (e.g., *will*), 620 positive words (e.g., *promising*) and 744 negative words (e.g., *discouraging*). These dictionaries have been frequently used to measure temporal foci (DesJardine & Shi, 2021; Nadkarni & Chen, 2014) and affective foci (Gamache & McNamara, 2019; Mannor et al., 2016) in strategy research. Table 10 provides illustrative statements of the studied private banks' LTSs.

Table 10: Illustrative Quotations of Top Management's Temporal Attitudes^a

Temporal attitude	Bank	Illustrative quotations in LTSs
Nostalgia (positive past)	Bank #112	“The year 2013 was [Name]’s 50th in Switzerland. Serving individuals, corporations and institutions and seeing them achieve, grow and excel is something we’re very proud of. That is why we came here 50 years ago , [...]” <i>LTS, 2013</i>
	Bank #176	“We can be proud and satisfied at the manner in which this integration was accomplished. Thanks to the dedication and hard work of all our staff, we successfully brought this extensive and challenging project to a smooth conclusion [...]” <i>LTS, 2010</i>
	Bank #204	“These qualities were once again greatly appreciated by our clientele during the past twelve months, and helped us to attract numerous new clients.” <i>LTS, 2009</i>
Regret (negative past)	Bank #128	“[...] we also mourned the death of [Name], our former longstanding Deputy Chairman of the board, who [...] was associated with our firm in a wide variety of ways. We therefore regretfully record the loss of the preceding management generation.” <i>LTS, 2010</i>
	Bank #142	“In 2011 the results of the Bank continued to suffer from the low conversion rate of the US Dollar and the euro against the Swiss Francs as well as from the very low interest rates.” <i>LTS, 2011</i>
	Bank #212	“[...] the branch office that we opened in Lugano four years ago has, regrettably , not lived up to our expectations. Following a thorough analysis [...], we have decided to close the branch in the course of 2009.” <i>LTS, 2008</i>
Hopefulness (positive future)	Bank #178	“[Name] now has opportunities to strengthen its market position. The long-term potential for development remains very promising the committed staff and thriving corporate culture will be the main drivers of quality, performance and security .” <i>LTS, 2009</i>
	Bank #198	“With these measures, [Name] will be stronger moving forward, and it will master the difficult environment with its motivated staff. In order to take advantage of opportunities and minimize risks, everyone is called upon to work together for the benefit of [Name]’s future .” <i>LTS, 2014</i>
	Bank #223	“Looking ahead , we are optimistic about the new financial year and expect to see further strong inflows of assets. Our clear positioning and targeted investment should also enable us to achieve a renewed and sustainable improvement in our long-term profitability .” <i>LTS, 2011</i>
Worry (negative future)	Bank #038	“In the short term, we expect to see a continuation of the challenges that weighed on our industry in 2008. Income and profit will be under pressure as market action lowers AUM levels, client activity decelerates and product mix shifts towards deposits and fixed income.” <i>LTS, 2008</i>
	Bank #071	“Governments are facing the very trying challenge of attempting to stimulate growth in the near term while dealing with the problems of excess debt, [...]. This struggle will slowly go on for some time suggesting that one should consider the future outlook with caution.” <i>LTS, 2011</i>
	Bank #266	“[...] we continue to act with caution when it comes to asset allocation choices and we fear that the relative serenity felt during the first months of 2013 might be disturbed by political events, that are difficult to accurately predict .” <i>LTS, 2012</i>

^a Words printed in boldface referring to corresponding dictionaries developed by Pennebaker et al. (2015)

The content, convergent and discriminant validity of the LIWC dictionaries have already been rigorously examined by their authors (Pennebaker et al., 2015). Additionally, we tested the applicability of the LIWC dictionaries to the LTSs of the Swiss and Liechtenstein private banks under study. In line with prior research, we found that top management's temporal and affective foci are marginally, but significantly, correlated (Shipp & Aeon, 2019; Shipp et al., 2009). Past orientation is negatively related to positive affect ($\rho = -0.14$, $p < 0.01$) but positively related to negative affect ($\rho = 0.23$, $p < 0.01$). Moreover, future orientation is positively related to positive affect ($\rho = 0.20$, $p < 0.01$), but unrelated to negative affect ($\rho = 0.01$, n.s.).

Drawing on micro-level research, we acknowledged that top management's temporal foci and affective foci are affected by contextual factors and vary considerably over time (Barsade & Gibson, 2007; Mohammed & Marhefka, 2020). To further substantiate this claim, we specified five hierarchical regression models with past orientation, future orientation, positive affect, negative affect and LTS total word count as dependent variables. Following an approach described by Gamache et al. (2015), we specified the individual CEO as a level 2 predictor. Table 11 presents the linear regression outcomes. In line with our expectations, a substantial portion of variances operates *between* executives, as indicated by significant likelihood ratio tests ($p < 0.01$). Yet, the relatively low intraclass correlation coefficients (ICCs) suggest that more than half of the total variance related to past orientation ($ICC = 0.39$), future orientation ($ICC = 0.43$) and negative affect ($ICC = 0.44$) operates *within* executives over time. Accordingly, we measured top management's temporal and affective foci on an annual basis. In contrast, the majority of variance related to LTS word count occurs *between* executives ($ICC = 0.84$).

Table 11: Hierarchical Regression at CEO-Level^a

Variables	(1) Past focus	(2) Future focus	(3) Positive affect	(4) Negative affect	(5) LTS word count
Constant	2.47***	0.79***	3.70***	1.19***	1.45***
Likelihood ratio (LR) test	110.35***	117.84***	243.05***	133.72***	655.67***
Between variance	0.46	0.28	0.73	0.40	1.00
Within variance	0.58	0.32	0.61	0.45	0.44
ICC	0.39	0.43	0.59	0.44	0.84

^a $N = 599$ *** $p < .01$, ** $p < .05$, * $p < .10$

3.4.2.3 Control variables

At the firm level, we controlled for *past performance*. Additionally, we suspected that the relationships between top management's temporal foci, affective foci and firm performance are confounded by other firm-level characteristics that are not reflected in past performance (e.g., Berger & Mester, 1997; Deyoung & Hasan, 1998). Hence, we controlled for *equity margin* using shareholders' equity over total banking assets. Moreover, we added *growth*, which we measured as the percentage change in the banks' net income. We controlled for *firm size* using the logarithm of total banking assets. Moreover, we added two controls related to diversification. We controlled for *market diversification* using the logarithm of the number of foreign branches and banking subsidiaries. We also controlled for *service diversification*, which we measured as 1 – Herfindahl-Hirschman Index of seven income categories. Finally, we added *strategic change*, which we measured as the percentage change in the banks' asset allocation.

At the level of the LTSs, we followed prior research controlling for their total *word count*. Additionally, we measured their linguistic *complexity* using the percentage of words with more than six characters. We controlled for *authorship*, which we coded as 1 if the LTSs were associated with the CEO, 2 if they were associated with the CEO and chairman and 3 if they were associated with the chairman. According to local standards of corporate governance, annual reports are typically signed by chairpersons, although CEOs are closely involved in their crafting and review (Bowman, 1984).

At the executive level, we measured *CEO tenure* using the logarithm of the number of years for which a CEO was in this position. Finally, we controlled for *CEO succession*, coding a binary variable as 1 when a CEO changed in a given year and 0 otherwise.

3.4.3 Analysis

To test our hypotheses, we conducted linear regression analyses. Because private banks appear repeatedly in the sample, the assumption of independent observations is violated. Because the Hausman (1978) specification test rejected the null-hypothesis ($\chi^2 = 102.65$, $p < 0.01$), we have incorporated firm fixed effects into the regressions. We also added year dummies to control for unobserved effects at the macro-economic level. Because auto-correlation and heteroskedasticity may lead to the underestimation of

standard errors, we applied robust standard errors. Furthermore, continuous variables were winsorized ($p = 0.01$) to eliminate severe outliers (DesJardine & Shi, 2021).

Because top management's temporal and affective foci vary considerably over time (cf. Table 11), we suspected that firm-level factors, such as past performance and organizational capabilities, influence temporal and affective foci. Building upon performance feedback theory, we acknowledged that such information may feed back into strategic decision-making (Greve & Gaba, 2020). For example, a sudden decline in organizational performance may lead to a shift in managerial attention from the past to the future.

To address issues related to reverse causality, we lagged predictors and controls by one year. Following an approach described by Chen and Nadkarni (2017), we also specified four regression models, one for each temporal and affective focus. To predict top management's temporal and affective foci, we used past performance change, client asset performance, net income growth, equity margin and year dummies. As expected, a change in past performance was found to be weakly related to future orientation ($b = -0.27$, $p < 0.10$). Moreover, high equity margins were found to be strongly related to negative affect ($b = 1.39$, $p < 0.01$). As a second step, we added the predicted temporal and affective foci to the original model as endogeneity controls.

3.5 Results

3.5.1 Primary analysis

Table 12 presents descriptive statistics and correlations. As an inspection shows, the Pearson correlations of temporal and affective foci with other predictors and controls are only moderate. Additionally, we examined their variance inflation factors (VIFs). Among the four predictors, positive affect was found to have the highest score ($VIF = 1.53$) and future focus was found to have the lowest ($VIF = 1.20$). Because these scores are well below recommended cut-off values, multicollinearity is not a major concern in our study.

Table 13 shows the linear regression outputs. Figures 5 and 6 present the interaction plots of top management's temporal and affective foci. In Hypothesis 1a, we suggest that nostalgia (positive past) decreases firm performance. In Model 7, the coefficient of past orientation is insignificant, but its interaction term with positive affect is negative and significant ($b = -0.83$, $p < 0.10$). In the case of low levels of positive affect (mean -1 SD), past focus enhances firm performance by 2.4% (cf. Figure 5). For high levels of positive affect (mean $+1$ SD), however, this relationship disappears. Because the presence of top management's positive affect undermines the apparently positive effect related to past orientation, the findings support Hypothesis 1a. In contrast, Hypothesis 1b suggests that regret (negative past) is positively related to firm performance. The interaction between past focus and negative affect is positive but insignificant. Hence, the findings do not support Hypothesis 1b.

According to Hypothesis 2a, hopefulness (positive future) should enhance firm performance. Because the coefficients of future focus and its interaction term with positive affect are positive but insignificant, they do not support Hypothesis 2a. In contrast, Hypothesis 2b suggests that worry (negative future) decreases firm performance. As theorized, the interaction between future focus and negative affect is negative and significant ($b = -3.71$, $p < 0.05$). At low levels of negative affect (mean -1 SD), an increase in future focus enhances firm performance by 1.8% (cf. Figure 6). For high levels of negative affect (mean $+1$ SD), however, this relationship is reversed. A strong future focus leads to a 1.9% decline in performance. Taken together, these findings support Hypothesis 2b.

Table 12: Descriptive Statistics and Pairwise Correlations^a

Variables	Mean	SD	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) Performance	3.45	10.73	1.00										
(2) Past performance	5.18	10.94	0.56***	1.00									
(3) Equity margin	16.09	10.75	-0.09**	-0.04	1.00								
(4) Growth	1.15	24.45	0.17***	0.21***	-0.08**	1.00							
(5) Size (logged)	20.92	1.63	0.11***	0.12***	-0.54***	0.04	1.00						
(6) Market diversification (logged)	.48	.74	-0.05	-0.04	-0.29***	0.05	0.74***	1.00					
(7) Service diversification	.53	.14	-0.03	-0.01	-0.33***	0.07*	0.39***	-0.12***	1.00				
(8) Strategic change	.3	3.11	-0.12***	-0.10**	0.04	0.03	-0.22***	-0.05	-0.02	1.00			
(9) LTS word count	1.47	1.13	0.01	0.05	-0.27***	0.01	0.29***	0.36***	0.00	1.00			
(10) LTS complexity	29.94	2.59	-0.12***	-0.10**	0.00	-0.02	0.09**	0.04	0.05	0.04	1.00		
(11) LTS authorship1 (CEO)	.03	.17	0.10**	0.13***	-0.06	-0.05	-0.09**	-0.10**	-0.10**	0.06	0.04	1.00	
(12) LTS authorship2 (both)	.42	.49	0.01	0.03	-0.31***	0.02	0.39***	0.33***	0.20***	-0.09**	0.07*	0.49***	1.00
(13) LTS authorship3 (chair)	.55	.5	-0.05	-0.07*	0.32***	-0.01	-0.35***	-0.30***	-0.16***	0.07*	-0.50***	-0.03	-0.19***
(14) CEO tenure (logged)	1.37	.94	0.12***	0.17***	-0.06	0.05	-0.04	0.03	-0.09**	-0.04	0.15***	-0.14***	0.05
(15) CEO succession	.15	.36	0.08**	-0.09**	-0.02	-0.06	0.02	-0.05	0.00	0.04	-0.04	0.06	0.03
(16) Past focus (endogeneity control)	2.48	.12	0.13***	0.28***	-0.12***	0.03	0.05	0.05	0.12***	0.16***	0.03	-0.11***	0.09**
(17) Future focus (endogeneity control)	.8	.06	-0.01	-0.04	-0.10**	-0.21***	0.07*	0.03	0.05	0.11***	0.02	-0.06	0.07*
(18) Positive affect (endogeneity control)	3.72	.12	-0.04	-0.01	0.49***	0.07*	-0.29***	-0.15***	-0.22***	0.04	-0.14***	0.07*	-0.06
(19) Negative affect (endogeneity control)	1.18	.21	-0.14***	-0.12***	0.69***	-0.21***	-0.43***	-0.23***	-0.27***	0.17***	-0.20***	-0.02	-0.08*
(20) Past focus	2.48	.74	-0.01	-0.02	-0.04	0.01	-0.01	-0.08*	0.00	0.06	0.07*	-0.26***	-0.08*
(21) Future focus	.79	.42	0.01	0.00	-0.03	-0.03	-0.03	0.00	-0.06	-0.04	0.04	-0.06	0.06
(22) Positive affect	3.7	.95	0.05	0.04	0.09**	0.04	0.03	-0.06	-0.02	-0.08*	-0.30***	0.21***	0.03
(23) Negative affect	1.17	.6	-0.09**	-0.06	0.21***	-0.17***	-0.29***	-0.21***	-0.28***	0.07*	0.06	-0.04	0.06

Variables	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
(12) LTS authorship2 (both)	1.00											
(13) LTS authorship3 (chair)	-0.94***	1.00										
(14) CEO tenure (logged)	-0.03	0.01	1.00									
(15) CEO succession	-0.01	0.00	-0.62***	1.00								
(16) Past focus (endogeneity control)	0.09**	-0.12***	-0.09**	0.06	1.00							
(17) Future focus (endogeneity control)	0.07*	-0.09**	0.00	0.03	0.40***	1.00						
(18) Positive affect (endogeneity control)	-0.20***	0.22***	0.00	-0.07*	-0.22***	-0.14***	1.00					
(19) Negative affect (endogeneity control)	-0.24***	0.24***	-0.04	0.03	0.09**	-0.07*	0.13***	1.00				
(20) Past focus	0.05	-0.02	0.10**	-0.01	0.17***	0.07*	-0.05	0.01	1.00			
(21) Future focus	0.06	-0.08*	0.08**	-0.03	0.05	0.15***	-0.02	-0.02	-0.08**	1.00		
(22) Positive affect	-0.08*	0.06	-0.08**	-0.01	-0.05	-0.03	0.16***	0.05	0.20***	0.01	1.00	
(23) Negative affect	-0.12***	0.10**	0.10**	0.00	0.04	-0.02	0.02	0.35***	0.23***	-0.11***	-0.04	1.00

^a $N = 599$; *** $p < .01$, ** $p < .05$, * $p < .1$; two-tailed tests

Table 13: Regression on ROE^a

Variables	(1) Controls	(2) Predictor variables	(3) Positive past attitude	(4) Negative past attitude	(5) Positive future attitude	(6) Negative future attitude	(7) Full model
Control variables							
Past performance	.17* (.09)	.17* (.09)	.17* (.09)	.17* (.09)	.17* (.09)	.19** (.09)	.2** (.09)
Equity margin	-.26** (.12)	-.24* (.12)	-.25** (.12)	-.24* (.12)	-.24** (.12)	-.25** (.12)	-.26** (.12)
Growth	.05** (.02)	.04* (.02)	.04** (.02)	.04** (.02)	.04** (.02)	.04* (.02)	.04* (.02)
Size (logged)	-3.3 (2.64)	-2.93 (2.64)	-3.15 (2.58)	-2.96 (2.63)	-2.88 (2.6)	-2.48 (2.54)	-2.66 (2.44)
Market diversification (logged)	-3.61 (3.63)	-4.4 (3.34)	-4.47 (3.27)	-4.45 (3.35)	-4.43 (3.32)	-4.42 (3.38)	-4.56 (3.32)
Service diversification	-.38 (6.87)	-.74 (6.94)	1.06 (7.03)	-.75 (7.02)	-.05 (7.28)	-.63 (6.93)	1.25 (7.29)
Strategic change	-.01 (.2)	-.01 (.2)	-.03 (.2)	0 (.2)	-.02 (.2)	0 (.19)	-.01 (.19)
LTS word count	1.15 (1.15)	1.23 (1.15)	1.29 (1.15)	1.23 (1.16)	1.45 (1.2)	1.14 (1.15)	1.32 (1.19)
LTS complexity	-.01 (.17)	.05 (.18)	.11 (.18)	.04 (.18)	.07 (.19)	.05 (.18)	.11 (.19)
LTS authorship2 (both)	-4.28*** (1.45)	-4.45*** (1.38)	-4.29*** (1.58)	-4.7*** (1.36)	-4.44*** (1.35)	-3.83** (1.46)	-3.98** (1.52)
LTS authorship3 (chair)	-5.58** (2.69)	-5.53** (2.77)	-5.08* (2.96)	-5.82** (2.78)	-5.44* (2.76)	-5.19* (2.8)	-5.1* (2.89)
CEO tenure (logged)	-.27 (1.01)	-.34 (1.07)	-.43 (1.06)	-.33 (1.07)	-.32 (1.08)	-.35 (1.05)	-.39 (1.06)
CEO succession	-.68 (1.39)	-.77 (1.38)	-.8 (1.4)	-.83 (1.38)	-.69 (1.4)	-.74 (1.39)	-.77 (1.42)
Past focus (endogeneity control)	-71.25 (43.57)	-71.43* (42.97)	-73.16* (42.56)	-71.36 (43.06)	-68.52* (40.54)	-64.12 (40.12)	-63.82* (38.33)
Future focus (endogeneity control)	-56.3 (111.6)	-59.49 (113.17)	-60.78 (113)	-55.62 (113.66)	-51.81 (111.73)	-51.52 (109.66)	-43.64 (109.62)
Positive affect (endogeneity control)	2.49 (51.57)	1.14 (52.37)	.43 (52.06)	3.05 (52.51)	3.69 (51.68)	2.9 (50.82)	6 (50.55)
Negative affect (endogeneity control)	-24.92* (12.59)	-24.1* (13.26)	-24.74* (13.23)	-24.54* (13.37)	-23.61* (13.17)	-21.58 (13.12)	-22.34* (13.14)
Independent variables							
Past focus		.7 (.71)	.85 (.7)	.72 (.69)	.82 (.72)	.62 (.73)	.84 (.71)
Future focus		.52 (1.06)	.34 (1.06)	.57 (1.05)	.05 (1)	.32 (1.09)	-.05 (1.04)
Positive affect		.31 (.48)	.08 (.51)	.32 (.48)	.28 (.49)	.3 (.49)	.11 (.53)
Negative affect		-.93 (.87)	-1 (.86)	-.87 (.86)	-.97 (.86)	-1 (.83)	-1.01 (.81)
Past focus x positive affect			-1.03** (.5)				-.83* (.5)
Past focus x negative affect				.77 (.84)			.86 (.84)
Future focus x positive affect					1.47 (1.24)		.93 (1.21)
Future focus x negative affect						-3.82** (1.61)	-3.71** (1.6)
Constant	9.68 (11.35)	9.98 (11.69)	9.8 (11.65)	9.75 (11.74)	9.31 (11.52)	9.19 (11.4)	8.39 (11.37)
Year effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	.16	.17	.17	.17	.17	.18	.19

^a N = 599; *** p < .01, ** p < .05, * p < .10

Figure 5: Interaction Plot of Past Focus and Positive Affect^a

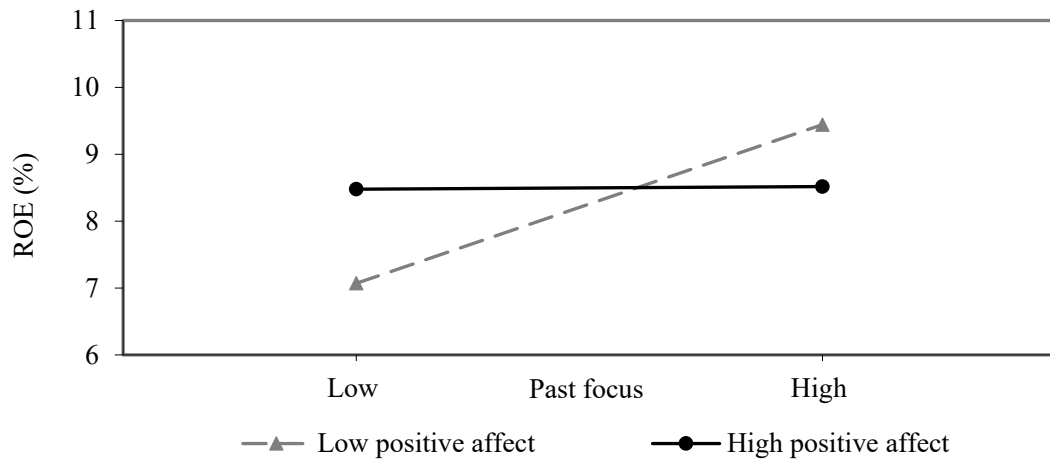
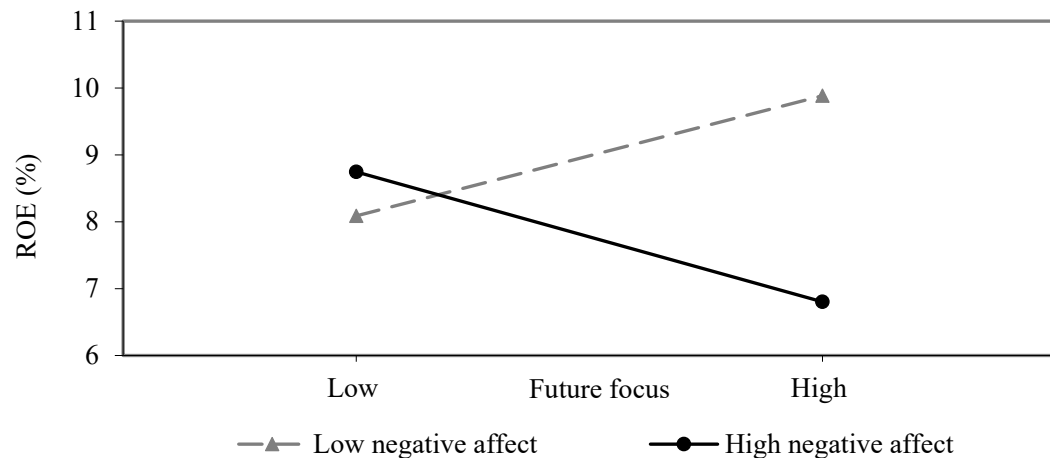


Figure 6: Interaction Plot of Future Focus and Negative Affect^a



^a Low values = mean – 1 SD; high values = mean + 1 SD

3.5.2 Supplementary analyses

We conducted a series of supplementary analyses to ensure that our findings are robust to potential biases and model adjustments.

3.5.2.1 Coefficient of affective tonality

Scholars argued that results may be biased when positive and negative affect are operationalized as separate constructs (Pollock & Rindova, 2003; Rindova, Petkova, & Kotha, 2007). At high scores of positive and negative affect, for example, the affective tonality of an LTS is relatively balanced. In such cases, “negative references tended to qualify or offer counterpoints to the positive references” (Pollock & Rindova, 2003:

635). Separate constructs, however, could make both positive and negative affect appear to be rather extreme.

To address such concerns related to the measurement of positive and negative affect, we computed a single coefficient of *affective tonality*. Following the procedure described by Pfarrer, Pollock, and Rindova (2010), we divided the number of positive words in a given LTS by the sum of positive and negative words therein. The corresponding coefficient of affective tonality ranges from 0 to 1, with 0 indicating perfect negative tonality and 1 indicating perfect positive tonality. Moreover, we may speculate that a balanced temporal attitude may enhance firm performance. To test for a potential non-linear relationship between affective tonality and performance, we incorporated the interaction terms related to top management's temporal foci and affective tonality as well as those for the temporal foci and their squared terms.

Table 14 contains the corresponding linear regression outputs. In Model 5, the interaction term of top management's past focus and affective tonality is negative and weakly significant ($b = -8.47$, $p < 0.10$). The regression output does not indicate a change in direction for the interaction term involving the square of affective tonality. Hence, we did not find any evidence of a non-linear relationship. Furthermore, the interaction effect of top management's future focus and affective tonality is positive and significant ($b = 22.09$, $p < 0.01$). Again, we did not find evidence of a non-linear relationship. Taken together, our original results are supported.

3.5.2.2 Dependent variable

To measure the performance of banking institutions, strategy researchers also applied alternative metrics, such as ROA (Delgado-García & De La Fuente-Sabaté, 2010; Surroca et al., 2014; Zuniga-Vicente & Vicente-Lorente, 2006). Although the private banks under study typically do not use ROA, we ran our analyses again on this alternative measure of firm performance. As presented in Table 15, the results are largely consistent with the ones reported above. In Model 7, the interaction term for past focus and positive affect remains negative but becomes insignificant ($b = -0.09$, n.s.). Furthermore, the interaction term for future focus and negative affect remains negative and significant ($b = -0.96$, $p < 0.05$).

Table 14: Regression on ROE, incl. Coefficient of Affective Tonality^a

Variables	(1) Controls	(2) Predictor variables	(3) Past attitude	(4) Future attitude	(5) Full model
Control variables					
Past performance	.18** (.08)	.17** (.09)	.18** (.09)	.19** (.09)	.2** (.09)
Equity margin	-.26** (.12)	-.25** (.12)	-.26** (.12)	-.25** (.11)	-.26** (.12)
Growth	.05** (.02)	.04** (.02)	.05** (.02)	.04* (.02)	.05** (.02)
Size (logged)	-3.3 (2.61)	-3.03 (2.61)	-3.11 (2.6)	-2.7 (2.52)	-2.75 (2.5)
Market diversification (logged)	-3.61 (3.64)	-4.05 (3.33)	-4.42 (3.26)	-3.89 (3.37)	-4.38 (3.29)
Service diversification	-.39 (6.86)	-.48 (6.84)	-.23 (6.89)	-.2 (7.02)	.12 (7.13)
Strategic change	-.01 (.2)	-.01 (.2)	-.01 (.2)	-.01 (.19)	0 (.19)
LTS word count	1.14 (1.16)	1.16 (1.15)	1.16 (1.16)	1.27 (1.19)	1.28 (1.21)
LTS complexity	-.01 (.17)	.04 (.17)	.04 (.17)	.05 (.18)	.06 (.17)
LTS authorship2 (both)	-4.26*** (1.46)	-4.52*** (1.41)	-4.93*** (1.54)	-3.75** (1.44)	-4.24*** (1.52)
LTS authorship3 (chair)	-5.57** (2.67)	-5.81** (2.73)	-6.31** (2.92)	-5.22* (2.69)	-5.86** (2.86)
CEO tenure (logged)	-.27 (1.01)	-.37 (1.03)	-.4 (1.01)	-.33 (1.02)	-.37 (1)
CEO succession	-.7 (1.38)	-.81 (1.37)	-.95 (1.38)	-.6 (1.39)	-.77 (1.4)
Past focus (endogeneity control)	-68.57** (29.1)	-67.9** (29)	-69.08** (29.06)	-62.3** (26.64)	-63.05** (26.61)
Future focus (endogeneity control)	-45.55** (19.34)	-45.91** (19.96)	-45.44** (19.94)	-41.85** (19.74)	-40.78** (19.69)
Affective balance (endogeneity control)	180.47*** (57.35)	178.3*** (58.35)	179.18*** (58.47)	155.87*** (52.61)	154.07*** (53.08)
Independent variables					
Past focus		.6 (.69)	.89 (.92)	.51 (.7)	.95 (.88)
Future focus		.62 (1.05)	.74 (1.12)	-.55 (1.05)	-.52 (1.08)
Affective balance		1.82 (4.98)	1.05 (4.93)	2.41 (4.66)	1.41 (4.64)
Past focus x affective balance			-6.69 (4.67)		-8.47* (4.81)
Past focus x affective balance (squared)			-15.37 (32.9)		-25.76 (33.86)
Future focus x affective balance				20.12** (8.35)	22.09*** (8.11)
Future focus x affective balance (squared)				45.59 (50.07)	52.68 (48.9)
Constant	8.53*** (2.52)	8.78*** (2.47)	9.07*** (2.59)	8.21*** (2.43)	8.58*** (2.54)
Year effects	Yes	Yes	Yes	Yes	Yes
Firm effects	Yes	Yes	Yes	Yes	Yes
R-squared	.16	.16	.17	.18	.18

^aN = 599; *** p < .01, ** p < .05, * p < .10

Table 15: Regression on ROA^a

Variables	(1) Controls	(2) Predictor variables	(3) Positive past attitude	(4) Negative past attitude	(5) Positive future attitude	(6) Negative future attitude	(7) Full model
Control variables							
Past performance	.34*** (.07)	.34*** (.07)	.34*** (.07)	.34*** (.07)	.34*** (.07)	.36*** (.07)	.37*** (.08)
Equity margin	-.04* (.02)	-.04* (.02)	-.04** (.02)	-.04* (.02)	-.04* (.02)	-.04** (.02)	-.04** (.02)
Growth	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Size (logged)	-.9** (.38)	-.91** (.38)	-.94** (.38)	-.92** (.38)	-.91** (.38)	-.79** (.35)	-.81** (.34)
Market diversification (logged)	.05 (.37)	.03 (.34)	.02 (.34)	.02 (.34)	.02 (.34)	.02 (.36)	-.01 (.36)
Service diversification	-.1 (1.29)	-.23 (1.23)	-.02 (1.28)	-.23 (1.25)	-.16 (1.23)	-.21 (1.17)	-.04 (1.22)
Strategic change	.01 (.02)	0 (.02)	0 (.02)	.01 (.02)	0 (.02)	.01 (.02)	.01 (.02)
LTS word count	.07 (.15)	.09 (.16)	.1 (.16)	.09 (.16)	.11 (.16)	.07 (.16)	.08 (.16)
LTS complexity	.01 (.02)	.02 (.03)	.02 (.03)	.02 (.03)	.02 (.03)	.02 (.03)	.02 (.03)
LTS authorship2 (both)	-.44*** (.16)	-.53*** (.19)	-.51** (.2)	-.58*** (.19)	-.53*** (.18)	-.38* (.23)	-.43* (.22)
LTS authorship3 (chair)	-.54 (.37)	-.55 (.39)	-.5 (.4)	-.61 (.39)	-.54 (.38)	-.47 (.41)	-.5 (.41)
CEO tenure (logged)	.04 (.15)	.06 (.16)	.05 (.16)	.06 (.16)	.06 (.16)	.06 (.16)	.05 (.16)
CEO succession	-.1 (.21)	-.08 (.22)	-.09 (.22)	-.09 (.22)	-.08 (.22)	-.08 (.22)	-.1 (.22)
Past focus (endogeneity control)	-10.54 (7.23)	-10.69 (7.22)	-10.87 (7.25)	-10.74 (7.29)	-10.45 (7.15)	-8.47 (6.17)	-8.56 (6.24)
Future focus (endogeneity control)	-19.23 (16.18)	-19.88 (16.25)	-20.13 (16.3)	-19.58 (16.39)	-19.28 (16.15)	-15.53 (14.35)	-15.07 (14.55)
Positive affect (endogeneity control)	-5.09 (6.55)	-5.39 (6.56)	-5.52 (6.55)	-5.19 (6.58)	-5.2 (6.5)	-4.03 (5.83)	-3.78 (5.83)
Negative affect (endogeneity control)	-3.44** (1.62)	-3.14** (1.54)	-3.2** (1.57)	-3.19** (1.53)	-3.09** (1.54)	-2.76* (1.44)	-2.86* (1.47)
Independent variables							
Past focus		.03 (.11)	.05 (.11)	.04 (.11)	.04 (.11)	.01 (.12)	.03 (.11)
Future focus		-.11 (.18)	-.13 (.19)	-.1 (.18)	-.15 (.17)	-.15 (.2)	-.17 (.18)
Positive affect		-.06 (.08)	-.09 (.09)	-.06 (.08)	-.06 (.08)	-.06 (.08)	-.08 (.09)
Negative affect		-.17 (.15)	-.18 (.15)	-.16 (.15)	-.18 (.15)	-.19 (.14)	-.18 (.14)
Past focus x positive affect			-.12 (.08)				-.09 (.08)
Past focus x negative affect				.16 (.13)			.2 (.14)
Future focus x positive affect					.14 (.22)		.04 (.22)
Future focus x negative affect						-.94** (.44)	-.96** (.45)
Constant	2.45* (1.45)	2.58* (1.48)	2.57* (1.48)	2.58* (1.49)	2.52* (1.46)	2.17 (1.33)	2.14 (1.33)
Year effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	.28	.28	.29	.29	.29	.31	.32

^aN = 599; ***p < .01, **p < .05, *p < .10

3.5.2.3 Clock time

We also tested whether the reported effects vary concerning strength or direction over time because the gradual erosion of banking secrecy could have introduced an unobserved temporal pattern. Hence, we added clock time and its interactions with temporal and affective foci to the original model (cf. Table 16). As expected, the interaction between past focus and positive affect remained negative and significant ($b = -0.87$, $p < 0.10$), while the three-way interaction with clock time was insignificant. Similarly, the interaction of future focus and negative affect was negative and significant ($b = -3.26$, $p < 0.05$), but the three-way interaction term involving clock time was insignificant. As a further robustness check, we split the original sample into an early stage (2007-2011) and a late stage (2012-2016). As Table 17 shows, the split-sample linear regression outputs are consistent with the previously reported ones.

3.5.2.4 Present attitude

In line with prior research, we theorized about the effects of past and future attitudes. For our robustness tests, however, we also added top management's present focus as well as its interactions with positive and negative affect. Depending on their affective foci, executives with a strong present focus may experience either joy (positive present) or boredom (negative present), as speculated by Park et al. (2017). As Table 18 shows, none of the terms involving present focus was found to be significant. Moreover, there were no material changes from the previously reported results, except for the fact that the interaction between past focus and positive affect became insignificant.

3.5.2.5 Sample boundaries

Finally, we investigated the robustness of our results to adjustments of the sample population. In Table 19, we changed the beginning of the 10-year study period to 2008. In Table 20, we added banks that were also active in other domains, such as commercial and investment banking. In Table 21, we incorporated additional LTSs that we translated from German to English. In Table 22, we excluded private banks that were domiciled in the principality of Liechtenstein. In conclusion, the interaction between past focus and positive affect remained negative but became marginally insignificant in three of these model specifications. The interaction between future focus and negative affect was insignificant in only one of them.

Table 16: Regression on ROE, incl. Clock Time^a

Variables	(1) Controls	(2) Predictor variables	(3) Positive past attitude	(4) Negative past attitude	(5) Positive future attitude	(6) Negative future attitude	(7) Full model
Control variables							
Past performance	.17* (.09)	.17* (.09)	.17* (.09)	.17* (.09)	.18* (.09)	.19** (.09)	.19** (.1)
Equity margin	-.26** (.12)	-.24* (.12)	-.25** (.12)	-.24* (.12)	-.25** (.12)	-.26** (.12)	-.26** (.12)
Growth	.05** (.02)	.04* (.02)	.04* (.02)	.04** (.02)	.04** (.02)	.04* (.02)	.04* (.02)
Size (logged)	-3.3 (2.64)	-2.93 (2.64)	-2.93 (2.59)	-2.94 (2.62)	-2.86 (2.6)	-2.71 (2.59)	-2.62 (2.5)
Market diversification (logged)	-3.61 (3.63)	-4.4 (3.34)	-4.72 (3.25)	-4.77 (3.31)	-4.28 (3.39)	-4.44 (3.37)	-5.04 (3.28)
Service diversification	-.38 (6.87)	-.74 (6.94)	.03 (6.95)	-1.25 (6.92)	-.08 (7.25)	-.49 (6.85)	.09 (7.1)
Strategic change	-.01 (.2)	-.01 (.2)	-.02 (.2)	.02 (.2)	-.02 (.2)	-.01 (.19)	.02 (.2)
LTS word count	1.15 (1.15)	1.23 (1.15)	1.24 (1.15)	1.19 (1.18)	1.49 (1.21)	1.13 (1.15)	1.27 (1.22)
LTS complexity	-.01 (.17)	.05 (.18)	.11 (.18)	.05 (.18)	.08 (.19)	.06 (.18)	.14 (.19)
LTS authorship2 (both)	-4.28*** (1.45)	-4.45*** (1.38)	-3.76* (1.89)	-4.19*** (1.35)	-4.35*** (1.35)	-3.53** (1.53)	-2.86* (1.68)
LTS authorship3 (chair)	-5.58** (2.69)	-5.53** (2.77)	-4.77 (3.19)	-5.46** (2.72)	-5.34* (2.77)	-4.8* (2.82)	-4.22 (2.94)
CEO tenure (logged)	-.27 (1.01)	-.34 (1.07)	-.41 (1.05)	-.33 (1.07)	-.32 (1.08)	-.31 (1.06)	-.36 (1.06)
CEO succession	-.68 (1.39)	-.77 (1.38)	-.8 (1.39)	-.86 (1.37)	-.67 (1.4)	-.68 (1.39)	-.77 (1.41)
Past focus (endogeneity control)	-71.25 (43.57)	-71.43* (42.97)	-73.07* (43.04)	-69.8 (42.39)	-66.98 (41.13)	-65.45 (40.78)	-63.1 (38.76)
Future focus (endogeneity control)	-56.3 (111.6)	-59.49 (113.17)	-63.91 (113.27)	-54.33 (112.96)	-46.57 (112.63)	-51.97 (110.33)	-44.69 (110.32)
Positive affect (endogeneity control)	2.49 (51.57)	1.14 (52.37)	-1.59 (52.19)	3.91 (52.34)	5.76 (52.03)	2.04 (51.07)	5 (50.92)
Negative affect (endogeneity control)	-24.92* (12.59)	-24.1* (13.26)	-23.69* (13.29)	-24.46* (13.55)	-23.58* (13.28)	-21.38 (13.19)	-21.5 (13.38)
Independent variables							
Past focus		.7 (.71)	.98 (.66)	.9 (.75)	.88 (.69)	.56 (.75)	1.13 (.74)
Future focus		.52 (1.06)	.35 (1.04)	.58 (1.07)	-.03 (1.02)	.21 (1.08)	-.13 (1.05)
Positive affect		.31 (.48)	.2 (.51)	.29 (.49)	.27 (.48)	.27 (.48)	.15 (.55)
Negative affect		-.93 (.87)	-1.05 (.86)	-.7 (.84)	-.95 (.86)	-.96 (.84)	-.86 (.8)
Clock time		-.65 (.67)	-.69 (.67)	-.60 (.67)	-.59 (.65)	-.66 (.64)	-.61 (.62)
Past focus x positive affect			-1.02** (.47)				-.87* (.49)
Past focus x positive affect x clock time			.27 (.17)				.22 (.16)
Past focus x negative affect				.97 (.85)			.94 (.85)
Past focus x negative affect x clock time				.46 (.3)			.46 (.28)
Future focus x positive affect					1.58 (1.17)		1.02 (1.12)
Future focus x positive affect x clock time					-.31 (.37)		-.09 (.28)
Future focus x negative affect						-3.65** (1.68)	-3.26** (1.55)
Future focus x negative affect x clock time						.46 (.56)	.24 (.48)
Constant	9.68 (11.35)	9.33 (11.13)	9.08 (11.15)	8.7 (11.10)	8.15 (11.06)	8.34 (10.98)	7.12 (10.92)
Year effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	.16	.17	.18	.17	.17	.18	.19

^aN = 599; ***p < .01, **p < .05, *p < .10

Table 17: Regression on ROE, incl. Sample Split^a

Variables	Early stage (2007-2011)			Late stage (2012-2016)		
	(1) Past attitude	(2) Future attitude	(3) Full model	(4) Past attitude	(5) Future attitude	(6) Full model
Control variables						
Past performance	-.09 (.14)	-.07 (.15)	-.08 (.15)	-.03 (.16)	-.05 (.16)	-.03 (.15)
Equity margin	-.2 (.19)	-.21 (.19)	-.2 (.19)	.03 (.16)	.05 (.15)	.03 (.15)
Growth	.05 (.03)	.06* (.03)	.06* (.03)	.06** (.03)	.06* (.03)	.06* (.03)
Size (logged)	-4.4 (3.93)	-4.02 (4.02)	-4.05 (3.94)	1.52 (4.04)	2.47 (3.65)	2.35 (3.76)
Market diversification (logged)	-4.04 (4.62)	-3.43 (4.59)	-3.7 (4.54)	-.75 (4.3)	.04 (4.22)	-.55 (4.28)
Service diversification	1.85 (11.69)	.51 (11.5)	1.76 (11.51)	12.37 (13.63)	11.42 (12.92)	12.02 (13.02)
Strategic change	.27 (.27)	.25 (.26)	.27 (.26)	-.21 (.21)	-.19 (.2)	-.17 (.2)
LTS word count	-.82 (2.89)	-.53 (2.96)	-.62 (2.95)	3.95** (1.93)	4.07** (1.86)	3.88** (1.9)
LTS complexity	.36 (.25)	.39 (.25)	.43 (.26)	.16 (.43)	.03 (.41)	.08 (.42)
LTS authorship2 (both)	-4.44 (3.31)	-4.63 (2.9)	-4.21 (3.2)	2 (2.84)	1.88 (2.53)	2.45 (2.73)
LTS authorship3 (chair)	-6.55 (4.77)	-6.97 (4.38)	-6.48 (4.59)			
CEO tenure (logged)	1.57 (1.64)	1.49 (1.63)	1.48 (1.62)	-3.35* (1.81)	-3.63** (1.65)	-3.35* (1.77)
CEO succession	.05 (1.86)	-.1 (1.85)	.02 (1.85)	-2.24 (3.08)	-2.34 (3.07)	-2.23 (3.1)
Past focus (endogeneity control)	-151.06*** (53.98)	-149.68*** (54.63)	-147.26*** (53.91)	16.92 (40.16)	17.87 (38.26)	16.73 (38.11)
Future focus (endogeneity control)	-391.24** (158.56)	-363.99** (159.07)	-370.94** (157.67)	143.31 (168.54)	143.5 (166.06)	139.54 (168.45)
Positive affect (endogeneity control)	-137.65** (67.06)	-125.17* (66.56)	-129.18* (66.56)	77.53 (90.56)	81.2 (89.42)	78.73 (91.1)
Negative affect (endogeneity control)	7.88 (14.12)	6.17 (13.73)	7.32 (13.8)	-23.09 (33.36)	-28.17 (32.84)	-25.12 (33.82)
Independent variables						
Past focus	-.13 (.91)	-.23 (1)	-.05 (.98)	1.96* (1.08)	1.62* (.95)	2.06* (1.11)
Future focus	.93 (1.12)	.31 (1.11)	.3 (1.12)	-1.13 (1.84)	-1.31 (1.7)	-1.18 (1.7)
Positive affect	-.26 (.58)	-.13 (.53)	-.18 (.54)	1.4 (.96)	1.67* (.98)	1.55 (1.04)
Negative affect	-.58 (.98)	-.53 (1.03)	-.53 (.99)	-.39 (1.65)	-1.07 (1.48)	-.72 (1.53)
Past focus x positive affect	-.88 (.68)		-.62 (.71)	-.49 (.84)		-.24 (.83)
Past focus x negative affect	-1.27 (1.01)		-1.31 (1.02)	1.5 (1.7)		1.82 (1.74)
Future focus x positive affect		1.85* (1.05)	1.74 (1.14)		.98 (1.74)	.87 (1.76)
Future focus x negative affect		-1.44 (1.75)	-1.16 (1.77)		-5.67* (3.02)	-5.84* (2.96)
Constant	40.47** (15.87)	37.9** (15.77)	38.46** (15.7)	7.52 (10.29)	7.02 (9.93)	6.53 (10.02)
Year effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm effects	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.27	0.27	0.28	0.16	0.17	0.18
N	332	332	332	267	267	267

^a Robust standard errors in parentheses; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

Table 18: Regression on ROE, incl. Present Focus^a

Variables	(1) Controls	(2) Predictor variables	(3) Positive present attitude	(4) Negative present attitude	(5) Full model
<i>Control variables</i>					
Past performance	.17* (.09)	.17* (.09)	.17* (.09)	.17* (.09)	.2** (.09)
Equity margin	-.26** (.12)	-.24* (.12)	-.24* (.12)	-.25** (.12)	-.27** (.12)
Growth	.05** (.02)	.04* (.02)	.04* (.02)	.04* (.02)	.04* (.02)
Size (logged)	-3.3 (2.64)	-2.95 (2.64)	-3.04 (2.63)	-2.94 (2.64)	-2.5 (2.39)
Market diversification (logged)	-3.61 (3.63)	-4.38 (3.32)	-4.26 (3.29)	-4.42 (3.3)	-4.81 (3.25)
Service diversification	-.38 (6.87)	-.75 (6.94)	-.48 (7.06)	-.71 (6.92)	1.24 (7.18)
Strategic change	-.01 (.2)	-.01 (.19)	-.01 (.19)	-.02 (.19)	-.03 (.19)
LTS word count	1.15 (1.15)	1.25 (1.17)	1.3 (1.19)	1.24 (1.19)	1.21 (1.24)
LTS complexity	-.01 (.17)	.04 (.18)	.05 (.19)	.04 (.18)	.11 (.19)
LTS authorship2 (both)	-4.28*** (1.45)	-4.44*** (1.41)	-4.26*** (1.35)	-4.26*** (1.42)	-3.6*** (1.54)
LTS authorship3 (chair)	-5.58** (2.69)	-5.51* (2.8)	-5.35* (2.82)	-5.28* (2.8)	-4.65 (2.93)
CEO tenure (logged)	-.27 (1.01)	-.34 (1.07)	-.38 (1.09)	-.37 (1.07)	-.44 (1.05)
CEO succession	-.68 (1.39)	-.77 (1.38)	-.78 (1.38)	-.76 (1.38)	-.77 (1.43)
Past focus (endogeneity control)	-65.01* (38.17)	-64.86* (37.69)	-64.57* (37.36)	-64.96* (37.82)	-56.77* (33.6)
Present focus (endogeneity control)	9.3 (9.81)	9.6 (9.88)	9.29 (9.84)	9.9 (10)	9.96 (9.33)
Future focus (endogeneity control)	-57.23 (112.47)	-60.15 (114.53)	-56.26 (114.77)	-62.82 (115.54)	-50.65 (110.93)
Positive affect (endogeneity control)	7.88 (46.73)	6.81 (47.72)	8.53 (47.99)	5.58 (48.29)	8.14 (46.58)
Negative affect (endogeneity control)	-27.52** (11.38)	-26.77** (11.97)	-27.05** (12.16)	-26.42** (12.08)	-23.44* (11.9)
<i>Independent variables</i>					
Past focus		.68 (.78)	.71 (.8)	.72 (.8)	.96 (.8)
Present focus		-.05 (.43)	-.04 (.43)	-.07 (.43)	.03 (.45)
Future focus		.54 (1.03)	.56 (1.05)	.58 (1.05)	-.02 (1)
Positive affect		.32 (.48)	.3 (.48)	.34 (.48)	.15 (.52)
Negative affect		-.93 (.87)	-.91 (.87)	-.94 (.87)	-1.03 (.8)
Past focus x positive affect					-.8 (.51)
Past focus x negative affect					1.25 (.91)
Present focus x positive affect			.17 (.3)		-.08 (.24)
Present focus x negative affect				.34 (.56)	.95 (.61)
Future focus x positive affect					.97 (1.13)
Future focus x negative affect					-4.46*** (1.67)
Constant	8.3 (10.15)	8.51 (10.54)	7.98 (10.62)	8.56 (10.57)	7.23 (10.3)
Year effects	Yes	Yes	Yes	Yes	Yes
Firm effects	Yes	Yes	Yes	Yes	Yes
R-squared	.16	.17	.17	.17	.19

^a $N = 599$; *** $p < .01$, ** $p < .05$, * $p < .10$

Table 19: Regression on ROE, 2008-2017^a

Variables	(1) Controls	(2) Predictor variables	(3) Positive past attitude	(4) Negative past attitude	(5) Positive future attitude	(6) Negative future attitude	(7) Full model
Control variables							
Past performance	.25*** (.08)	.25*** (.08)	.25*** (.08)	.25*** (.08)	.25*** (.08)	.26*** (.08)	.26*** (.08)
Equity margin	-.27 (.21)	-.27 (.21)	-.27 (.21)	-.27 (.21)	-.27 (.21)	-.29 (.21)	-.28 (.21)
Growth	.03 (.02)	.02 (.02)	.02 (.02)	.03 (.02)	.03 (.02)	.02 (.02)	.02 (.02)
Size (logged)	-2.02 (3.34)	-1.98 (3.33)	-2.09 (3.31)	-1.96 (3.32)	-1.99 (3.32)	-1.59 (3.21)	-1.67 (3.17)
Market diversification (logged)	-4.85 (4.18)	-5.41 (4.05)	-5.43 (4.01)	-5.56 (4.08)	-5.41 (4.01)	-5.71 (4.12)	-5.87 (4.08)
Service diversification	-5.03 (5.89)	-6.09 (5.92)	-4.45 (6.13)	-6.37 (6.07)	-5.65 (6.11)	-5.4 (6.11)	-4.13 (6.47)
Strategic change	-.07 (.16)	-.08 (.16)	-.1 (.16)	-.07 (.16)	-.09 (.16)	-.07 (.16)	-.07 (.16)
LTS word count	1.85* (.93)	2.06** (.94)	2.08** (.94)	2.06** (.95)	2.18** (.99)	2.03** (.95)	2.14** (1)
LTS complexity	0 (.23)	.07 (.23)	.11 (.23)	.06 (.23)	.09 (.24)	.07 (.23)	.1 (.23)
LTS authorship2 (both)	-3.3** (1.54)	-3.76** (1.82)	-3.44* (1.86)	-3.4* (1.84)	-4** (1.81)	-3.78* (1.93)	-3.31* (1.93)
LTS authorship3 (chair)	-4.36* (2.51)	-4.53* (2.72)	-3.88 (2.83)	-4.27 (2.67)	-4.74* (2.66)	-4.75* (2.76)	-4.1 (2.7)
CEO tenure (logged)	-1.53 (.93)	-1.57 (.95)	-1.66* (.95)	-1.56 (.96)	-1.58 (.96)	-1.66* (.93)	-1.71* (.94)
CEO succession	-2.11 (1.45)	-2.21 (1.41)	-2.28 (1.44)	-2.28 (1.41)	-2.17 (1.43)	-2.34 (1.41)	-2.44* (1.44)
Past focus (endogeneity control)	-23.3 (14.2)	-23.59* (14.11)	-23.91* (13.84)	-23.93* (14.28)	-23.38* (13.8)	-21.98 (13.37)	-22.52* (13.2)
Future focus (endogeneity control)	41.71 (28.07)	40.67 (28.84)	41.05 (28.76)	44.09 (28.5)	42.59 (29.76)	40.2 (27.7)	45.32 (28.15)
Positive affect (endogeneity control)	39.42** (18.95)	38.26* (19.55)	38.43** (19.21)	40.16** (19.5)	38.45* (19.64)	38.16** (19.18)	40.38** (19.01)
Negative affect (endogeneity control)	-15.67** (6.17)	-14.49** (6.45)	-14.88** (6.41)	-14.44** (6.52)	-14.11** (6.42)	-12.87** (6.3)	-12.95** (6.35)
Independent variables							
Past focus		.85 (.73)	.95 (.75)	.91 (.72)	.91 (.75)	.9 (.76)	1.07 (.75)
Future focus		-.23 (1.05)	-.34 (1.06)	-.2 (1.05)	-.55 (.98)	-.14 (1.03)	-.42 (.97)
Positive affect		.21 (.49)	.06 (.52)	.23 (.49)	.2 (.51)	.21 (.51)	.11 (.54)
Negative affect		-1.09 (.96)	-1.12 (.96)	-1 (.96)	-1.13 (.96)	-1.21 (.91)	-1.16 (.91)
Past focus x positive affect			-.83* (.49)				-.66 (.5)
Past focus x negative affect				1.34 (.86)			1.38 (.88)
Future focus x positive affect					1.16 (1.2)		.78 (1.23)
Future focus x negative affect						-3.39* (1.87)	-3.21* (1.84)
Constant	2.99 (3.82)	3.48 (4.18)	2.97 (4.19)	2.71 (4.14)	3.58 (4.09)	3.75 (4.13)	2.62 (4.01)
Year effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	.12	.12	.13	.13	.13	.13	.14

^aN = 582; ***p < .01, **p < .05, *p < .10

Table 20: Regression on ROE, incl. WM + Other^a

Variables	(1) Controls	(2) Predictor variables	(3) Positive past attitude	(4) Negative past attitude	(5) Positive future attitude	(6) Negative future attitude	(7) Full model
Control variables							
Past performance	.14* (.08)	.14* (.08)	.15* (.08)	.14* (.08)	.14* (.08)	.15* (.08)	.16** (.08)
Equity margin	-.29*** (.1)	-.26** (.1)	-.28*** (.1)	-.27** (.1)	-.27** (.1)	-.27** (.1)	-.28*** (.1)
Growth	.04** (.02)	.04** (.02)	.04** (.02)	.04** (.02)	.04** (.02)	.04** (.02)	.04** (.02)
Size (logged)	-2.88 (2.24)	-2.54 (2.26)	-2.88 (2.2)	-2.54 (2.25)	-2.54 (2.25)	-2.27 (2.18)	-2.61 (2.13)
Market diversification (logged)	-5.25* (3.15)	-5.53* (3.04)	-5.45* (2.99)	-5.55* (3.04)	-5.55* (3.04)	-5.38* (3.04)	-5.32* (2.98)
Service diversification	-3.55 (5.95)	-4.21 (6.08)	-2.86 (6.26)	-4.24 (6.12)	-3.99 (6.22)	-4.04 (6.07)	-2.7 (6.33)
Strategic change	.07 (.18)	.07 (.18)	.05 (.18)	.07 (.18)	.07 (.18)	.08 (.17)	.06 (.17)
LTS word count	1.2 (1.08)	1.33 (1.07)	1.41 (1.07)	1.33 (1.08)	1.41 (1.09)	1.29 (1.07)	1.38 (1.07)
LTS complexity	-.08 (.16)	-.04 (.17)	.03 (.17)	-.04 (.17)	-.03 (.17)	-.04 (.17)	.02 (.17)
LTS authorship2 (both)	-3.23*** (1.13)	-3.17*** (1.17)	-2.5 (1.57)	-3.2*** (1.2)	-3.18*** (1.16)	-2.67** (1.18)	-2.05 (1.55)
LTS authorship3 (chair)	-4.98** (2.11)	-4.72* (2.38)	-3.72 (2.64)	-4.77** (2.4)	-4.71** (2.38)	-4.44* (2.39)	-3.52 (2.62)
CEO tenure (logged)	-.54 (.92)	-.64 (.96)	-.72 (.94)	-.63 (.97)	-.64 (.97)	-.6 (.96)	-.66 (.95)
CEO succession	-.65 (1.14)	-.71 (1.13)	-.72 (1.15)	-.72 (1.13)	-.69 (1.14)	-.57 (1.15)	-.59 (1.17)
Past focus (endogeneity control)	-33.3 (21.99)	-33.25 (21.92)	-33.87 (21.54)	-33.05 (21.97)	-33.28 (21.67)	-29.3 (20.7)	-29.9 (20.38)
Future focus (endogeneity control)	-49.36 (34.43)	-49.77 (35.16)	-51.65 (35.19)	-50.05 (35.35)	-49.21 (34.57)	-43.46 (33.93)	-45.46 (33.57)
Positive affect (endogeneity control)	-2.14 (10.63)	-2.77 (10.61)	-4.08 (10.61)	-3.01 (10.66)	-2.92 (10.83)	-2.35 (10.38)	-3.81 (10.53)
Negative affect (endogeneity control)	1.2 (9.38)	.87 (9.35)	.62 (9.15)	1.15 (9.36)	1.24 (9.79)	1.19 (9.23)	1.2 (9.46)
Independent variables							
Past focus		.82 (.66)	.94 (.67)	.83 (.66)	.86 (.66)	.73 (.68)	.87 (.67)
Future focus		.67 (.92)	.49 (.9)	.68 (.91)	.55 (.94)	.36 (.94)	.17 (.92)
Positive affect		.61 (.47)	.26 (.47)	.61 (.47)	.61 (.47)	.61 (.48)	.27 (.48)
Negative affect		-.73 (.76)	-.72 (.76)	-.7 (.76)	-.74 (.76)	-.75 (.73)	-.73 (.73)
Past focus x positive affect			-1.25** (.52)				-1.21** (.56)
Past focus x negative affect				.33 (.7)			.2 (.71)
Future focus x positive affect					.53 (1.18)		.15 (1.15)
Future focus x negative affect						-2.83* (1.44)	-2.75* (1.4)
Constant	12.12*** (3.15)	11.85*** (3.18)	11.23*** (3.32)	11.89*** (3.21)	11.84*** (3.18)	11.07*** (3.1)	10.51*** (3.26)
Year effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	.16	.16	.17	.16	.16	.17	.18

^aN = 723; ***p < .01, **p < .05, *p < .10

Table 21: Regression on ROE, incl. German^a

Variables	(1) Controls	(2) Predictor variables	(3) Positive past attitude	(4) Negative past attitude	(5) Positive future attitude	(6) Negative future attitude	(7) Full model
Control variables							
Past performance	.19** (.08)	.17** (.08)	.18** (.08)	.18** (.08)	.18** (.09)	.18** (.08)	.19** (.09)
Equity margin	-.24** (.12)	-.22* (.12)	-.22* (.11)	-.22* (.12)	-.22* (.11)	-.22* (.11)	-.22* (.11)
Growth	.03 (.02)	.03 (.02)	.03 (.02)	.03 (.02)	.03 (.02)	.03 (.02)	.03 (.02)
Size (logged)	-3.03 (2.34)	-2.79 (2.36)	-2.94 (2.33)	-2.79 (2.35)	-2.73 (2.32)	-2.58 (2.31)	-2.66 (2.25)
Market diversification (logged)	-3.46 (3.41)	-4.15 (3.17)	-4.25 (3.1)	-4.19 (3.17)	-4.29 (3.14)	-4.09 (3.18)	-4.31 (3.11)
Service diversification	-5.1 (6.24)	-5.41 (6.27)	-4.54 (6.34)	-5.48 (6.32)	-5.01 (6.46)	-5.3 (6.28)	-4.39 (6.51)
Strategic change	-.04 (.2)	-.05 (.2)	-.06 (.2)	-.04 (.2)	-.05 (.2)	-.04 (.19)	-.04 (.2)
LTS word count	.97 (1)	1.14 (1)	1.21 (1)	1.14 (1)	1.33 (1.04)	1.1 (.99)	1.28 (1.03)
LTS complexity	-.05 (.16)	0 (.17)	.05 (.17)	-.01 (.17)	.03 (.17)	-.02 (.17)	.05 (.18)
LTS authorship2 (both)	-2.59 (1.88)	-2.76 (1.8)	-2.41 (2.17)	-2.85 (1.85)	-2.91 (1.81)	-2.4 (1.75)	-2.34 (2.05)
LTS authorship3 (chair)	-3.51 (2.83)	-3.34 (2.87)	-2.73 (3.18)	-3.44 (2.92)	-3.38 (2.82)	-3.18 (2.81)	-2.84 (3)
CEO tenure (logged)	.24 (.9)	.23 (.96)	.2 (.96)	.24 (.96)	.25 (.97)	.23 (.96)	.22 (.96)
CEO succession	-.34 (1.36)	-.31 (1.39)	-.29 (1.4)	-.38 (1.39)	-.25 (1.4)	-.31 (1.4)	-.32 (1.42)
Past focus (endogeneity control)	-25.93 (27.51)	-26.77 (26.87)	-27.95 (26.7)	-27.69 (26.93)	-25.98 (25.87)	-24.48 (25.59)	-25.69 (24.7)
Future focus (endogeneity control)	-68.03 (93.94)	-75.21 (93.72)	-80.12 (93.05)	-74.42 (93.76)	-69.33 (90.19)	-68.52 (90.36)	-67.39 (87.42)
Positive affect (endogeneity control)	-30.87 (42.07)	-32.9 (41.54)	-35.89 (40.95)	-32.9 (41.42)	-30.87 (39.51)	-29.69 (39.7)	-30.56 (37.65)
Negative affect (endogeneity control)	-16.05*** (5.3)	-15.31*** (5.27)	-16*** (5.29)	-15.33*** (5.26)	-14.5*** (4.99)	-14.41*** (5.28)	-14.36*** (5.14)
Independent variables							
Past focus		.41 (.61)	.52 (.61)	.43 (.59)	.53 (.62)	.37 (.61)	.56 (.61)
Future focus		.61 (1.02)	.42 (.99)	.61 (1.01)	.14 (.99)	.48 (1.06)	-.01 (1.02)
Positive affect		.19 (.43)	.03 (.45)	.22 (.42)	.16 (.43)	.23 (.43)	.1 (.46)
Negative affect		-1.44* (.79)	-1.56* (.79)	-1.4* (.79)	-1.58** (.79)	-1.43* (.78)	-1.59** (.77)
Past focus x positive affect			-.85 (.52)				-.65 (.53)
Past focus x negative affect				.66 (.7)			.59 (.67)
Future focus x positive affect					1.45 (1.08)		1.1 (1.09)
Future focus x negative affect						-2.02 (1.74)	-1.93 (1.73)
Constant	14.31 (10.95)	14.89 (11.09)	15.06 (11.07)	14.85 (11.10)	14.35 (10.63)	13.98 (10.72)	13.7 (10.4)
Year effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	.14	.15	.15	.15	.15	.15	.16

^a N = 697; *** p < .01, ** p < .05, * p < .10

Table 22: Regression on ROE, excl. Liechtenstein^a

Variables	(1) Controls	(2) Predictor variables	(3) Positive past attitude	(4) Negative past attitude	(5) Positive future attitude	(6) Negative future attitude	(7) Full model
Control variables							
Past performance	.18* (.09)	.17* (.09)	.18* (.09)	.17* (.09)	.18* (.1)	.19** (.09)	.2** (.1)
Equity margin	-.27** (.13)	-.25** (.12)	-.25** (.12)	-.25** (.13)	-.25** (.12)	-.26** (.12)	-.26** (.12)
Growth	.04* (.02)	.04* (.02)	.04* (.02)	.04* (.02)	.04* (.02)	.03 (.02)	.04* (.02)
Size (logged)	-3.57 (2.74)	-3.19 (2.76)	-3.38 (2.7)	-3.23 (2.75)	-3.15 (2.71)	-2.7 (2.66)	-2.87 (2.58)
Market diversification (logged)	-2.87 (3.84)	-3.62 (3.53)	-3.66 (3.47)	-3.66 (3.54)	-3.63 (3.5)	-3.64 (3.58)	-3.72 (3.53)
Service diversification	-.06 (7.16)	-.3 (7.2)	1.43 (7.28)	-.34 (7.3)	.44 (7.59)	.05 (7.2)	1.83 (7.58)
Strategic change	-.02 (.2)	-.03 (.2)	-.05 (.2)	-.02 (.2)	-.03 (.2)	-.02 (.2)	-.02 (.2)
LTS word count	1.16 (1.23)	1.24 (1.23)	1.3 (1.23)	1.24 (1.24)	1.47 (1.29)	1.13 (1.23)	1.34 (1.27)
LTS complexity	.03 (.19)	.09 (.2)	.14 (.2)	.08 (.2)	.11 (.21)	.09 (.2)	.14 (.2)
LTS authorship2 (both)	-4.33*** (1.48)	-4.63*** (1.48)	-4.47*** (1.59)	-4.86*** (1.47)	-4.6*** (1.44)	-3.95** (1.6)	-4.09** (1.58)
LTS authorship3 (chair)	-5.67** (2.68)	-5.75** (2.8)	-5.29* (2.94)	-6.01** (2.81)	-5.64** (2.78)	-5.39* (2.85)	-5.28* (2.88)
CEO tenure (logged)	-.26 (1.04)	-.35 (1.11)	-.42 (1.1)	-.33 (1.12)	-.34 (1.12)	-.37 (1.09)	-.4 (1.1)
CEO succession	-.33 (1.43)	-.44 (1.42)	-.47 (1.45)	-.49 (1.43)	-.36 (1.45)	-.42 (1.44)	-.43 (1.47)
Past focus (endogeneity control)	-47.61 (30.3)	-47.7 (29.81)	-48.93 (29.45)	-47.89 (29.84)	-45.64 (27.99)	-42.22 (27.64)	-42.18 (26.16)
Future focus (endogeneity control)	-15.19 (69.56)	-17.73 (71.24)	-18.5 (70.87)	-15 (71.56)	-12.54 (71.23)	-13.68 (69.59)	-7.94 (70.01)
Positive affect (endogeneity control)	18.06 (30.74)	17.15 (31.49)	16.55 (31.1)	18.37 (31.54)	18.44 (31.34)	17.42 (30.85)	19.16 (30.7)
Negative affect (endogeneity control)	-27.24** (10.57)	-26.42** (11.08)	-26.96** (10.95)	-26.77** (11.17)	-25.71** (10.84)	-23.56** (10.81)	-23.99** (10.65)
Independent variables							
Past focus		.78 (.74)	.92 (.73)	.8 (.72)	.9 (.75)	.69 (.76)	.9 (.74)
Future focus		.66 (1.1)	.49 (1.09)	.71 (1.09)	.19 (1.01)	.41 (1.12)	.03 (1.05)
Positive affect		.24 (.51)	.01 (.54)	.25 (.51)	.2 (.52)	.22 (.52)	.05 (.57)
Negative affect		-.9 (.93)	-.97 (.92)	-.82 (.92)	-.93 (.92)	-.95 (.89)	-.94 (.87)
Past focus x positive affect			-.95* (.51)				-.73 (.51)
Past focus x negative affect				.74 (.89)			.83 (.89)
Future focus x positive affect					1.52 (1.29)		1 (1.25)
Future focus x negative affect						-3.94** (1.63)	-3.83** (1.62)
Constant	5.92 (7.82)	6.28 (8.19)	6.06 (8.11)	6.13 (8.22)	5.82 (8.13)	5.82 (8.09)	5.21 (8.04)
Year effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	.16	.17	.17	.17	.17	.18	.18

^aN = 553; ***p < .01, **p < .05, *p < .10

3.6 Discussion

Subjective perceptions of time have become popular constructs in strategy research (Chen & Nadkarni, 2017; DesJardine & Bansal, 2019; Nadkarni et al., 2016; Nadkarni, Pan, & Chen, 2019). Temporal focus theory has specifically gained noteworthy traction (Back et al., 2020; DesJardine & Shi, 2021; Gamache & McNamara, 2019; Nadkarni & Chen, 2014; Tuncdogan & Dogan, 2020). Drawing on empirical findings at the micro-level, we need to acknowledge, however, that temporal foci are relatively blind to emotional valence (Carelli et al., 2011; Kooij et al., 2018; Park et al., 2017; Zimbardo & Boyd, 1999). In this study, we, therefore, brought the concept of temporal attitude from micro- to macro-level research. Consistent with our theorizing, both nostalgia (positive past) and worry (negative future) were negatively associated with firm performance. In contrast, neither regret (negative past) nor hopefulness (positive future) was positively associated with firm performance because their coefficients remained statistically insignificant.

3.6.1 Theoretical implications

We believe that our findings yield important contributions to strategy research, especially regarding upper echelons theory (Hambrick & Mason, 1984).

First, our study offers a fine-grained understanding of the role of temporal biases in strategic decision-making (Tang et al., 2019). We followed explicit calls in the management literature to examine temporal and affective foci in concert. Levasseur et al. (2020), for example, have asked “[h]ow might relationships between temporal focus and outcomes depend upon the affect associated with a particular time period? Does temporal focus become an even stronger predictor of [...] performance when attitudes toward the past or future are more positive?” (239). Similarly, Dane and George (2014) encouraged management scholars to examine the role of not only affective forecasting but also affective experiences. To address these calls, we applied the concept of temporal attitude to strategy research. Depending on their affective foci, we argued that managers with strong past foci are better at remembering and learning either positive or negative material (Staw & Cohen-Charash, 2005). Similarly, strategic foresight may trigger both positive and negative feelings in managers with strong future foci (Dane & George, 2014).

In this regard, our study may also help resolve some of the seemingly inconclusive findings related to temporal focus theory. In recent empirical studies, past orientation was found to be unrelated to strategic change (Back et al., 2020), as well as exploration and exploitation activities (Tuncdogan & Dogan, 2020). Similarly, the relationship between future orientation and strategic risk-taking has been reported to be positive (Shipp et al., 2009) or negative (Kooij et al., 2018). To address these inconsistencies, scholars examined the role of contingency factors, such as industry dynamism (Back et al., 2020; Nadkarni & Chen, 2014) or incentive schemes (DesJardine & Shi, 2021). Beyond such environmental and organizational factors, however, the literature remained surprisingly void concerning potential individual-level contingencies, such as top management's affective foci.

Second, our study extends what we know regarding the relationship between temporal biases and organizational performance. Scholars examined the impact of top management's temporal foci on a range of strategic behaviors, such as corporate innovation (Nadkarni & Chen, 2014; Yadav et al., 2007), strategic change (Back et al., 2020; Tuncdogan & Dogan, 2020) and mergers and acquisitions (DesJardine & Shi, 2021; Gamache & McNamara, 2019). To the best of our knowledge, though, the recent study by Back et al. (2020) is the only one that shed light on how top management's temporal foci affect firm performance. Specifically, the authors reported that CEO past orientation strengthens the relationship between strategic change and organizational performance and CEO future orientation weakens this link. Accordingly, our study enriches what we know regarding the impact of top management's temporal biases on organizational performance.

Third, we contribute to the relatively nascent stream of research on managerial emotions and affect (Ashkanasy et al., 2017). As emphasized in prior strategy research, managerial emotions play an important role in strategic decision-making (e.g., Huy & Zott, 2019; Vuori & Huy, in press). Apart from positive and negative affect, however, there have been relatively few studies on the role of discrete emotional states (Barsade & Gibson, 2007; Gooty et al., 2009). Among other reasons, this could be due to the limited accessibility of executives and TMTs for scientific purposes. Past-oriented emotional states, such as *nostalgia* and *regret*, have been primarily studied in marketing and consumer research (Huang et al., 2016; Inman & Zeelenberg, 2002; Lasaleta et al., 2014; Tsiros & Mittal, 2000). We acknowledge the recent study by Verbruggen and De

Vos (2020) on regret for career inaction as a noteworthy exception in the field of management. Concerning future-oriented emotional states, *hopefulness* received considerably more attention from scholars in organizational behavior (Peterson & Byron, 2008; Peterson et al., 2009) and entrepreneurship research (Huang et al., 2019; Podoynitsyna et al., 2012) than in strategy research (Huy, 1999). The literature on *worry* remained exceptionally scarce. Nevertheless, some scholarly attention has been dedicated to concepts of future anxiety (Mannor et al., 2016) and fear (Vuori & Huy, 2016), which are inextricably linked to the notion of worry.

Fourth, this study of temporal attitude may help mitigate “the traditional divide between cognition and emotion” (Huy, 2011: 1407). As stressed in prior research, temporal attitude is a combination of temporal focus and affective focus. While the first represents a cognitive bias, the second represents an affective state. Instead of being viewed exclusively as a cognition or an emotion, temporal attitude encompasses both components. This conceptualization has been confirmed by research in psychology and behavioral science. *Regret*, for instance, is typically referred to as a “hot cognition” (Beike et al., 2009: 386) that blends cognitive activity (rumination) with an emotional state (sadness). In a similar way, Reichard et al. (2013) argued that *hopefulness* encompasses “both affective and cognitive components” (293).

Drawing on these arguments, we echo concerns in the strategy literature that neither cognition nor emotion is sufficient on its own to explain individual- and firm-level outcomes. Vuori and Huy (2016), for instance, encouraged scholars to “investigate the target of the emotion in addition to observing whether the emotion is present” (12). In this regard, positive and negative affect may be directed toward the past or the future as the ultimate target. Specifically, we found that positive affect reduces organizational performance when it is directed toward the past but not when it is directed toward the future. On the contrary, negative affect reduces organizational performance when it is directed toward the future but not when it is directed towards the past.

Finally, this study advances our knowledge of how executive characteristics affect organizational outcomes during corporate crises (Bundy et al., 2017). Prior management research predominantly examined the impact of conventional demographics during times of environmental change (e.g., Dowell et al., 2011; Westphal & Milton, 2000; Zuniga-Vicente & Vicente-Lorente, 2006). Recently, management scholars have become increasingly interested in the role of top management’s cognition

and emotion as well. König et al. (2020), for example, built a novel theory on the relationship between CEO empathy and organizational effectiveness during an organizational crisis. Likewise, Vuori and Huy (2016) studied the impact of shared fear during major disruptions in the competitive environment. In our study, we shed additional light on how managerial cognition and emotion help secure a firm's positive performance during an environmental crisis. As stressed by Überbacher and Scherer (2020), the fall of banking secrecy in Switzerland and Liechtenstein was a major industry-level discontinuity. It eroded the long-defended competitive advantage of the private banks under study that they had enjoyed over foreign wealth managers for almost a century. In such a context of change and uncertainty, we found that top management's temporal attitudes are associated with firm performance in distinct ways.

3.6.2 Managerial implications

Apart from these theoretical contributions, our results have implications for organizations and executives.

Firms are well-advised to consider temporal attitudes in the recruitment of executives if they are confronted with an environmental crisis. As our results indicate, the recruitment of executives with strong positive past attitudes (nostalgia) or negative future attitudes (worry) may adversely affect firm performance. Instead, firms should hire executives who operate on low levels of nostalgia and worry.

Like temporal and affective foci, temporal attitudes encompass a situational component that is affected by organizational contingencies. Firms may, therefore, develop internal systems that instill a particular temporal attitude in executives. As emphasized in prior research, such systems include, but are not limited to, executive training, compensation schemes and governance structures (DesJardine & Shi, 2021; Vuori & Huy, in press).

Finally, our results emphasize that executives need to understand how temporal biases affect strategic decision-making and firm performance. If managers critically reflect on their temporal attitudes, they can improve their ability to control and adapt their temporal biases to situational demands. To strengthen organizational performance, for instance, nostalgic executives could temporarily switch to a more negative past attitude. This is challenging, however, because temporal biases usually operate in the subconsciousness (Zimbardo & Boyd, 1999).

3.6.3 Limitations and future research directions

The results of this study have to be considered in light of a number of limitations that provide opportunities for future research. First, we measured the temporal and affective foci of executives based on LTSs. Although the use of LTSs has become increasingly common in strategy research (Gamache et al., 2015; Laamanen & Wallin, 2009; Nadkarni & Narayanan, 2007; Surroca et al., 2014), it has also attracted criticism. Occasionally, LTSs are accused of being written by public relations departments and biased through impression management. Because most of the private banks in Switzerland and Liechtenstein were not publicly listed, supplementary data for further triangulation was exceptionally scarce. Hence, we encourage management scholars to replicate our study using alternative samples or sources of textual data, such as press releases and earnings calls.

Moreover, we conducted our analyses based on the subset of LTSs published in English. Yet, this approach may expose our study to a potential sample selection bias. Private banks that issued annual reports in any of Switzerland's official languages (i.e., German, French and Italian) might be more conservative and secretive. Similarly, if a bank did not publish its LTS in English, this could be because it has a relatively low number of international customers. To test for a potential selection bias, we translated a subset of LTSs from German to English and added these to the original regression analyses. Although the signs of all four interaction terms remained unchanged, the effects were insignificant. Of course, these findings may be the result of the specificities of the translations or the German language, but they may cast some doubt on the generalizability of our findings. Future research could replicate our study using textual data in a country's official language or top management's native language.

Third, we conceptualized temporal attitude as a blend of a dispositional trait and a malleable state. This approach reflects recent findings from studies in the fields of psychology and behavioral science that temporal foci (Holman & Silver, 2005; Rush & Grouzet, 2012; Shipp & Aeon, 2019) and affective foci (Bartels et al., 2022; Liu et al., 2017) substantially vary over time. Future research may shed additional light on the situational contingencies in the relationship between top management's temporal attitudes and firm performance. Although we examined this relationship during times of environmental discontinuity, other scholars could replicate our study in more benign

and stable environments. The positive, but insignificant, effects related to negative past attitudes and positive future attitudes specifically warrant further investigation.

Finally, the interplay of top management's temporal foci and other notions of managerial psychology constitutes a fruitful avenue for further research. For example, scholars may integrate temporal focus theory with regulatory focus theory (Strobel et al., 2013; Tuncdogan & Dogan, 2020). We expect that the effectiveness of temporal foci is partially dependent on whether managers work towards maximum or minimum goals. A manager with a strong past focus, on the one hand, may choose to opportunistically expand the traditional business or shy away from the risks associated with new business practices. A manager with a strong future focus, on the other hand, may be motivated to increase the revenues from new business or eliminate the risks related to traditional business practices.

3.6.4 Conclusion

Temporal focus represents an important cognitive bias, but it is relatively blind to emotional valence. Although managers have similar temporal foci, they may operate based on different temporal attitudes. To the best of our knowledge, we presented one of the first studies in which the micro-level concept of temporal attitude was applied to strategy research. As theorized, we found evidence that top management's past foci reduce firm performance when combined with positive affect (nostalgia). Similarly, a strong future focus undermines firm performance when it is related to negative thought (worry). We hope that our study encourages future strategy research on top management's temporal attitudes.

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4. Back or Forth? The Role of Successor CEOs' Temporal Focus on Post-Succession Firm Performance (*Study 3*)

The replacement of the chief executive starts a new chapter in the history of a firm. To improve our understanding of the succession-performance relationship, we introduce CEO temporal focus as an individual-level contingency. Acknowledging their temporal heterogeneity, we argue that successor CEOs with strong past foci extend and refresh the knowledge base within TMTs while keeping disruption at moderate levels. In contrast, successors with strong future foci may amplify conflict and power struggles, which prevents them from enriching their new firm's adaptive capacity. Based on a unique sample of private banks in Switzerland and Liechtenstein, we find that high levels of past orientation enhance post-succession firm performance, whereas high levels of future orientation decrease it. Our findings extend the multi-level contingency framework of executive succession and provide novel insights into the role of subjective temporality during a major industry-level discontinuity.

Keywords: Temporal focus; CEO succession; upper echelons; discontinuity; content analysis

4.1 Introduction

Drawing on upper echelons theory (Hambrick & Mason, 1984), executives are responsible for translating external demands, such as regulatory change and competitor behavior, into strategic action. The replacement of chief executives has become a common phenomenon in today's corporate world, as reflected in the dramatic decline in CEO tenure (Quigley & Hambrick, 2015; Wiersema & Zhang, 2011). This is not surprising because executive characteristics explain a substantial proportion of variance in firm performance (e.g., Wang et al., 2016).

Despite the vibrant stream of research on executive succession (Berns & Klarner, 2017; Hutzschenreuter, Kleindienst, & Greger, 2012), empirical findings regarding its impact on firm performance remain partially inconclusive (Karaevli, 2007; Schepker, Kim, Patel, Thatcher, & Campion, 2017). Some researchers found a positive relationship between succession and performance (Tushman & Rosenkopf, 1996; Virany, Tushman, & Romanelli, 1992) while others reported identifying a negative one (Beatty & Zajac, 1987; Brown, 1982; Grusky, 1963). To resolve some of these inconsistencies, Berns and Klarner (2017) developed a multi-level contingency framework. By reviewing the literature at the individual manager's level, we find that the psychological contingencies of successor CEOs are relatively under-researched. This is surprising because strategy scholars emphasized the critical role of managerial psychology in strategic decision-making, which is laden with cognitive biases (e.g., Cyert & March, 1963; Kiesler & Sproull, 1982; Walsh, 1988). Even among the studies on managerial psychology, many of the authors relied on demographics as proxies for psychological characteristics (Datta, Rajagopalan, & Zhang, 2003; Zhang, Ayoko, & Liang, 2021).

To advance our understanding of the succession-performance relationship, we propose introducing temporal focus theory to succession research (Shipp et al., 2009; Zimbardo & Boyd, 1999). Applying temporality as a guiding framework (Shipp & Jansen, 2021), we acknowledge that successor CEOs may differ in their attention to the past, present and future (Shipp et al., 2009; Zimbardo & Boyd, 1999). Temporal focus is an important cognitive contingency because it directs the attention, information processing and subsequent action of successor CEOs to a particular temporal domain (e.g., Karniol & Ross, 1996; Shipp et al., 2009). Accordingly, we argue that a successor CEO's temporal foci may help resolve some of the inconclusive findings of the succession-performance relationship.

Specifically, we expect executives with a strong past focus to be more effective as successor CEOs because as they alleviate the liability of newness that is typically associated with succession (Shen, 2003; Zhang & Qu, 2016). This is because high levels of past orientation reduce the likelihood of internal conflict and power struggles (Blank, Hadley, Minnick, & Rivolta, 2021; Georgakakis & Buyl, 2020) while enriching the knowledge base within TMTs (Conti & Graham, 2020; Daily, Certo, & Dalton, 2000; Georgakakis & Ruigrok, 2017; Gomulya & Boeker, 2014; Weng & Lin, 2014). Executives with strong future foci, in contrast, may be less effective as successors. Unlike their past-oriented counterparts, they are more likely to alienate organizational members because they disregard established planning and decision-making processes (Carroll, 1984; Haveman, 1993). Their lack of support may ultimately diminish their ability to pursue strategic renewal and implement their visionary ideas.

Following recent calls in the management literature, we regard successor CEOs' temporal foci as combinations of a dispositional trait and a malleable state (Mohammed & Marhefka, 2020). Prior strategy research has typically referred to temporal foci as stable individual dispositions (e.g., DesJardine & Shi, 2021; Mohammed & Harrison, 2013), even though their state-like component has been well-established in psychology and behavioral science (Holman & Silver, 2005; Rush & Grouzet, 2012; Shipp & Aeon, 2019). In support of this claim, we present empirical evidence that substantial amounts of variance operate *between* and *within* executives.

To test our theory, we draw on a unique sample of 88 private banks in Switzerland and Liechtenstein from 2007 through 2016. We choose the private banking industry as a research context because the cognitive characteristics of CEOs have the strongest impacts under high job demands (Hambrick et al., 2005). During the 10-year period under study, the private banks were confronted with extensive regulatory pressure that ultimately led to the fall of banking secrecy in Switzerland in Liechtenstein. According to Überbacher and Scherer (2020), banking secrecy has been of utmost importance to them because it has given these private banks a decades-long competitive advantage over foreign wealth managers. As theorized, we find that successor CEOs' temporal foci moderate the effect of executive succession on post-succession firm performance. High levels of successor past orientation are positively associated with post-succession firm performance, whereas the opposite holds for high levels of a successor future orientation.

Our study contributes to management research in three major ways. First, it advances our understanding of the succession-performance relationship. In particular, the study may help resolve some of the inconsistent findings regarding the link between executive succession and firm performance (Karaevli, 2007; Schepker et al., 2017). Although scholars have started to examine contingency effects related to executive characteristics, they have been primarily interested in successor CEOs' demographics (Hutzschenreuter et al., 2012). To the best of our knowledge, this study is among the first to shed light on their cognitive characteristics as a contingency factor in the succession-performance relationship.

Second, we contribute to the literature on subjective temporality in strategy research. Although temporal focus theory has recently gained traction in management research (e.g., Back et al., 2020; DesJardine & Shi, 2021; Gamache & McNamara, 2019), it is "still nascent and few studies have addressed this topic in the area of strategy" (Nadkarni & Chen, 2014: 1810). Although studies regarding their temporal biases typically contain discussion of the potential implications for executive recruitment (e.g., Nadkarni & Chen, 2014), relatively few of them have explicitly investigated their effects at CEO succession events. Specifically, our findings shed light on the critical role of past focus in strategic decision-making. Moreover, we report strong evidence of the dysfunctional nature of future focus upon executive succession.

Third, our study advances what we know about the role of executive characteristics during episodes of corporate crisis (Bundy et al., 2017). To the best of our knowledge, the role of temporal biases has not been explicitly studied during episodes of severe crisis that put the survival of an entire industry population at risk. The fall of banking secrecy in Switzerland and Liechtenstein represents such a major discontinuity because it erased the decades-long competitive advantage of the private banks under study (Collardi, 2012; Überbacher & Scherer, 2020). Although corporate crisis scholars have been primarily interested in the role of executive demographics, they have recently started to examine top management's cognitive attributes more closely (e.g., Jiang, 2021; König, Graf-Vlachy, & Schöberl, 2021; Vuori & Huy, 2016). In this regard, our study provides novel insights into the role of top management's temporal biases during environmental crises.

4.2 Theoretical Background

4.2.1 CEO succession

According to prevailing narratives in media and academia, CEO replacements mark a turning point in the history of a firm. Thus far, findings on the succession-performance link are partially inconclusive and contradictory (Karaevli, 2007; Schepker et al., 2017). This inconclusiveness reflects the rivalry between two schools of thought, as laid out by Friedman and Singh (1989). The first emphasizes arguments related to the *revitalization* of strategic decision-making because CEO replacements may help a firm overcome inertia and poor performance (e.g., Virany et al., 1992). Drawing on theories of organizational learning, executive succession refreshes the knowledge within TMTs, thus enriching the adaptive capacity of a firm. In contrast, the second school refers to organizational *disruption* (Brown, 1982; Grusky, 1963). According to proponents of this perspective, CEO succession weakens firm performance because it amplifies power struggles and disturbs established routines and decision-making processes. In addition to these two schools, a third describes CEO succession as *scapegoating* without an impact on post-succession performance (Boeker, 1992; Gamson & Scotch, 1964).

In light of these contradictory perspectives, scholars started to examine contingency effects in the succession-performance relationship. As our review of the literature shows, scholarly interest has predominantly been focused on demographics while psychological characteristics received rather little attention. Table 23 contains a summary of prior empirical research involving individual-level contingencies.

Numerous scholars examined the role of *CEO origin* (e.g., Karaevli, 2007; Karaevli & Zajac, 2013). Typically, outside successor CEOs are associated with increased levels of strategic change (Chiu, Johnson, Hoskisson, & Pathak, 2016; Lin & Liu, 2012; Wiersema, 1992) because they are less committed to the status quo than insiders. Moreover, outsiders are associated with increased variability in post-succession firm performance (Quigley, Hambrick, Misangyi, & Rizzi, 2019), especially if they lack industry-specific knowledge (Bailey & Helfat, 2003). Some authors even reported a negative performance effect of outside succession (e.g., Georgakakis & Ruigrok, 2017; Schepker et al., 2017; Shen & Cannella, 2002b). Keil, Lavie, and Pavićević (in press) found this negative effect to be related to an outside successor's lack of organizational fit.

Table 23: Summary of Succession Research, incl. Individual-Level Contingencies^a

Study (Year)	Sample	Dependent variable(s)	Independent variable(s)	Moderator variable(s)	Level of contingency			
					Ind	Grp	Org	Env Tem
Brown (1982)	26 U.S. football teams (1970-1978)	Percentage of games won	- Coach succession - Time interval of coach succession (within-season, between-season) - Successor coach origin (insider, outsider)		x			x
Pfeffer and Davis-Blake (1986)	27 North American basketball teams (1977-1981)	Percentage of games won	Coach succession	- Successor coach past performance - Change in coach past performance - Successor coach past coach experience	x			
Worrell, Davidson, Chandy, and Garrison (1986)	127 executive successions following a predecessor executive's death in publicly listed firms (1967-1981)	Market-based performance	Time intervals (i.e., days)	Successor executive position (CEO, chair, CEO-chair)	x			x
Beatty and Zajac (1987)	209 CEO successions in large firms (1979-1980)	Market-based performance	Time intervals (i.e., days)	Successor CEO origin (insider, outsider)	x			x
Chung, Rogers, Lubatkin, and Owers (1987)	99 CEO successions in large U.S. firms (1971-1976)	- Accounting performance - Market-based performance	Successor CEO origin (insider, outsider)	Firm past performance	x		x	
Worrell and Davidson (1987)	60 CEO successions following a predecessor executive's death in publicly listed firms (1966-1982)	Market-based performance	Time intervals (i.e., days)	Successor CEO origin (insider, outsider)	x			x
Bonnier and Bruner (1989)	87 executive successions in distressed firms (1969-1983)	Market-based performance	Time intervals (i.e., days)	- Successor executive origin (insider, outsider) - Successor executive position (CEO, non-CEO) - Firm size	x		x	x
Friedman and Singh (1989)	130 CEO successions in Fortune 500 firms	Market-based performance	- Successor CEO origin (insider, outsider) - Predecessor CEO departure (retired, board-initiated, CEO-initiated, disability-related)	Firm past performance	x		x	

Study (Year)	Sample	Dependent variable(s)	Independent variable(s)	Moderator variable(s)	Level of contingency				
					Ind	Grp	Org	Env	Tem
Lubatkin, Chung, Rogers, and Owers (1989)	477 CEO successions (1971-1985)	Market-based performance	Successor CEO origin (insider, outsider)	Firm past performance	x				x
Davidson, Worrell, and Cheng (1990)	367 executive successions in Fortune 500 firms (1986)	Market-based performance	Time intervals (i.e., days)	- Successor executive origin (insider, outsider) - Successor executive position (CEO, chair, CEO-chair) - Successor executive age - Successor executive education - Firm past performance - Firm size	x			x	x
Wiersema (1992)	146 manufacturing firms from Fortune 1000 list (1977-1981)	Strategic change	CEO succession	Successor CEO origin (insider, outsider)	x				
Davidson, Worrell, and Dutia (1993)	81 CEO successions in bankrupt firms (1979-1989)	Market-based performance	Time intervals (before bankruptcy, after bankruptcy)	Successor CEO origin (insider, outsider)	x				x
Cannella and Rowe (1995)	26 North American baseball teams (1951-1980)	Percentage of games won	Field-manager between-season succession	- Successor field-manager past field-manager experience - Successor field-manager past performance - Competitive rivalry	x			x	x
Alexander and Lee (1996)	2,780 small U.S. community hospitals (1984-1991)	Failure	CEO succession	Predecessor CEO tenure	x				
Fizel and D'Itri (1999)	147 CEO successions in North American college basketball teams (1984-1991)	Change in percentage of games won	- Change in coach past efficiency - Change in coach past performance - Change in coach past coach experience	Predecessor coach departure (voluntary, non-voluntary)	x				
Lauterbach, Vu, and Weisberg (1999)	165 CEO successions in U.S. firms (1989-1991)	Market-based performance	Successor CEO origin (insider, outsider)		x				

Study (Year)	Sample	Dependent variable(s)	Independent variable(s)	Moderator variable(s)	Level of contingency			
					Ind	Grp	Org	Env Tem
Sakano and Lewin (1999)	81 pairs of Japanese non-financial firms (with/without CEO succession, 1988-1993)	- Strategic change - Organizational restructuring - TMT turnover	- CEO succession - Successor CEO origin (insider, outsider)	- Firm governance structure - Firm financial pressure	x			x
Smith and Amoako-Adu (1999)	124 CEO successions in Canadian family-controlled firms (1962-1996)	- Accounting performance - Market-based performance	Successor CEO origin (family insider, non-family insider, outsider)		x			
Daily et al. (2000)	367 Fortune 500 firms (1997)	- Accounting performance - Market-based performance	Successor CEO international experience	- Successor CEO origin (insider, outsider) - Firm internationalization	x			x
Davidson, Nemec, and Worrell (2001)	421 CEO successions (1992)	Market-based performance	- Successor CEO duality (i.e., CEO-chairs) - Successor CEO plurality (i.e., CEO-chair-presidents)		x			
Westphal and Fredrickson (2001)	201 outside CEO successions in Forbes and Fortune 500 firms (1984-1996)	Diversification	- Successor CEO strategic experience (prior firm, board ties) - Board strategic experience (home firms)	Firm past performance	x		x	x
Shen and Cannella (2002b)	228 CEO successions in large U.S. firms (1988-1994)	Accounting performance	- Successor CEO origin (follower, contender, outsider) - Predecessor CEO tenure	TMT turnover	x			x
Bigley and Wiersema (2002)	61 CEO successions in Forbes 500 firms (1990-1994)	Strategic change	Successor CEO power	Heir apparent experience	x			
Ang, Lauterbach, and Vu (2003)	268 CEO successions in U.S. firms (1991-1995)	- Accounting performance - Market-based performance	Successor CEO pay premium		x			
Bailey and Helfat (2003)	36 pairs of CEO successions (outside/inside) in large U.S. firms (1978-1987)	Accounting performance	- Successor CEO industry-specific experience - Successor CEO related-industry experience		x			
Datta et al. (2003)	132 CEO successions in U.S. manufacturing firms (1977-1987)	Strategic persistence	Successor CEO openness to change	- Industry advertising intensity - Industry growth rate - Industry capital intensity	x			x

Study (Year)	Sample	Dependent variable(s)	Independent variable(s)	Moderator variable(s)	Level of contingency			
					Ind	Grp	Org	Env Tem
Shen and Cannella (2003)	193 CEO successions, 114 heir appointments and 31 heir exits in large U.S. firms (1988-1997)	Market-based performance	- Successor CEO origin (heir insider, non-heir insider, outsider) - Heir appointment - Heir exit	Firm past performance	x			x
Haveman and Khaire (2004)	2,593 U.S. magazines (1741-1860)	Failure	Founder succession	- Founder position (editor, publisher) - Firm affiliations - Firm ideology	x			x
Huson, Malatesta, and Parrino (2004)	1,344 CEO successions in large publicly listed firms (1971-1994)	- Accounting performance - Market-based performance	- Successor CEO origin (insider, outsider) - Predecessor CEO departure (voluntary/ routine, non-voluntary/ non-routine) - Board independence - Firm institutional ownership - Firm takeover pressure		x		x	x
Zhang and Rajagopalan (2004)	204 CEO successions in U.S. manufacturing firms (1993-1998)	Performance composite (accounting, market-based)	Successor CEO origin (relay insider, non-relay insider, outsider)	- Firm past performance - Firm strategic instability - Industry instability	x		x	x
Helfat and Bailey (2005)	36 pairs of CEO successions (outside/ inside) in large U.S. firms (1978-1987)	Accounting performance	- Predecessor CEO departure (forced, voluntary/ routine) - Successor CEO origin (heir outsider, non-heir outsider)		x			
Karaevli (2007)	140 CEO successions in U.S. airline and chemical firms (1972-2002)	Performance composite (accounting, market-based)	Successor CEO origin (insider, outsider)	- TMT turnover - Firm past performance - Firm strategic reorientation - Environmental turbulence - Environmental munificence	x		x	x
Lee and James (2007)	1,624 executive successions (1990-2000)	- Market-based performance - Media reaction	Successor executive gender	- Successor executive origin (insider, outsider) - Successor executive position (CEO, non-CEO)	x			
Ndofor, Priem, Rathburn, and Dhir (2009)	28 U.S. football teams (1983-1992)	- On-field change - Percentage of games won	Coach succession	- Change in coach cognitive community - Successor coach past performance	x			

Study (Year)	Sample	Dependent variable(s)	Independent variable(s)	Moderator variable(s)	Level of contingency			
					Ind	Grp	Org	Env Tem
Ballinger and Marcel (2010)	479 CEO successions in publicly listed U.S. firms (1996-1998)	- Accounting performance - Market-based performance - Survival	CEO succession type (permanent, interim)	- Successor CEO duality (i.e., CEO-chairs) - Industry dynamism	x			x
Zhang and Rajagopalan (2010)	193 CEO successions in large U.S. firms (1993-1998)	Accounting performance	Strategic change	CEO succession origin (insider, outsider)	x		x	
Tian, Halebian, and Rajagopalan (2011)	208 CEO successions in U.S. manufacturing firms (1999-2003)	Market-based performance	- Board human capital - Board social capital	Successor CEO origin (insider, outsider)	x		x	
Barron, Chulkov, and Waddell (2011)	2,664 publicly listed firms (1992-2006)	Strategic change	CEO succession	- Successor CEO origin (follower, contender, outsider) - TMT turnover	x		x	
Quigley and Hambrick (2012)	181 CEO successions in high-tech firms (1994-2006)	- Strategic change - Accounting performance - Market-based performance	Predecessor CEO departure (retained as chair, not retained as chair)		x			
Chen and Hambrick (2012)	223 turnaround firms from S&P 1500 index (1990-2003)	- Accounting performance - Market-based performance	- CEO succession - Successor CEO origin (insider, outsider)	- Predecessor CEO tenure - Predecessor CEO functional experience - Successor CEO functional experience - Firm past performance - Industry past performance	x		x	x
Lin and Liu (2012)	160 CEO successions in publicly listed Taiwanese firms (2000-2005)	Internationalization	- Successor CEO origin (insider, outsider) - Successor CEO-chair socio-demographic similarity	Firm slack	x		x	
Karaevli and Zajac (2013)	193 CEO successions in U.S. airline and chemical firms (1972-2010)	Strategic change	Successor CEO origin (insider, outsider)	- Predecessor CEO tenure - Predecessor CEO departure (retired, non-retired) - Firm past performance	x		x	

Study (Year)	Sample	Dependent variable(s)	Independent variable(s)	Moderator variable(s)	Level of contingency			
					Ind	Grp	Org	Env Tem
Chung and Luo (2013)	573 publicly listed Taiwanese firms (1996-2005)	Accounting performance	CEO succession	- Successor CEO origin (family insider, non-family insider, outsider) - Firm family ownership - Firm business group membership - Firm foreign institutional ownership - High-tech industry	x		x	x
Gomulya and Boeker (2014)	352 pairs of U.S. firms (restating/ matching, 2003-2006)	- Market-based performance - Analysts' reaction - Media reaction	- Successor CEO elite education - Successor CEO past CEO experience - Successor CEO functional experience (turnaround, accounting and finance)	Firm financial statement restatement severity	x		x	
Minichilli, Nordqvist, Corbetta, and Amore (2014)	161 Italian family-controlled firms (1998-2007)	Accounting performance	Successor CEO origin (relay insider, horse-race insider, outsider)	Board family ratio	x		x	
Weng and Lin (2014)	281 CEO successions in U.S. computer firms (1994-2007)	Strategic change	Successor CEO newness	- Successor CEO strategic distance - Successor CEO industry similarity	x			
Nakauchi and Wiersema (2015)	214 CEO successions in Japanese manufacturing firms (1999-2001)	Strategic change	Predecessor CEO departure (retained as chair, not retained as chair)	- Predecessor CEO duality (i.e., CEO-chairs) - Firm past performance	x		x	
Chiu et al. (2016)	234 divestiture programs in U.S. firms (1986-2009)	Divestitures	- CEO succession - Successor CEO origin (insider, outsider)		x			
Desai, Lockett, and Paton (2016)	4,452 matches of U.K. soccer teams (1996-2010)	Points gained for wins and draws	- Successor coach origin (insider, outsider) - Successor coach arrival (poached, non-poached) - Predecessor coach departure (poached, non-poached) - Successor coach past domestic coach experience - Successor coach past foreign coach experience		x			

Study (Year)	Sample	Dependent variable(s)	Independent variable(s)	Moderator variable(s)	Level of contingency			
					Ind	Grp	Org	Env Tem
Gangloff, Connelly, and Shook (2016)	104 CEO successions following financial misrepresentation (1992-2008)	Market-based performance	- Successor CEO origin (insider, outsider) - CEO succession type (permanent, interim) - Delay in successor CEO announcement		x			x
Zhang and Qu (2016)	3,320 CEO successions in publicly listed Chinese firms (1997-2010)	- Accounting performance - CEO early departure	Change in CEO gender	- Successor CEO origin (insider, outsider) - TMT gender diversity - Board gender diversity	x		x	
Zhu and Shen (2016)	188 outside CEO successions in publicly listed Fortune 500 firms (1994-2007)	Accounting performance	Successor CEO experience with board diversity		x			
Bilgili, Campbell, and Ellstrand, and Johnson (2017)	249 CEO successions following a predecessor CEO's retirement in S&P 1500 firms (2003-2012)	Market-based performance	Firm narratives of predecessor CEO retirement (uncertainty reducing, positive-emotion inducing)		x		x	
Bragaw and Misangyi (2017)	654 CEO successions in U.S. firms (2001-2004)	- Market-based performance - CEO compensation	Successor CEO past CEO experience	- Successor CEO experience with publicly listed firm - Successor CEO experience with industry dynamism	x			
Cao, Pan, Qian, and Tian (2017)	475 Chinese publicly listed non-SOEs (2002-2010)	- Accounting performance - Market-based performance	Predecessor CEO departure (forced, non-forced)	- Successor CEO political ties - Board political ties	x		x	
Georgakakis and Ruigrok (2017)	109 CEO successions in large international firms from Switzerland, the Netherlands, Germany and the U.K. (2005-2009)	Accounting performance	Successor CEO origin (insider, outsider)	- Successor CEO experience variety (international, industry) - Successor CEO-TMT socio-demographic similarity - Firm past performance - Industry munificence	x		x	x

Study (Year)	Sample	Dependent variable(s)	Independent variable(s)	Moderator variable(s)	Level of contingency			
					Ind	Grp	Org	Env Tem
Quigley, Crossland, and Campbell (2017)	240 CEO successions following a predecessor CEO's unexpected death in U.S. publicly listed firms (1950-2009)	Market-based performance	Time intervals (i.e., decades)		x			
Schepker et al. (2017)	60 samples with 13,578 CEO successions (1972-2013)	- Strategic change - Performance composite (accounting, market-based)	- Successor CEO origin (insider, outsider) - Predecessor CEO departure (forced, non-forced)	Board independence	x	x		
Brinkhuis and Scholtens (2018)	100 pairs of executive successions (female/male, 2004-2014)	Market-based performance	Time intervals (i.e., days)	Successor CEO gender	x			x
Calabrò, Minichilli, Amore, and Brogi (2018)	843 CEO successions in large Italian family-controlled firms (2000-2012)	Accounting performance	Successor CEO birth order (first-born, second-/ subsequent-born)		x			
Dwivedi, Joshi, and Misangyi (2018)	84 CEO successions involving female successors in S&P 1500 and Fortune 500 firms (1989-2009)	Accounting performance	- Predecessor CEO tenure - Predecessor CEO type (founder, non-founder) - Predecessor CEO duality (i.e., CEO-chairs) - Predecessor CEO departure (retained at board, not retained at board) - Predecessor CEO performance - Successor CEO origin (insider, outsider) - Successor CEO duality (i.e., CEO-chairs)	- Board presence of female directors - Firm size - Male-dominated industry	x	x	x	x
Elosge, Oesterle, Stein, and Hattula (2018)	102 large German manufacturing firms (1990-2012)	Internationalization	- Frequency of CEO successions - Successor CEO origin (insider, outsider)	Firm ownership concentration	x		x	

Study (Year)	Sample	Dependent variable(s)	Independent variable(s)	Moderator variable(s)	Level of contingency				
					Ind	Grp	Org	Env	Tem
Rivolta (2018)	687 CEO successions following a predecessor CEO's unplanned departure in S&P 1500 firms (1995-2015)	- Accounting performance - Market-based performance - CEO quality - CEO-firm misfit - CEO early departure	Delay in successor CEO announcement	- Predecessor CEO departure (forced, unexpected) - Firm succession planning	x		x		x
Chiu and Walls (2019)	684 U.S. firms (2001-2013)	Social performance	CEO succession	- Successor CEO origin (insider, outsider) - Firm financial distress			x		
Quigley et al. (2019)	1,027 CEO successions (2006-2011)	Accounting performance	Successor CEO origin (insider, outsider)		x				
Vafeas and Vlittis (2019)	4,492 Russell 3000 firms (1995-2014)	Accounting performance	CEO succession	- Predecessor CEO departure (forced, non-forced) - Successor CEO origin (insider, outsider) - Board executive committee	x		x		
Conti and Graham (2020)	2,821 U.S. start-ups (2008)	- Survival - Innovation performance	CEO succession	- Successor CEO origin (insider, outsider) - Successor CEO experience with start-ups			x		
Georgakakis and Buyl (2020)	110 CEO successions in large publicly listed firms from Switzerland, the Netherlands, Germany and the U.K. (2008-2013)	Accounting performance	TMT factional faultline strength	- Successor CEO origin (follower, non-follower) - Predecessor CEO departure (forced, non-forced) - Firm past performance	x		x		x
Hopp, Wentzel, and Rose (2020)	422 CEO successions in Fortune 500 firms (2005-2018)	Accounting performance	Successor CEO facial appearance				x		
Querbach, Bird, Kraft, and Kammerlander (2020)	480 CEO successions in small- and medium-sized Swiss family-owned firms	Innovation performance	Predecessor CEO departure (retained at board, not retained at board)	- Predecessor CEO selection influence - Successor CEO type (family, non-family)	x				

Study (Year)	Sample	Dependent variable(s)	Independent variable(s)	Moderator variable(s)	Level of contingency			
					Ind	Grp	Org	Env Tem
Zhu, Hu, and Shen (2020)	697 CEO successions in S&P 1500 firms (2001-2012)	Strategic change	- Successor CEO past focal board experience - Successor CEO past other board experience		x			
Amore, Bennedsen, Le Breton-Miller, and Miller (2021)	489 large Italian family-controlled firms experiencing CEO succession involving non-family predecessor CEOs (2000-2016)	Accounting performance	Successor CEO type (family, non-family)	- Firm past R&D expenditures - Industry volatility	x	x	x	x
Blank et al. (2021)	2,509 inside CEO successions in S&P 1500 firms (1993-2016)	- Accounting performance - Market-based performance - CEO compensation - CEO early departure	Successor CEO origin (relay insider, horse-race insider)		x			
Gligor, Novicevic, Feizabadi, and Stapleton (2021)	4,288 executive successions (2001-2020)	Market-based performance	Successor executive race	- Successor executive position (CEO, non-CEO) - Successor executive origin (insider, outsider)	x			
Zhang et al. (2021)	3,704 CEO successions in publicly listed Chinese firms (2006-2016)	Strategic change	Successor CEO origin (follower, contender, outsider)	Successor CEO-TMT faultlines (identity, knowledge, resources)	x	x		
Keil et al. (in press)	1,275 CEO successions in publicly listed S&P 500 and S&P MidCap 400 firms (2001-2014)	Accounting performance	- Successor CEO length of executive experience - Successor CEO breadth of executive experience - Successor CEO-firm misfit - Stakeholder negative sentiment	Successor CEO origin (insider, outsider)	x	x	x	x

^a *Ind* = individual; *grp* = group-level; *org* = organizational; *env* = environmental; *tem* = temporal

The negative effect of outside succession may flip, however, during pre-succession performance crises (Chen & Hambrick, 2012; Karaevli, 2007) and environmental turbulence (Chung & Luo, 2013). Moreover, stock markets react positively to outside succession in contexts of financial distress (Bonnier & Bruner, 1989; Davidson et al., 1993) and earnings restatements (Gangloff et al., 2016). This is not surprising because outside successors help bolster credibility and trust. In new ventures, they enhance survival prospects because they typically possess knowledge that is not yet internally available (Conti & Graham, 2020).

Multiple scholars also examined relay succession as a special case of inside succession. Relay successors are related to increased levels of post-succession performance (Minichilli et al., 2014; Shen & Cannella, 2003; Zhang & Rajagopalan, 2004) because they may defuse potential conflicts among TMT members who were appointed by the new CEOs and their predecessors (Georgakakis & Buyl, 2020). Horse-race successions, however, reduce firm performance because having multiple internal candidates increases internal conflict (Blank et al., 2021).

Another large body of succession research examined a successor *CEO's experience*, finding it to be unrelated to post-succession firm performance (Cannella & Rowe, 1995; Fizel & D'Itri, 1999; Keil et al., in press). Specific kinds of experience, however, such as turnaround experience, are associated with positive stock market reactions after earnings restatements are issued (Gomulya & Boeker, 2014). Similarly, a successor's prior start-up experience enhances the innovation and survival prospects in new ventures (Conti & Graham, 2020). A successor's prior board experience in the current firm reduces the likelihood of strategic change while board experience in another firm increases it (Zhu et al., 2020). Specifically, a successor's experience with diverse boards is beneficial (Zhu & Shen, 2016). Apart from different kinds of functional experience, a successor CEO's breadth of experience enhances post-succession performance (Georgakakis & Ruigrok, 2017), particularly regarding cross-industry and international experience (Daily et al., 2000). Having experience from similar industries can also be effective in cases of high levels of strategic distance (Weng & Lin, 2014).

Another important contingency is a successor *CEO's power* (Ocasio, 1994). On a positive note, onboarding a successor CEO with high power leads to increased levels of strategic change because it helps firms overcome TMT resistance (Zhang et al., 2021). Post-succession performance, however, is negatively affected by CEO power.

Politically connected successors, for instance, become entrenched and are, despite their poor performance, less likely to be replaced than others (Cao et al., 2017). Prior CEO experience helps successor CEOs negotiate favorable compensation packages but does not enhance shareholder wealth (Bragaw & Misangyi, 2017). Duality or plurality announcements are associated with negative stock market reactions (Davidson et al., 2001). Such negative effects are partially offset, however, by adverse firm conditions, such as earnings restatements (Gomulya & Boeker, 2014), and a successor's industry experience (Bragaw & Misangyi, 2017; Desai et al., 2016).

Finally, scholars examined successor CEOs' *socio-demographic similarities*. Dissimilarity with chairpersons spurs strategic change (Lin & Liu, 2012). Extreme forms of dissimilarity, such as identity-based CEO-TMT faultlines, may block strategic change (Zhang et al., 2021) because they undermine mutual trust and identity. Socio-demographic similarities are also related to changes in post-succession performance (Georgakakis & Ruigrok, 2017). Particular attention has been paid to successor CEOs who represent minorities on executive boards, such as women (Brinkhuis & Scholtens, 2018; Lee & James, 2007) and Black people (Gligor et al., 2021). Relatedly, Zhang and Qu (2016) found that a change in CEO gender reduces post-succession performance due to differences in leadership style and the outsider status of the new CEO.

Apart from conventional demographics, the psychological characteristics of successor CEOs received considerably less attention in succession research. Our literature review reveals that only a handful of studies examined successor CEOs' perceptions and personality traits. Datta et al. (2003) reported openness to change to reduce a firm's level of strategic persistence. However, they proxied openness to change through a composite measure of a successor's demographics. Relatedly, Ndofor et al. (2009) examined the role of ideology. In their study of sports teams, new head coaches were associated with increased levels of strategic reorientation if they belonged to a different cognitive community than their predecessors. Concerning post-succession performance, Hopp et al. (2020) studied subjective perceptions of leadership, but they did not find that it has a significant impact on post-succession performance.

Concluding, the succession literature remains relatively silent regarding the role of the psychological characteristics of executives in the succession-performance relationship. In the following section, we, therefore, propose studying the temporal foci of successor CEOs as a cognitive contingency.

4.2.2 Temporal focus

Temporal focus refers to an individual's "allocation of attention to the past, present, and future" (Shipp et al., 2009: 2). According to Zimbardo and Boyd (1999), maintaining a *balanced* temporal focus enables individuals to flexibly change from one temporal orientation to another if required in a particular situation. Most individuals, however, develop a *biased* temporal focus and "overemphasize one of these three temporal frames" (Zimbardo & Boyd, 1999: 1272). In this study, we follow research in behavioral science that shows that temporal orientation needs to be regarded as a blend of a dispositional trait and a malleable state (Mohammed & Marhefka, 2020). On the one hand, temporal focus has a stable dispositional component that is shaped by national culture and education (Bluedorn, 2002; Guo et al., 2012). On the other hand, temporal foci can be situationally induced by contextual factors and vary over time (Rush & Grouzet, 2012; Shipp & Aeon, 2019). When individuals are confronted, for instance, with a major discontinuity, they switch to other temporal foci (Holman & Silver, 2005; Jansen & Shipp, 2019).

In strategic decision-making, temporal foci represent cognitive biases because they direct an individual's information processing and subsequent action towards a particular temporal domain. As Karniol and Ross (1996) noted, this is due to their strong motivational cues. Future-oriented cognition, for example, provides motivational cues through goal setting. Individuals with strong future foci envision the future through possible selves that are to be attained or avoided (Markus & Nurius, 1986). Past-oriented cognition, in contrast, triggers motivation through counterfactual thinking. "In many cases," Karniol and Ross (1996) noted, "individuals break with the past, not because they envisage a possible self for which they strive, but because their negative conceptions of the past and the present provide an impetus for change" (608).

As a result, temporal foci are associated with different behavioral outcomes. They may help explain, for example, individual differences in procrastination and delay of gratification (Díaz-Morales, Ferrari, & Cohen, 2008) because they are based on the consideration of future consequences. Moreover, temporal foci may trigger high-risk behaviors, such as speeding (Zimbardo, Keough, & Boyd, 1997), or social behaviors like cooperation and volunteerism (Maki, Dwyer, & Snyder, 2016; Saraiva & Iglesias, 2016). Because temporal foci guide our attention and behavior, temporal focus theory has recently been applied to management research.

Individuals with a strong *past focus* think about the past to inform their actions. Hence, past-focused consumers are sensitive to past-related product information, such as brand heritage (Pecot et al., 2018). In a similar way, CEO past focus moderates the link between media coverage regarding a firm's past acquisitions and its future acquisition activity (Gamache & McNamara, 2019). Because executives rely on prior knowledge to successfully implement strategic change, Back et al. (2020) found that managers with strong past foci strengthen the link between strategic change and performance. Yet, they may also fall prey to an overgeneralization bias. High levels of past focus accelerate new product launches in stable industries but delay them in dynamic industries (Nadkarni & Chen, 2014).

Present focus, on the contrary, is related to sensation (Hurst et al., 1989). An executive's rich knowledge of the present enhances concerns about immediate strategic requirements (Foo et al., 2009) and shortens strategic planning horizons (Das, 1987). CEO present focus moderates, for instance, the link between CEO compensation and strategic risk-taking because it encourages the endowment of current wealth (DesJardine & Shi, 2021). Another important characteristic related to present orientation is the inclination towards improvisation (Crossan et al., 2005). Due to their high levels of strategic flexibility, CEOs with strong present foci are positively related to corporate innovation in stable and dynamic environments (Nadkarni & Chen, 2014).

Finally, *future focus* is associated with imagination and visionary thinking (Zimbardo & Boyd, 1999). Because CEOs with strong future foci have long planning horizons (Das, 1987), they prioritize tasks beyond immediate requirements (Foo et al., 2009) and exhibit proactive behaviors, such as organizational citizenship (Strobel et al., 2013). Accordingly, they take greater strategic risks than others because they do not endow current but prospective wealth (DesJardine & Shi, 2021). Moreover, CEOs with a strong future focus enhance the speed of product launches in dynamic environments (Nadkarni & Chen, 2014; Yadav et al., 2007). In new ventures, they are related to high levels of strategic change (West & Meyer, 1998). On a negative note, though, they weaken the change-performance relationship, as they disregard lessons learned and alienate organizational members (Back et al., 2020).

In the next section, we apply temporal focus theory to CEO successions, crafting three hypotheses on its contingencies in the succession-performance relationship.

4.3 Hypotheses

4.3.1 Past focus

When successor CEOs have a strong past focus, they reflect on memories and past experiences to inform their actions (Gamache & McNamara, 2019). In the context of executive succession, we argue that high levels of past orientation strengthen post-succession performance.

First, successor CEOs with strong past foci are quick at internalizing established decision-making routines (Back et al., 2020). As emphasized by Finkelstein, Hambrick, and Cannella (2009), a “new executive, even one internally appointed, enters the position at a disadvantage in terms of knowledge of the task at hand” (200). Successors with a strong past focus, however, actively seek opportunities for experiential learning because they expect the past to be related to the present and the future (Gavetti & Levinthal, 2000). High levels of past focus may, therefore, help alleviate their liability of newness (Shen, 2003; Zhang & Qu, 2016).

Second, successors with a strong past orientation mitigate conflict and power struggles among senior executives (Brown, 1982; Grusky, 1963). Because they recognize past achievements and appreciate the history of the firm (Back et al., 2020; Thoms, 2004), they may alleviate potential fault lines between themselves and TMT members who were appointed by predecessor CEOs (Zhang et al., 2021). Indeed, succession scholars associated internal successors with superior firm performance (Minichilli et al., 2014; Shen & Cannella, 2003; Zhang & Rajagopalan, 2004) because they reduce the level of conflict within TMTs (Blank et al., 2021; Georgakakis & Buyl, 2020). Accordingly, we expect that successor CEOs with strong past foci enhance post-succession firm performance.

Third, high levels of past focus help successors capitalize on their previous work experience (Nadkarni & Chen, 2014; Nadkarni et al., 2016). As Back et al. (2020) argued, CEOs with a strong past focus do not necessarily have more valuable experiences than others, especially if they have been internally promoted. Yet, past orientation increases their ability to recall and apply crucial experiences. High levels of past orientation may, therefore, help successor CEOs extend and refresh the knowledge base within TMTs. Indeed, prior succession research has shown that successor CEOs’ experience may increase a firm’s adaptive capacity (Conti & Graham, 2020; Daily et

al., 2000; Weng & Lin, 2014) and financial performance (Georgakakis & Ruigrok, 2017; Gomulya & Boeker, 2014). Hence, we expect CEOs with strong past foci to strengthen firm performance.

Given the increased levels of organizational support and knowledge transfer, we expect successor CEOs with a strong past orientation to strengthen post-succession firm performance.

Hypothesis 1: *A successor CEO's past focus is associated with higher levels of post-succession firm performance.*

4.3.2 Present focus

Unlike their past-oriented counterparts, CEOs with strong present foci typically attend to salient stimuli in organizations and environments (DesJardine & Shi, 2021; Shipp et al., 2009).

On the one hand, successors with a strong present focus are better able to adapt to their new roles as CEOs than others. They actively seek real-time information and performance feedback (Crossan et al., 2005; Hurst et al., 1989), which may help them develop deep understandings of the requirements of their new positions and overcome their liability of newness (Shen, 2003; Zhang & Qu, 2016). Nadkarni and Chen (2014) confirmed the adaptability of such CEOs to situational demands, reporting present orientation to enhance corporate innovation across environmental contexts. Additionally, present focus was found to be associated with increased levels of hurriedness (Shipp et al., 2009). Accordingly, we expect present-oriented successors to feel a greater sense of urgency to adapt to their new positions as CEOs than others.

Moreover, successor CEOs with a strong present focus may gain high levels of buy-in and organizational support. They are associated with a greater cognitive availability because they are accustomed to listening to others as a source of information for strategic decision-making (Thoms, 2004). Successor CEOs with a strong present focus are also compatible with TMT members who operate on different temporal foci. This is because they are “not as reluctant to talk about the past as future-oriented leaders nor as reluctant to talk about the future as past-oriented leaders” (Thoms, 2004: 52). Accordingly, we expect them to reduce the likelihood of internal conflict and power struggles within TMTs.

On the other hand, successors with strong present foci are unable to refresh the knowledge base within TMTs. Unlike successors with strong past foci, they do not capitalize on their prior work experience because they pay relatively little attention to memories and past events. Prior experience, however, especially if it is related to complementary knowledge, serves as a catalyst for strategic change and increased levels of organizational performance (Conti & Graham, 2020; Daily et al., 2000; Georgakakis & Ruigrok, 2017; Gomulya & Boeker, 2014; Weng & Lin, 2014). Unlike prior experience, rich information on current necessities alone is of little help in strategic decision-making because it does not enable successors to critically assess the current strategic situation against prior experiences. Accordingly, we did not expect successors with strong present foci to improve organizational learning and performance.

Considering these opposing arguments, it is difficult to predict the direction of the contingency effect related to present orientation. Although successors with strong present foci may be effective at adapting to their new positions and avoiding internal conflict, they are unlikely to enrich the knowledge base of the TMT. Hence, we expect a successor CEO's present focus to be unrelated to firm performance.

Hypothesis 2: *A successor CEO's present focus is not associated with higher or lower levels of post-succession firm performance.*

4.3.3 Future focus

Successors with a strong future orientation perceive the future as being detached from the past (Bluedorn, 2002). In the context of executive succession, we argue that a strong future focus is dysfunctional and negatively associated with post-succession firm performance.

First, successors with strong future foci struggle to adapt to their new roles as CEOs. Unlike their counterparts with strong past foci, they do not internalize established planning and decision-making processes (Carroll, 1984; Haveman, 1993) because they have little interest in experiential learning (Gavetti & Levinthal, 2000). Instead, we expect they disrupt strategic planning and decision-making, which depreciates their ability to implement strategic change. Unlike their counterparts with strong present foci, future-oriented successors are at risk of overlooking invaluable performance feedback because they are less responsive to salient stimuli than others (Hurst et al., 1989: 97). Given their distant future goals (DesJardine & Shi, 2021), they may lose sight of the

current necessity to adapt to their new position and underestimate the effort to do so (Foo et al., 2009). Hence, we expect that future orientation accentuates the liability of newness that is typically associated with executive succession (Shen, 2003; Zhang & Qu, 2016) and, ultimately, weakens firm performance.

Second, successors with a strong future focus may spur sabotage and resistance among senior executives who have been appointed by predecessor CEOs. Because they do not acknowledge past accomplishments (Back et al., 2020; Thoms, 2004), managers with strong future foci may accentuate fault lines between themselves and other TMT members (Zhang et al., 2021). Similarly, succession scholars associated the outsidership of new CEOs with not only strategic renewal but also increased levels of internal conflict (Shen & Cannella, 2002a) and, ultimately, reduced levels of post-succession firm performance (e.g., Georgakakis & Ruigrok, 2017; Schepker et al., 2017; Shen & Cannella, 2002b). Given their lack of organizational support, we expect successor CEOs with strong future foci to weaken post-succession firm performance.

Finally, high levels of future orientation encourage visionary thinking (DesJardine & Shi, 2021; Yadav et al., 2007) but distract successors from leveraging their past knowledge. Although future-oriented successors might “have gained crucial experiences in a specific field,” Back et al. (2020) argued that “they are not able to capitalize on those experiences and, thus, remain ineffective in implementing strategies” (887). Successor CEOs with a strong future focus may, therefore, be unable to extend the knowledge base of TMTs. Prior experience, however, especially if it is related to complementary knowledge, was found to increase post-succession firm performance (Conti & Graham, 2020; Daily et al., 2000; Georgakakis & Ruigrok, 2017; Gomulya & Boeker, 2014; Weng & Lin, 2014). Successors with a strong future focus are, hence, at risk of having to repeatedly correct their strategic decisions once they encounter problems related to their untested ideas.

In conclusion, successor CEOs with strong future foci amplify disruptive forces and disregard lessons learned (Brown, 1982; Grusky, 1963), which prevents them from implementing visionary ideas and enriching the adaptive capacity of their firms. We, hence, expect them to weaken post-succession performance.

Hypothesis 3: *A successor CEO's future focus is associated with lower levels of post-succession firm performance.*

4.4 Methodology

4.4.1 Sample

We tested our hypotheses on a unique sample of private banks between 2007 and 2016. During this 10-year time period, the private banks were confronted with the fall of banking secrecy in Switzerland and Liechtenstein, which was a major industry-level discontinuity. As Überbacher and Scherer (2020) pointed out, the fall of banking secrecy erased a decades-long competitive advantage that these banks had as safe havens for the taxable income of foreign citizens.

We took the sample from official records published by the Swiss National Bank and the Liechtenstein Bankers Association. To construct a homogeneous sample, we excluded three kinds of banking institutions. First, we removed all cantonal, regional, and savings banks because these institutions are state- or community-owned. Second, we excluded banks that were active in segments other than private banking and wealth management. Third, we removed all banks whose banking licenses had been granted after the start of the study period. In total, we gathered data about 141 private banks from 1,121 annual reports.

Next, we collected their annual reports from BvD's Orbis Bank Focus and S&P's Global Market Intelligence databases. Missing reports were collected from public libraries, corporate websites or requested directly from investor relations departments. We excluded annual reports if their LTSs were not in English, not authored by the chairperson or CEO or shorter than 250 words. After dropping cases with missing information, our final sample had 563 observations related to 88 private banks. To mitigate a potential selection bias, we incorporated firms with and without CEO succession events. 55 private banks, or 62.5% of the sample, experienced CEO succession, which is in line with prior studies (e.g., Chung & Luo, 2013; Karaevli & Zajac, 2013; Minichilli et al., 2014).

4.4.2 Variables

4.4.2.1 *Dependent variable*

We measured *firm performance* as the three-year average ROE subsequent to any year in which a CEO succession could have occurred (e.g., Shen & Cannella, 2002b; Zhang & Rajagopalan, 2004).

4.4.2.2 Independent variables

We operationalized *CEO succession* as a binary variable that equals 1 if the CEO changes in a given year and 0 otherwise.

To measure a successor CEO's *temporal foci*, we applied the LIWC dictionaries by Pennebaker et al. (2015) to the private banks' LTSs. These dictionaries have been frequently used in strategy research (e.g., DesJardine & Shi, 2021; Gamache & McNamara, 2019; Nadkarni & Chen, 2014). They contain 341 past-oriented words (e.g., *were*), 424 present-oriented words (e.g., *are*) and 97 future-oriented words (e.g., *will*). We computed temporal foci as the percentage of past-, present- and future-oriented words. Table 24 contains illustrative quotations for each of the three temporal foci.

The content, convergent and discriminant validity of the dictionaries were examined by Pennebaker et al. (2015). Moreover, we assessed their applicability to the LTSs of the private banks under study. Assuming that CEOs had been closely involved in the drafting and reviewing of the LTSs (Bowman, 1984), we expected material changes in their style and content after succession events. Table 25 shows the linear regression results of executive succession on absolute changes in temporal foci and word count. Indeed, we found that CEO succession is a significant predictor of absolute changes in temporal foci ($b = 0.58, p < 0.05$) and word count ($b = 93.28, p < 0.05$). Both coefficients are positive, indicating that CEO succession leads to more, not less, variation in temporal foci and total word count. Chairman succession, in contrast, does not predict changes in temporal foci.

The psychology and behavioral science literatures show that temporal foci are affected by contextual factors and vary considerably over time (Mohammed & Marhefka, 2020; Rush & Grouzet, 2012). To substantiate this claim, we specified four hierarchical regressions on past, present, future and word count, each with the individual CEO as a level 2 predictor (cf. Table. 26). The results of our significant likelihood ratio tests ($p < 0.01$) indicated that a substantial portion of variances operates *between* executives. Relatively low intraclass correlation coefficients, however, show that half of the variance related to past focus ($ICC = 0.38$), present focus ($ICC = 0.53$) and future focus ($ICC = 0.42$) occurred *within* executives over time, whereas the variance related to word count occurred by a clear majority *between* executives ($ICC = 0.83$). Accordingly, we measured the temporal foci of executives on an annual basis.

Table 24: Illustrative Quotations of Successor CEOs' Temporal Foci^a

Temporal focus	Bank	Illustrative quotations in LTSs
Past focus	Bank #095	“The new organization structure [...] saw [Name] departing [Name] after more than 30 years of outstanding commitment and admirable service in the Group. [...] In his place, [Name] was appointed to take up the new role as Chief Executive Officer in [Name]. [Name] has extensive international experience within the [Name]. He joined the Group more than 20 years ago and since then, has successfully taken different managerial roles [...]” <i>LTS, 2014</i>
	Bank #158	“As a result of the financial crisis, the performance of our clients’ assets in the past year was disappointing. We have initiated the necessary steps to remedy the situation. Thanks to our excellent financial strength and creditworthiness, we were able to attract significant new funds from new and existing clients throughout the year. Net new money grew by close to 20% measured against funds under administration at the end of 2007.” <i>LTS, 2008</i>
	Bank #204	“[Name] was ranked as the best wealth manager, an accolade it has now won for four consecutive years. Reliability, trust and security are integral to our advisory philosophy. These qualities were once again greatly appreciated by our clientele during the past twelve months, and helped us to attract numerous new clients.” <i>LTS, 2009</i>
Present focus	Bank #035	“As pleased as we are with our success, we are also keenly aware that we cannot afford to become complacent. Much to the contrary: the current volatility in the financial industry calls for an absolute commitment to performance. [...] Big is no longer necessarily beautiful, and our job now must be to demonstrate clearly the advantages of choosing a bank where transparency is all-important and decision-making fast and efficient.” <i>LTS, 2007</i>
	Bank #132	“What we are observing today is not merely cyclical. The major factors for equilibrium in tomorrow’s world are taking shape before our eyes. The profitability drivers in the banking sector are not the same. The role of finance needs to be redefined. [...] [Name] has serious advantages: a prestigious brand name, creative teams, quality service, loyal clients, an international presence and stable shareholders.” <i>LTS, 2012</i>
	Bank #235	“[...] economic growth is ‘decoupling’, which means that emerging countries will not be immune to a slowdown in industrialized countries but may allow economic growth worldwide to continue to sustain positive development. The question we should be asking ourselves in 2008 is whether these emerging economies will manage to avoid the current crisis without too much damage, particularly if there is a recession in the United States [...]” <i>LTS, 2007</i>
Future focus	Bank #141	“Going forward, we plan to strike out in new directions that will generate added value for clients, the shareholder and employees alike. Thereby, we will build a sustainable business model on proven qualities; entrepreneurship and agility are two of the attributes we intend to uphold. [Name] is known as a platform that unites those looking for capital and those looking to invest. We will continue to expand this area of activity. Furthermore, new technologies will form an important cornerstone of our services.” <i>LTS, 2016</i>
	Bank #183	“We want to leverage the advantages of our private bank even better in the market in future, and thereby generate further growth. At the same time, we will increasingly exploit the potential offered by digitisation, but without in any way undermining the importance of personal client contact, which will always be a key reference point for our advisory and investment activity.” <i>LTS 2016</i>
	Bank #223	“As of July 2011, [Name] will change its name to [Name]. This will better reflect the strategic repositioning mentioned above. [...] We will be rolling out a new IT system in London and Zurich in the coming months with the introduction of the Avaloq banking software. This will enhance and simplify many processes, in particular data management, booking and trading orders, and client reporting.” <i>LTS, 2010</i>

^a Words printed in boldface referring to corresponding dictionaries developed by Pennebaker et al. (2015)

Table 25: Regression on Changes in Temporal Foci and Word Count^a

Variables	(1) Absolute change in temporal foci	(2) Absolute change in LTS word count
CEO succession	.58** (.28)	93.28** (37.45)
Chairman succession	-.06 (.27)	35.12 (54.44)
Past focus	.28 (.18)	
Present focus	0 (.11)	
Future focus	.87*** (.3)	
LTS word count	-.68*** (.22)	83.02** (36.35)
LTS authorship 2 (both)	.46 (.34)	6.03 (44.14)
LTS authorship 3 (chair)	.5 (.47)	-124.14 (127.04)
Year effects	Yes	Yes
Firm effects	Yes	Yes
Constant	-.19 (.44)	379.55*** (87.38)
R-squared	.11	.05

^a $N = 519$; *** $p < .01$, ** $p < .05$, * $p < .10$

Table 26: Hierarchical Regression at the CEO-Level^a

Variables	(1) Past focus	(2) Present focus	(3) Future focus	(4) LTS word count
Constant	2.45***	3.73***	0.81***	1.46***
Likelihood ratio (LR) test	101.72***	189.82***	112.10***	611.16***
Between variance	0.46	0.89	0.27	1.01
Within variance	0.58	0.83	0.32	0.45
ICC	0.38	0.53	0.42	0.83

^a $N = 563$ *** $p < .01$, ** $p < .05$, * $p < .10$

4.4.2.3 Control variables

We controlled for *past performance* because it is related to succession and post-succession performance (Boeker, 1992; Ocasio, 1994; Wiersema & Zhang, 2011). Moreover, the succession-performance relationship could also be confounded by other characteristics of private banks (e.g., Berger & Mester, 1997; Deyoung & Hasan, 1998). Hence, we controlled for a bank's *equity margin* using shareholders' equity over total banking assets. We measured *growth* as the percentage change in a bank's net income. We operationalized bank *size* as a logarithm of total banking assets. Because diversification may stabilize corporate earnings, we also added two controls related to

diversification. We controlled for *market diversification* using the logarithm of foreign branches and banking subsidiaries. Moreover, we operationalized *service diversification* as 1 – Herfindahl-Hirschman Index of seven income categories. Finally, we controlled for *strategic change* using the percentage change in the banks’ asset allocation.

At the LTS level, we controlled for total *word count*. Furthermore, we measured the linguistic *complexity* of LTSs as the percentage of words with more than six characters. Finally, we controlled for *authorship*, coding this variable as 1 if the letters were associated with a CEO, 2 if they were associated with a CEO and a chairperson and 3 if they were associated with a chairperson only. For legal purposes, Swiss banks’ annual reports are typically signed by the chairpersons, but the CEOs are closely involved in shaping their contents (Bowman, 1984).

At the executive level, we measured *CEO tenure* using the logarithm of the number of years a CEO had been in this position. Because CEOs are internally or externally recruited, we also controlled for *CEO origin* as a binary variable that equals 1 if the CEO held a position in their firm for more than two years prior to their CEO appointment and 0 otherwise. Due to the prominent role of chairpersons in the private banks under study, we also controlled for *chairman tenure* and *chairman succession*. We operationalized these variables in the same way as those of CEOs.

4.4.3 Analysis

To test our hypotheses, we conducted linear regression analyses. Because the sample contained multiple observations per firm, the assumption of independence was violated. Our Hausman (1978) specification test rejected the null-hypothesis ($\chi^2 = 152.38, p < 0.01$), so we included firm fixed effects to mitigate omitted variable bias. Moreover, we added year dummies to control for unobserved macro-economic effects. Because auto-correlation and heteroskedasticity may lead to underestimated standard errors, we applied robust standard errors. Continuous variables were winsorized ($p = 0.01$) to eliminate severe outliers (DesJardine & Shi, 2021). We centered all continuous predictors and controls on their respective means to avoid issues related to multicollinearity (Aiken & West, 1996). Finally, predictors and controls were lagged by one year to mitigate concerns related to reverse causality.

4.5 Results

4.5.1 Primary analysis

Table 27 reports descriptive statistics and correlations. Table 28 shows linear regression outputs. Figure 7 contains the interaction plots of CEO succession and temporal focus.

As shown in Table 27, there are only few high correlations between the predictors and controls. Not surprisingly, CEO succession is highly correlated with CEO tenure ($\rho = -0.61$, $p < 0.01$). No other pair-wise correlation, however, surpasses the critical collinearity level of $\rho = 0.5$. To identify potential issues of multicollinearity, we also examined VIFs. Among the independent variables, CEO succession had the highest score (VIF = 2.02) and past orientation had the lowest score (VIF = 1.49). Because these are well below the recommended cut-off values, multicollinearity is not a major concern in our study.

In Table 28, we first entered the controls, then the predictors and interaction effects, and finally, the full model. Hypothesis 1 suggests that successors with a strong past focus are positively associated with post-succession firm performance. In Model 6, the interaction effect of CEO succession and a successor's past focus is positive and significant ($b = 2.33$, $p < 0.05$). In terms of economic magnitude, the change from mean to high levels of past orientation (mean + 1 SD) is associated with an increase in post-succession firm performance by 2.2% (cf. Figure 7a). In conclusion, our findings confirm Hypothesis 1.

According to Hypothesis 2, successors with strong present foci should not be associated with increased or decreased levels of post-succession firm performance. Indeed, the interaction effect of CEO succession and a successor's present focus is insignificant, which supports Hypothesis 2. In other words, a strong present focus may neither hurt nor help successor CEOs improve firm performance.

Finally, Hypothesis 3 suggests that successors with a strong future focus decrease firm performance. Indeed, the interaction term is negative and significant ($b = -4.04$, $p < 0.05$), thus supporting Hypothesis 3. Accordingly, the change from mean to high levels of future orientation (mean + 1 SD) leads to a 2.2% decline in post-succession firm performance (cf. Figure 7b).

Table 27: Descriptive Statistics and Pairwise Correlations^a

Variables	Mean	SD	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) Performance	3.13	8.92	1.00									
(2) Past performance	5.75	10.55	0.49***	1.00								
(3) Equity margin	16.53	11.2	-0.19***	-0.05	1.00							
(4) Growth	.02	.24	0.12***	0.27***	-0.06	1.00						
(5) Size (logged)	20.91	1.67	0.17***	0.11**	-0.56***	0.04	1.00					
(6) Market diversification (logged)	.48	.74	-0.03	-0.04	-0.30***	0.05	0.74***	1.00				
(7) Service diversification (logged)	.54	.14	0.00	0.00	-0.32***	0.07*	0.35***	-0.06	1.00			
(8) Strategic change	.33	3.16	-0.13***	-0.08*	-0.28***	0.02	-0.22***	0.33***	-0.11**	1.00		
(9) LTS word count	1.48	1.14	0.01	0.06	-0.28***	0.00	0.28***	0.06	0.09**	0.05	1.00	
(10) LTS complexity	29.91	2.6	-0.17***	-0.09**	-0.03	-0.01	0.12***	-0.07*	-0.10**	0.07	0.02	1.00
(11) LTS authorship1 (CEO)	.03	.17	0.12***	0.15***	-0.06	-0.05	-0.05	0.30***	0.19***	0.07*	0.51***	0.07*
(12) LTS authorship2 (both)	.43	.49	0.00	0.03	-0.32***	0.00	0.35***	-0.27***	-0.15***	0.07*	-0.51***	-0.05
(13) LTS authorship3 (chair)	.54	.5	-0.04	-0.08*	0.34***	0.01	-0.33***	-0.08*	-0.02	0.04	0.06	-0.26***
(14) Past focus	2.47	.74	0.03	-0.05	-0.04	0.03	-0.02	-0.09**	-0.23***	0.04	0.14***	-0.05
(15) Present focus	3.7	1.21	0.19***	0.16***	-0.04	-0.06	-0.05	-0.03	-0.04	-0.02	0.04	-0.08*
(16) Future focus	.8	.41	-0.04	0.02	-0.14***	0.04	0.19***	0.18***	-0.09**	-0.07	0.10**	-0.01
(17) Chairman tenure (logged)	1.51	.97	0.11***	0.06	0.03	0.01	-0.05	-0.02	0.09**	0.03	-0.01	0.02
(18) Chairman succession	.14	.35	-0.04	-0.05	-0.07*	0.02	-0.04	0.03	-0.10**	-0.03	0.15***	-0.13***
(19) CEO tenure (logged)	1.4	.95	0.10**	0.17***	-0.21***	0.01	0.27***	0.22***	-0.02	-0.11***	0.11**	-0.12***
(20) CEO origin	.36	.48	-0.05	-0.09**	0.00	-0.02	0.01	-0.04	0.01	0.05	-0.02	0.04
(21) CEO succession	.15	.35	-0.09**	-0.12***	0.00	-0.02	0.01	-0.04	0.01	0.05	-0.02	0.04

Variables	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
(11) LTS authorship1 (CEO)	1.00										
(12) LTS authorship2 (both)	-0.15***	1.00									
(13) LTS authorship3 (chair)	-0.19***	-0.94***	1.00								
(14) Past focus	-0.06	0.02	0.00	1.00							
(15) Present focus	0.08**	0.08**	-0.11***	-0.25***	1.00						
(16) Future focus	0.09**	0.06	-0.08**	-0.08*	0.36***	1.00					
(17) Chairman tenure (logged)	0.07*	0.01	-0.03	0.03	0.11***	0.14***	1.00				
(18) Chairman succession	-0.04	0.02	0.00	0.00	-0.08*	-0.07*	-0.64***	1.00			
(19) CEO tenure (logged)	0.02	-0.01	0.00	0.09**	0.06	0.08**	0.21***	-0.15***	1.00		
(20) CEO origin	-0.07	0.17***	-0.15***	0.11**	0.07*	0.10**	0.19***	-0.07*	0.06	1.00	
(21) CEO succession	0.04	0.00	-0.01	-0.03	-0.01	-0.01	-0.12***	0.17***	-0.61***	-0.01	1.00

^a $N = 563$; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$; two-tailed tests

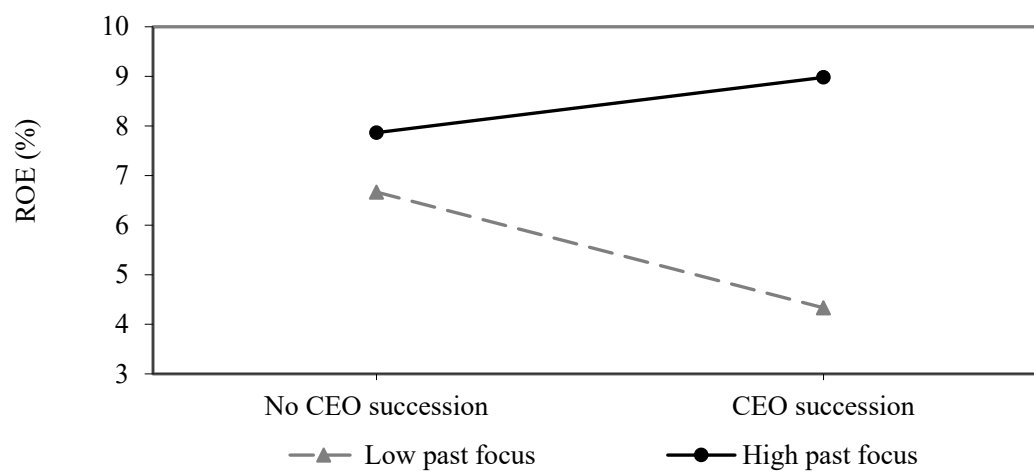
Table 28: Regression on ROE^a

Variables	(1) Controls	(2) CEO succession	(3) Past focus	(4) Present focus	(5) Future focus	(6) Full model
Control variables						
Past performance	.06 (.04)	.06 (.05)	.07 (.04)	.06 (.04)	.06 (.04)	.07 (.04)
Equity margin	-.21* (.12)	-.21* (.12)	-.21* (.12)	-.21* (.12)	-.21* (.12)	-.21* (.12)
Growth	.02 (.01)	.02 (.01)	.02 (.01)	.02 (.01)	.02 (.01)	.02 (.01)
Size (logged)	-1.18 (2.94)	-1.13 (2.93)	-1.23 (2.91)	-1.16 (2.94)	-1.21 (2.88)	-1.22 (2.87)
Market diversification (logged)	-.13 (3.65)	-.18 (3.67)	-.27 (3.64)	-.14 (3.74)	-.25 (3.6)	-.54 (3.61)
Service diversification	-2.99 (5.6)	-2.64 (5.62)	-3.55 (5.51)	-2.75 (5.73)	-3.25 (5.71)	-4.1 (5.6)
Strategic change	-.03 (.1)	-.03 (.1)	-.02 (.09)	-.02 (.1)	-.03 (.1)	-.02 (.09)
LTS word count	.15 (.81)	.16 (.81)	.13 (.8)	.16 (.81)	.18 (.82)	.14 (.81)
LTS complexity	-.28 (.2)	-.29 (.2)	-.29 (.2)	-.29 (.2)	-.28 (.2)	-.28 (.2)
LTS authorship2 (both)	-3.57 (2.27)	-3.73 (2.29)	-3.94* (2.21)	-3.71 (2.29)	-3.53 (2.38)	-3.86* (2.28)
LTS authorship3 (chair)	-2.78 (2.97)	-2.86 (2.97)	-3.37 (2.93)	-2.88 (3)	-2.74 (3.05)	-3.3 (2.99)
Past focus	1.01* (.55)	1.03* (.54)	.76 (.56)	1.02* (.54)	1.1** (.54)	.81 (.56)
Present focus	.62 (.44)	.62 (.44)	.62 (.44)	.64 (.45)	.59 (.44)	.5 (.46)
Future focus	-2.15* (1.15)	-2.12* (1.13)	-2.19* (1.13)	-2.12* (1.14)	-1.42 (1.2)	-1.38 (1.18)
Chairman tenure (logged)	-.45 (.68)	-.44 (.67)	-.48 (.68)	-.44 (.68)	-.4 (.68)	-.45 (.69)
Chairman succession	-.62 (1.47)	-.55 (1.51)	-.61 (1.53)	-.56 (1.52)	-.56 (1.5)	-.6 (1.52)
CEO tenure (logged)	-.21 (.54)	-.47 (.76)	-.36 (.77)	-.46 (.77)	-.5 (.76)	-.42 (.77)
CEO origin	2.42* (1.26)	2.35* (1.22)	2.43* (1.23)	2.35* (1.23)	2.24* (1.2)	2.34* (1.2)
Independent variables						
CEO succession		-.76 (1.11)	-.46 (1.15)	-.74 (1.14)	-.82 (1.1)	-.54 (1.15)
CEO succession x past focus			1.83** (.85)			2.33** (.97)
CEO succession x present focus				-.18 (.82)		.74 (.84)
CEO succession x future focus					-3.35* (1.86)	-4.04** (1.81)
Constant	6.87*** (2.3)	7.07*** (2.29)	7.4*** (2.25)	7.08*** (2.32)	6.94*** (2.36)	7.29*** (2.3)
Year effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm effects	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.13	0.13	0.13	0.13	0.13	0.14

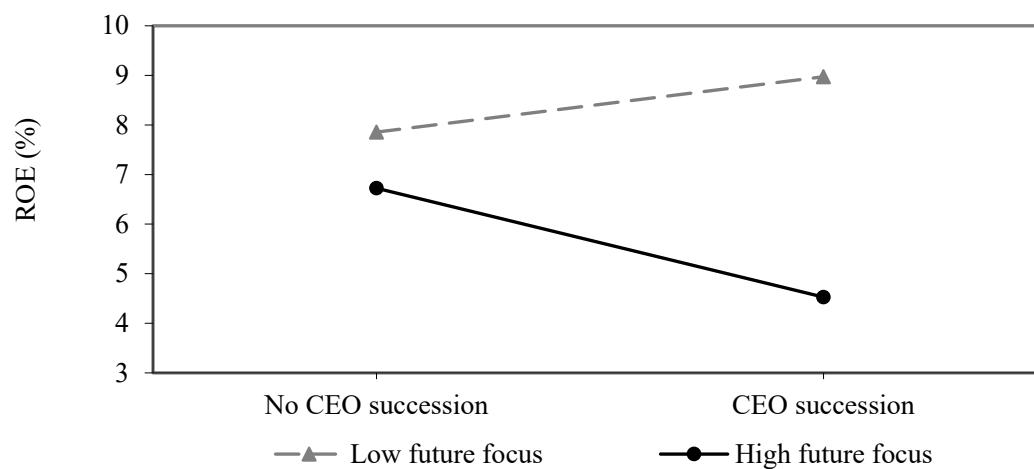
^a $N = 563$; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

Figure 7: Interaction Plots of CEO Succession and Temporal Foci^a

(a) Past focus



(b) Future focus



^a Low temporal foci = mean - 1 SD; high temporal foci = mean + 1 SD

4.5.2 Supplementary analyses

We conducted a series of supplementary analyses to ensure our findings are robust to potential biases and model adjustments.

4.5.2.1 Endogeneity

To mitigate a potential selection bias, we included firms without CEO succession events between 2007 and 2016, as proposed by Zhang et al. (2021). Nevertheless, we may still face endogeneity issues related to confounding variables, such as pre-succession performance, because these variables simultaneously influence executive succession and post-succession performance (Boeker, 1992; Ocasio, 1994; Wiersema & Zhang, 2011). Accordingly, we fitted a two-stage regression model. As a first step, we estimated the likelihood of CEO succession using pre-succession firm performance, firm size, firm age, predecessor CEO tenure and year dummies as predictors (Chen & Hambrick, 2012; Minichilli et al., 2014; Zhang & Qu, 2016). Pre-succession performance is, indeed, significantly negatively associated with CEO succession ($b = -1.31, p < 0.10$) while the remaining coefficients are not significant. As a second step, we added the predicted likelihood of CEO succession as an endogeneity control to the original model. Table 29 shows the linear regression output. As expected, the previously reported results do not substantially change, which lends credibility to their robustness.

Moreover, we may also encounter potential issues related to variables that affect both temporal foci and post-succession performance. This argument is logically compelling because an executive's temporal foci can be situationally affected (Mohammed & Marhefka, 2020). For instance, we may speculate that macro-economic factors or a sudden decline in firm performance let managers shift their attention from the past to the future. In support of this claim, we presented empirical evidence of a substantial amount of variance operating *within* executives over time. Following the procedure described by Chen and Nadkarni (2017), we fitted three linear regression models, one for each temporal focus. We used past performance change, client asset performance, net income growth, equity margin and year dummies as predictors of an executive's temporal foci. The predicted temporal foci were added to the original model as endogeneity controls. Table 30 shows the adjusted regression outputs, which do not materially differ from the previously reported ones.

Table 29: Regression on ROE, incl. Endogeneity Control for CEO Succession^a

Variables	(1) Controls	(2) CEO succession	(3) Past focus	(4) Present focus	(5) Future focus	(6) Full model
Control variables						
Past performance	.09* (.05)	.09* (.05)	.1* (.05)	.09* (.05)	.09* (.05)	.1** (.05)
Equity margin	-.17 (.11)	-.17 (.11)	-.17 (.11)	-.17 (.11)	-.17 (.11)	-.16 (.11)
Growth	0 (.01)	.01 (.01)	0 (.01)	0 (.01)	0 (.01)	0 (.01)
Size (logged)	-.64 (2.63)	-.58 (2.62)	-.67 (2.6)	-.68 (2.62)	-.65 (2.58)	-.71 (2.56)
Market diversification (logged)	-.7 (3.63)	-.82 (3.66)	-.92 (3.63)	-.68 (3.75)	-.9 (3.59)	-1.14 (3.6)
Service diversification	-2.29 (5.75)	-1.88 (5.78)	-2.53 (5.61)	-2.1 (5.86)	-2.43 (5.86)	-3.18 (5.67)
Strategic change	.02 (.11)	.03 (.11)	.03 (.11)	.03 (.11)	.03 (.11)	.03 (.11)
LTS word count	.21 (.81)	.22 (.8)	.18 (.79)	.22 (.8)	.24 (.81)	.2 (.8)
LTS complexity	-.28 (.19)	-.28 (.19)	-.28 (.19)	-.28 (.19)	-.27 (.19)	-.27 (.19)
LTS authorship2 (both)	-3.05 (2.09)	-3.26 (2.09)	-3.51* (2.02)	-3.18 (2.1)	-3.05 (2.2)	-3.36 (2.13)
LTS authorship3 (chair)	-2.62 (2.81)	-2.72 (2.8)	-3.33 (2.77)	-2.77 (2.84)	-2.6 (2.89)	-3.28 (2.87)
Past focus	1.02* (.58)	1.04* (.57)	.79 (.58)	1.04* (.57)	1.14** (.57)	.85 (.58)
Present focus	.65 (.43)	.64 (.43)	.62 (.43)	.69 (.44)	.61 (.43)	.54 (.44)
Future focus	-1.97* (1.12)	-1.92* (1.1)	-1.96* (1.1)	-1.9* (1.11)	-1.19 (1.19)	-1.12 (1.17)
Chairman tenure (logged)	-.55 (.66)	-.55 (.66)	-.58 (.66)	-.54 (.66)	-.49 (.66)	-.53 (.67)
Chairman succession	-.54 (1.49)	-.47 (1.51)	-.51 (1.52)	-.51 (1.53)	-.43 (1.5)	-.45 (1.53)
CEO tenure (logged)	-.14 (.54)	-.47 (.75)	-.35 (.75)	-.43 (.76)	-.5 (.74)	-.39 (.75)
CEO origin	2.28* (1.18)	2.17* (1.14)	2.26* (1.16)	2.16* (1.16)	2.05* (1.12)	2.15* (1.14)
CEO succession (endogeneity control)	9.6** (4.23)	9.56** (4.21)	9.62** (4.2)	9.63** (4.2)	9.55** (4.04)	9.57** (4.01)
Independent variables						
CEO succession		-.98 (1.11)	-.59 (1.15)	-.92 (1.12)	-1 (1.09)	-.57 (1.13)
CEO succession x past focus			2.09** (.86)			2.57*** (.91)
CEO succession x present focus				-.57 (.93)		.38 (.91)
CEO succession x future focus					-3.51* (1.8)	-4.21** (1.76)
Constant	17.91*** (5.58)	18.12*** (5.56)	18.65*** (5.52)	18.26*** (5.57)	17.99*** (5.35)	18.53*** (5.32)
Year effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm effects	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.15	0.15	0.16	0.15	0.16	0.17

^aN = 555; *** p < 0.01, ** p < 0.05, * p < 0.10

Table 30: Regression on ROE, incl. Endogeneity Controls for Temporal Foci^a

Variables	(1) Controls	(2) CEO succession	(3) Past focus	(4) Present focus	(5) Future focus	(6) Full model
Control variables						
Past performance	.02 (.05)	.02 (.05)	.03 (.05)	.02 (.05)	.02 (.05)	.03 (.05)
Equity margin	-.16 (.11)	-.16 (.11)	-.16 (.11)	-.16 (.11)	-.16 (.1)	-.16 (.11)
Growth	.01 (.01)	.01 (.01)	.01 (.01)	.01 (.01)	.01 (.01)	.01 (.01)
Size (logged)	-.66 (2.63)	-.62 (2.63)	-.72 (2.61)	-.72 (2.64)	-.7 (2.59)	-.79 (2.58)
Market diversification (logged)	-.67 (3.54)	-.73 (3.56)	-.82 (3.54)	-.6 (3.64)	-.82 (3.48)	-1.01 (3.51)
Service diversification	-.83 (5.51)	-.57 (5.56)	-1.33 (5.46)	-.77 (5.6)	-1.05 (5.61)	-1.98 (5.51)
Strategic change	0 (.1)	.01 (.1)	.01 (.1)	.01 (.1)	0 (.1)	.01 (.1)
LTS word count	.24 (.83)	.25 (.83)	.21 (.82)	.25 (.82)	.27 (.84)	.23 (.83)
LTS complexity	-.3 (.2)	-.3 (.2)	-.3 (.2)	-.3 (.2)	-.29 (.2)	-.28 (.2)
LTS authorship2 (both)	-3.35 (2.15)	-3.49 (2.17)	-3.76* (2.1)	-3.38 (2.19)	-3.31 (2.32)	-3.67 (2.25)
LTS authorship3 (chair)	-3.1 (2.82)	-3.19 (2.84)	-3.8 (2.85)	-3.22 (2.88)	-3.11 (2.95)	-3.85 (2.96)
Past focus	.91 (.62)	.92 (.62)	.69 (.61)	.91 (.61)	1.04* (.61)	.78 (.61)
Present focus	.62 (.46)	.62 (.46)	.61 (.46)	.68 (.47)	.57 (.46)	.52 (.47)
Future focus	-2.22* (1.13)	-2.18* (1.12)	-2.28** (1.12)	-2.17* (1.13)	-1.35 (1.24)	-1.35 (1.23)
Chairman tenure (logged)	-.43 (.7)	-.43 (.7)	-.45 (.7)	-.42 (.7)	-.39 (.7)	-.42 (.71)
Chairman succession	-.68 (1.55)	-.62 (1.59)	-.65 (1.6)	-.66 (1.6)	-.64 (1.57)	-.66 (1.59)
CEO tenure (logged)	-.11 (.57)	-.33 (.81)	-.23 (.82)	-.28 (.83)	-.39 (.81)	-.29 (.82)
CEO origin	2.59** (1.28)	2.54** (1.24)	2.64** (1.27)	2.52* (1.27)	2.45** (1.23)	2.57** (1.26)
Past focus (endogeneity control)	25.36 (17.96)	24.27 (18.15)	24.6 (17.87)	24.53 (18.1)	23.99 (18.33)	24.24 (17.86)
Present focus (endogeneity control)	-16.22 (11.36)	-16.77 (11.25)	-15.79 (10.98)	-16.77 (11.14)	-16.96 (11.07)	-15.75 (10.75)
Future focus (endogeneity control)	-.38 (21.64)	.28 (21.47)	-.66 (21.13)	-.23 (21.36)	.09 (21.02)	-.88 (20.58)
Independent variables						
CEO succession		-.65 (1.19)	-.24 (1.22)	-.58 (1.2)	-.73 (1.17)	-.26 (1.2)
CEO succession x past focus			2.05** (.88)			2.56*** (.93)
CEO succession x present focus				-.61 (.89)		.3 (.86)
CEO succession x future focus					-3.85** (1.9)	-4.48** (1.83)
Constant	7.17*** (2.68)	7.47*** (2.69)	7.82*** (2.72)	7.51*** (2.76)	7.47*** (2.83)	7.9*** (2.85)
Year effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm effects	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.17	0.17	0.18	0.17	0.18	0.19

^a N = 533; *** p < 0.01, ** p < 0.05, * p < 0.10

4.5.2.2 Predecessors' temporal foci

Scholars have shown that organizational outcomes may also be affected by the characteristics of predecessor CEOs, such as the nature of their departures (Barron et al., 2011; Helfat & Bailey, 2005; Karaevli & Zajac, 2013; Quigley & Hambrick, 2012) or tenure (Chen & Hambrick, 2012; Shen & Cannella, 2002b). Accordingly, post-succession firm performance may also be influenced by a predecessor's temporal foci. To control for this alternative explanation, we added the prior year's score for each of the temporal foci to the original model, as well as their interaction terms with CEO succession. Table 31 reports the outputs of the adjusted linear regressions. In Model 5, none of the interaction effects involving the predecessor's temporal foci was statistically significant. In contrast, the original interaction terms of CEO succession and successor CEOs' past and future foci remained significant.

4.5.2.3 Dependent variable

Concerning banking institutions, scholars also applied other performance metrics, such as ROA (Delgado-García & De La Fuente-Sabaté, 2010; Surroca et al., 2014; Zuniga-Vicente & Vicente-Lorente, 2006). Hence, we ran the analyses again with this alternative measure of bank performance. Table 32 shows the linear regression outputs. The results are consistent with the previously reported ones but are statistically less significant. In Model 6, the interaction term of CEO succession and past focus is positive and weakly significant ($b = 0.30$, $p < 0.10$). Similarly, the interaction term of CEO succession and future focus is negative, but only weakly significant ($b = -0.64$, $p < 0.10$).

4.5.2.4 Temporality

During the 10-year period under study, banking secrecy was gradually eroding as institutional changes unfolded in multiple waves (Überbacher & Scherer, 2020). Hence, we examined whether previously reported effects vary in terms of strength or direction over time. We added *clock time* using the number of years that had passed since the inception of the uncertainty and its interactions terms with CEO succession and each of the three temporal foci. Table 33 shows the linear regression outputs. The interaction term of CEO succession and past focus remains positive and significant ($b =$

3.00, $p < 0.01$), but the three-way interaction including clock time is insignificant. Similarly, the coefficient including CEO succession and future focus remains negative and significant ($b = -4.08$, $p < 0.05$) while their three-way interaction with clock time is negative and weakly significant ($b = -1.02$, $p < 0.10$). These results provide support that the strength and direction of the original effects changed only marginally during the 10-year study period.

4.5.2.5 Sample boundaries

Finally, we investigated the robustness of our results to adjustments of the sample population. Table 34 shows the linear regression outputs. In Model 1, we changed the beginning of the 10-year study period to 2008. In Model 2, we included banks that were also active in other domains, such as commercial and investment banking. In Model 3, we added LTSs that we translated from German to English. Specifically, we suspected that private banks with LTSs published in German were more secrecy-oriented and conservative. In Model 4, we excluded private banks that were domiciled in the principality of Liechtenstein because these banks are regulated by a different financial authority. Again, we did not observe substantial changes, with the single exception of banks that are also active in other domains (cf. Model 2). In this model specification, the interaction term of CEO succession and past focus became statistically insignificant.

Table 31: Regression on ROE, incl. Predecessor's Temporal Foci^a

Variables	(1) Controls	(2) CEO succession	(3) Successor temporal foci	(4) Predecessor temporal foci	(5) Full model
Control variables					
Past performance	.08 (.05)	.08 (.05)	.09* (.05)	.08 (.05)	.1** (.05)
Equity margin	-.18 (.15)	-.18 (.15)	-.18 (.15)	-.18 (.15)	-.18 (.15)
Growth	.01 (.01)	.01 (.01)	.01 (.01)	.01 (.01)	.01 (.01)
Size (logged)	-.18 (3.1)	-.18 (3.09)	-.24 (3.08)	-.19 (3.15)	-.33 (3.12)
Market diversification (logged)	-.19 (4.28)	-.19 (4.3)	-.68 (4.25)	-.14 (4.36)	-.43 (4.34)
Service diversification	-3.94 (5.68)	-3.9 (5.72)	-4.99 (5.5)	-3.79 (5.77)	-4.92 (5.5)
Strategic change	0 (.11)	0 (.11)	.01 (.11)	0 (.11)	.01 (.11)
LTS word count	-.14 (.84)	-.14 (.83)	-.2 (.83)	-.13 (.82)	-.16 (.81)
LTS complexity	-.29 (.21)	-.29 (.21)	-.28 (.21)	-.29 (.21)	-.27 (.21)
LTS authorship2 (both)	-2.33 (2.15)	-2.36 (2.18)	-2.81 (2.11)	-2.13 (2.25)	-1.98 (2.15)
LTS authorship3 (chair)	-.74 (3.25)	-.75 (3.26)	-1.72 (3.18)	-.5 (3.4)	-1.06 (3.25)
Past focus (successor)	1.03 (.63)	1.03 (.63)	.77 (.64)	1.03 (.64)	.62 (.65)
Present focus (successor)	.63 (.41)	.63 (.41)	.47 (.42)	.64 (.41)	.46 (.41)
Future focus (successor)	-1.52 (1.19)	-1.52 (1.18)	-.82 (1.22)	-1.53 (1.19)	-.87 (1.22)
Past focus (predecessor)	.89* (.5)	.89* (.5)	.82* (.48)	.93* (.5)	1.07** (.5)
Present focus (predecessor)	.53 (.39)	.53 (.39)	.55 (.38)	.53 (.45)	.58 (.44)
Future focus (predecessor)	-.91 (.96)	-.91 (.95)	-1.12 (.93)	-.86 (.96)	-1.02 (.96)
Chairman tenure (logged)	-.45 (.72)	-.45 (.72)	-.43 (.74)	-.46 (.72)	-.44 (.73)
Chairman succession	-.98 (1.43)	-.97 (1.46)	-.89 (1.46)	-.96 (1.51)	-.86 (1.51)
CEO tenure (logged)	-.31 (.63)	-.34 (.84)	-.26 (.85)	-.35 (.85)	-.24 (.84)
CEO origin	2.33* (1.24)	2.32* (1.22)	2.35* (1.23)	2.29* (1.2)	2.22* (1.18)
Independent variables					
CEO succession		-.11 (1.1)	.33 (1.14)	-.11 (1.13)	.6 (1.19)
CEO succession x past focus (successor)			3.14*** (1.06)		4.31*** (1.49)
CEO succession x present focus (successor)			.95 (.82)		1.03 (.84)
CEO succession x future focus (successor)			-3.6** (1.8)		-3.8** (1.9)
CEO succession x past focus (predecessor)				-.34 (1.03)	-2.11 (1.33)
CEO succession x present focus (predecessor)				.01 (.64)	-.21 (.63)
CEO succession x future focus (predecessor)				-.27 (1.83)	-.86 (1.85)
Constant	5.51* (2.87)	5.53* (2.88)	6.32** (2.74)	5.3* (3.13)	5.66* (3)
Year effects	Yes	Yes	Yes	Yes	Yes
Firm effects	Yes	Yes	Yes	Yes	Yes
R-squared	0.14	0.14	0.15	0.14	0.16

^a N = 519; *** p < 0.01, ** p < 0.05, * p < 0.10

Table 32: Regression on ROA^a

Variables	(1) Controls	(2) CEO succession	(3) Past focus	(4) Present focus	(5) Future focus	(6) Full model
Control variables						
Past performance	.09** (.04)	.09** (.04)	.1** (.04)	.09** (.04)	.09** (.04)	.1** (.04)
Equity margin	-.04* (.02)	-.04* (.02)	-.04* (.02)	-.04* (.02)	-.04* (.02)	-.04* (.02)
Growth	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Size (logged)	-.59 (.45)	-.58 (.45)	-.59 (.45)	-.58 (.45)	-.59 (.45)	-.59 (.45)
Market diversification (logged)	.28 (.39)	.27 (.39)	.26 (.39)	.27 (.4)	.26 (.38)	.22 (.37)
Service diversification	.58 (1.31)	.67 (1.31)	.57 (1.29)	.68 (1.34)	.57 (1.35)	.48 (1.31)
Strategic change	.01 (.01)	.01 (.01)	.01 (.01)	.01 (.01)	.01 (.01)	.01 (.01)
LTS word count	-.04 (.12)	-.04 (.11)	-.05 (.11)	-.04 (.11)	-.04 (.12)	-.04 (.12)
LTS complexity	-.04 (.03)	-.04 (.03)	-.04 (.03)	-.04 (.03)	-.04 (.03)	-.04 (.03)
LTS authorship2 (both)	-.33 (.29)	-.38 (.29)	-.41 (.28)	-.38 (.28)	-.35 (.3)	-.4 (.29)
LTS authorship3 (chair)	-.29 (.38)	-.32 (.37)	-.38 (.37)	-.32 (.38)	-.31 (.38)	-.38 (.38)
Past focus	.19* (.1)	.2* (.1)	.17 (.1)	.2* (.1)	.21** (.1)	.18* (.1)
Present focus	.14** (.07)	.14** (.07)	.14** (.07)	.14** (.07)	.14** (.07)	.12* (.07)
Future focus	-.38* (.19)	-.37* (.19)	-.37* (.19)	-.37* (.19)	-.26 (.21)	-.24 (.21)
Chairman tenure (logged)	-.09 (.1)	-.09 (.1)	-.09 (.1)	-.09 (.1)	-.08 (.1)	-.09 (.1)
Chairman succession	-.1 (.2)	-.08 (.2)	-.09 (.2)	-.08 (.2)	-.08 (.2)	-.08 (.2)
CEO tenure (logged)	0 (.08)	-.08 (.1)	-.07 (.1)	-.08 (.1)	-.08 (.1)	-.08 (.1)
CEO origin	.18 (.16)	.16 (.16)	.17 (.15)	.16 (.16)	.14 (.15)	.16 (.14)
Independent variables						
CEO succession		-.21 (.14)	-.18 (.15)	-.21 (.14)	-.22 (.14)	-.19 (.14)
CEO succession x past focus			.21 (.14)			.3* (.16)
CEO succession x present focus				.01 (.1)		.14 (.11)
CEO succession x future focus					-.52 (.35)	-.64* (.36)
Constant	.94*** (.34)	.99*** (.34)	1.03*** (.33)	.99*** (.34)	.97*** (.34)	1.02*** (.34)
Year effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm effects	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.18	0.18	0.19	0.18	0.19	0.19

^a $N = 563$; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

Table 33: Regression on ROE, incl. Clock Time^a

Variables	(1) Controls	(2) CEO succession	(3) Past focus	(4) Present focus	(5) Future focus	(6) Full model
Control variables						
Past performance	.06 (.04)	.06 (.05)	.07 (.04)	.06 (.04)	.05 (.04)	.06 (.04)
Equity margin	-.21* (.12)	-.21* (.12)	-.21* (.12)	-.21* (.12)	-.22* (.12)	-.21* (.12)
Growth	.02 (.01)	.02 (.01)	.02 (.01)	.02 (.01)	.02 (.01)	.02 (.01)
Size (logged)	-1.18 (2.94)	-1.13 (2.93)	-1.21 (2.91)	-1.16 (2.94)	-1.28 (2.87)	-1.21 (2.87)
Market diversification (logged)	-.13 (3.65)	-.18 (3.67)	-.25 (3.65)	-.11 (3.79)	-.13 (3.58)	-.64 (3.6)
Service diversification	-2.99 (5.6)	-2.64 (5.62)	-3.53 (5.51)	-2.72 (5.75)	-2.84 (5.77)	-3.75 (5.61)
Strategic change	-.03 (.1)	-.03 (.1)	-.02 (.09)	-.02 (.1)	-.02 (.09)	-.02 (.09)
LTS word count	.15 (.81)	.16 (.81)	.13 (.8)	.17 (.81)	.21 (.82)	.15 (.82)
LTS complexity	-.28 (.2)	-.29 (.2)	-.29 (.2)	-.29 (.2)	-.28 (.2)	-.29 (.2)
LTS authorship2 (both)	-3.57 (2.27)	-3.73 (2.29)	-3.83* (2.23)	-3.68 (2.29)	-3.03 (2.4)	-3.23 (2.34)
LTS authorship3 (chair)	-2.78 (2.97)	-2.86 (2.97)	-3.28 (2.92)	-2.86 (2.97)	-2.22 (3.07)	-2.57 (3.02)
Past focus	1.01* (.55)	1.03* (.54)	.77 (.56)	1.02* (.54)	1.09** (.54)	.82 (.56)
Present focus	.62 (.44)	.62 (.44)	.63 (.44)	.64 (.45)	.6 (.44)	.51 (.45)
Future focus	-2.15* (1.15)	-2.12* (1.13)	-2.2* (1.13)	-2.11* (1.15)	-1.43 (1.21)	-1.4 (1.2)
Chairman tenure (logged)	-.45 (.68)	-.44 (.67)	-.46 (.68)	-.44 (.68)	-.4 (.68)	-.46 (.69)
Chairman succession	-.62 (1.47)	-.55 (1.51)	-.58 (1.53)	-.56 (1.52)	-.66 (1.46)	-.66 (1.49)
CEO tenure (logged)	-.21 (.54)	-.47 (.76)	-.35 (.77)	-.46 (.77)	-.49 (.77)	-.4 (.78)
CEO origin	2.42* (1.26)	2.35* (1.22)	2.44* (1.24)	2.36* (1.24)	2.11* (1.2)	2.08* (1.18)
Clock time	-.34 (.22)	-.34 (.22)	-.33 (.22)	-.34 (.23)	-.33 (.23)	-.31 (.23)
Independent variables						
CEO succession		-.76 (1.11)	-.41 (1.15)	-.74 (1.14)	-.78 (1.09)	-.33 (1.13)
CEO succession x past focus			2.05** (.8)			3*** (1.06)
CEO succession x past focus x clock time			.27 (.29)			.64 (.39)
CEO succession x present focus				-.17 (.82)		.93 (.86)
CEO succession x present focus x clock time				-.03 (.18)		.27 (.23)
CEO succession x future focus					-3.12* (1.78)	-4.08** (1.74)
CEO succession x future focus x clock time					-.79 (.54)	-1.02* (.52)
Constant	5.5** (2.55)	5.72** (2.57)	5.98** (2.53)	5.7** (2.55)	5.32** (2.67)	5.65** (2.63)
Year effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm effects	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.13	0.13	0.13	0.13	0.14	0.15

^a N = 563; *** p < 0.01, ** p < 0.05, * p < 0.10

Table 34: Regression on ROE, incl. Modified Sample Boundaries^a

Variables	(1) Period (2008-2017)	(2) Business Model (incl. WM + Other)	(3) Language (incl. GER)	(4) Domicile (excl. LIE)
Control variables				
Past performance	.09** (.04)	.03 (.04)	.06* (.03)	.07 (.04)
Equity margin	-.19 (.14)	-.25** (.1)	-.27** (.11)	-.23* (.12)
Growth	.02 (.01)	.02** (.01)	.01 (.01)	.02 (.01)
Size (logged)	-.47 (2.72)	-2.27 (2.45)	-1.8 (2.32)	-1.9 (3.21)
Market diversification (logged)	-1.26 (3.78)	-3.78 (3.12)	.24 (3.24)	.23 (3.91)
Service diversification	-5.21 (5.98)	-7.88 (4.92)	-6.19 (5.18)	-3.49 (5.8)
Strategic change	-.03 (.09)	0 (.1)	-.01 (.1)	-.01 (.1)
LTS word count	.56 (.87)	.01 (.73)	.24 (.64)	.34 (.9)
LTS complexity	-.26 (.23)	-.23 (.17)	-.32* (.17)	-.32 (.22)
LTS authorship2 (both)	-2.75 (2.03)	-2.04 (1.56)	-2.3 (2)	-4.54* (2.54)
LTS authorship3 (chair)	-1.24 (2.4)	-2.97 (2.06)	-2.09 (2.6)	-3.9 (3.16)
Past focus	.34 (.54)	.84 (.52)	.41 (.53)	.98 (.59)
Present focus	.56 (.5)	.65 (.46)	.25 (.41)	.53 (.49)
Future focus	-2.02 (1.3)	-.37 (1.11)	-1.58 (1.07)	-1.47 (1.31)
Chairman tenure (logged)	-.69 (.67)	-.93 (.69)	-.75 (.61)	-.73 (.79)
Chairman succession	-.77 (1.4)	-.82 (1.32)	-1.37 (1.39)	-1.24 (1.86)
CEO tenure (logged)	-.48 (.87)	-.41 (.68)	.08 (.77)	-.59 (.86)
CEO origin	1.96* (1.18)	2.44*** (.86)	1.88* (1.13)	2.59* (1.37)
Independent variables				
CEO succession	-.84 (1.41)	-.37 (1.05)	-.18 (.99)	-.32 (1.35)
CEO succession x past focus	1.94* (1.16)	1.14 (.86)	1.68* (.9)	2.79** (1.09)
CEO succession x present focus	.64 (.93)	.5 (.52)	.17 (.74)	1.11 (.86)
CEO succession x future focus	-4.16** (2.06)	-5.48*** (2)	-3.1* (1.84)	-5.05** (1.98)
Constant	5.19*** (1.93)	7.23*** (1.89)	6.6*** (1.91)	7.19*** (2.49)
Year effects	Yes	Yes	Yes	Yes
Firm effects	Yes	Yes	Yes	Yes
R-squared	0.14	0.15	0.14	0.16
N	536	688	663	504

^a Robust standard errors in parentheses; *** $p < .01$, ** $p < .05$, * $p < .10$

4.6 Discussion

Based on our analyses, we found empirical evidence that temporal foci have contingency effects on the succession-performance relationship. Specifically, our findings indicate that successor CEOs with strong past orientation strengthen post-succession performance, whereas those with strong future orientation weaken it. We showed that our findings are robust to the inclusion of endogeneity controls and predecessor CEO's temporal foci. Our findings have important implications for theory and practice.

4.6.1 Theoretical implications

First, our research contributes to upper echelons theory (Hambrick & Mason, 1984). As stressed in recent reviews, the role of the demographic characteristics of executives has been well understood as of today. Over the past decade though, researchers became increasingly interested in the impact of managerial psychology because strategic decision-making is laden with cognitive biases (e.g., Cyert & March, 1963; Kiesler & Sproull, 1982; Walsh, 1988). In this regard, we contribute to a still nascent, but steadily increasing theoretical perspective on managerial cognition and emotion (Gamache et al., 2020; König et al., 2020; Malhotra et al., 2018).

Specifically, this study advances our understanding of the succession-performance relationship. We followed frequent calls to examine the role of psychological contingencies, such as perceptions and personality traits (Finkelstein et al., 2009; Hutzschenreuter et al., 2012; Zhang et al., 2021). Thus far, scholars have primarily studied contingency effects of demographic attributes, including a successor CEO's experience (Georgakakis & Ruigrok, 2017; Gomulya & Boeker, 2014; Zhang et al., 2021; Zhu & Shen, 2016), origin (Karaevli, 2007; Karaevli & Zajac, 2013; Shen & Cannella, 2002b; Shen & Cannella, 2003) and socio-demographic similarity (Georgakakis & Ruigrok, 2017; Lin & Liu, 2012; Zhang et al., 2021; Zhang & Qu, 2016). To the best of our knowledge, our study is among the first to shed light on managerial cognition as a contingency of the succession-performance relationship. It may help extend the contingency framework and resolve some of the seemingly inconclusive findings on the important link between executive succession and firm performance (Karaevli, 2007; Schepker et al., 2017).

We echo Schepker et al. (2017), who stated that theories related to adaptation and disruption are complementary rather than contradictory. We believe that our study may help strengthen intellectual bridges between these two seemingly opposing schools of thought. On the one hand, successor CEOs with strong past foci may be effective in balancing requirements related to revitalization and stability. They refresh the knowledge base of TMTs while keeping disruption and internal conflict at moderate levels. Successor CEOs with strong future foci, on the other hand, accentuate the likelihood of conflict and power struggles, thus constraining their ability to implement visionary ideas and pursue strategic renewal. Similarly, Shen and Cannella (2002a) argued that the outsidership of new CEOs triggers not only strategic renewal but also hostility and conflict.

Second, our study broadens the stream of succession research on temporality. Event studies examined abnormal stock market returns before and after succession announcements. Moreover, scholars considered special cases, such as successions before and after bankruptcy filings (Davidson et al., 1993) and delayed successor CEO announcements (Rivolta, 2018). At the level of the individual manager though, the literature remains relatively silent. A predecessor CEO's tenure (Chen & Hambrick, 2012; Shen & Cannella, 2002b), a successor CEO's position in birth order (Calabrò et al., 2018) and the distinction between permanent and interim succession (Ballinger & Marcel, 2010; Gangloff et al., 2016) constitute three noteworthy exceptions. Nevertheless, these examples illustrate the relative paucity of succession research related to subjective temporality, such as a successor CEO's temporal focus.

Third, our study extends the literature on subjective temporality in strategy research. Among psychological characteristics, subjective temporality emerged as a particularly important one (Shipp & Jansen, 2021). Because temporal focus theory helps explain cognitive biases in managerial decision-making, it has recently gained traction in management research. Thus far, top management's temporal foci have been examined in the contexts of corporate innovation (Nadkarni & Chen, 2014; Yadav et al., 2007), strategic change (Back et al., 2020) and mergers and acquisitions (DesJardine & Shi, 2021; Gamache & McNamara, 2019). Accordingly, we contribute to a still nascent, but increasingly growing, stream in strategy research.

Specifically, our study emphasized the critical role of a successor's past focus in strategic decision-making. For a decade, management scholars have been primarily

interested in top management's present and future foci (e.g., Foo et al., 2009; Strobel et al., 2013; West & Meyer, 1998; Yadav et al., 2007). This may be due to the fact that present and future foci are strongly associated with the consideration of future consequences and strategic risk-taking (DesJardine & Shi, 2021; Strathman, Gleicher, Boninger, & Edwards, 1994). In this regard, we join the relatively few but recent scholars who emphasized the important role of past focus in strategic decision-making (Briker et al., 2020; Gamache & McNamara, 2019). Moreover, our study contributes to a balanced perspective of CEO future orientation. Prior studies highlighted the advantages of future orientation, for example, concerning organizational citizenship (Strobel et al., 2013) and strategic renewal (West & Meyer, 1998). Our study, however, contains strong evidence that successor CEOs' future foci accentuate their liability of newness and are, ultimately, negatively associated with post-succession firm performance. In this sense, our study logically extends the findings presented by Back et al. (2020), who found that a future focus weakens the positive relationship between strategic change and firm performance.

Fourth, we shed light on the interplay between subjective and objective temporality. Despite recent calls in management research to study them in concert (Dawson & Sykes, 2019; Johnsen & Holt, 2021; Shipp & Cole, 2015; Shipp & Jansen, 2021), few scholars have integrated subjective and objective time. On the one hand, our study is related to *event* time, which is an "alternative organizing mechanism to the clock or calendar" (Shipp & Jansen, 2021: 320). Succession events create a hidden temporal structure as they slice a continuous passage of time into smaller episodes. Thus far, only a handful of researchers have examined temporal focus and event time. The study by Kaplan and Orlikowski (2013) is a noteworthy exception. In their study, they examined how employees resolved conflicting interpretations regarding organizational past, present and future during a sudden environmental punctuation. Similarly, we examined the effect of temporal foci at CEO succession events, which mark the beginning of a new chapter in the history of a firm. On the other hand, we controlled for the potential effects of *clock* time. As noted by Überbacher and Scherer (2020), regulatory uncertainty was gradually reduced because the relevant institutional changes unfolded in multiple waves. Hence, we examined whether the contingency effects of past and future focus were constant over the 10-year period under study. In our supplementary analyses, however, clock time had only a marginal impact on the contingency effects of

successors' temporal foci. We hope our study encourages future research on the interplay of temporal focus, event time and clock time in strategy research.

Fifth, the study extends what we know about the role of executive characteristics during corporate crises (Bundy et al., 2017). Corporate crisis scholars recently started to closely examine the role of managerial psychology. König et al. (2021) studied the impact of opportunity and threat perceptions during industry-level discontinuities. Likewise, Vuori and Huy (2016) examined the role of shared fear during a major disruption in the competitive environment. Following this path, our study illuminates the effects of temporal biases during an episode of crisis. Prior studies examined temporal foci in dynamic industries (e.g., Back et al., 2020; Nadkarni & Chen, 2014), but not during times of a severe crisis that threatened the existence of an entire industry population.

4.6.2 Managerial implications

On the one hand, our study informs chairpersons and nomination committees, who are the orchestrators of executive succession. Our results encourage them to consider the temporal biases of potential successor CEOs. Prior studies on temporality typically discussed the managerial implications of executive recruitment. Nadkarni and Chen (2014), for instance, argued that the consideration of temporal foci may “help firms improve their CEO hiring decisions” (1828). Few researchers, however, explicitly investigated the effect of temporal biases at executive succession events. Moreover, our results stress the necessity of succession planning. Without succession planning, there is limited time to systematically evaluate the characteristics of potential successors, such as their temporal foci. Prior research has, indeed, associated formalized succession planning with increased levels of post-succession performance (Berns & Klarner, 2017; Shen & Cannella, 2003; Zhang & Rajagopalan, 2004) and stock market returns (Davidson et al., 2001).

On the other hand, our study has direct implications for CEOs. As stressed by Zimbardo and Boyd (1999), few executives are aware of their temporal foci. As our study shows, however, it is of vital importance for successor CEOs to understand how their temporal biases influence organizational performance. Because temporal foci can be adapted to situational demands (Holman & Silver, 2005), a successor CEO may adopt a past focus to strengthen post-succession firm performance.

4.6.3 Limitations and directions for future research

Our results have to be considered in light of a number of limitations. First, our sample of private banks was suitable for studying the role of temporal foci because the impacts of executive characteristics are particularly evident during an industry-level discontinuity, such as the fall of banking secrecy. We acknowledge, however, that few organizations are in a perpetual state of crisis. Our original results became, indeed, partially insignificant once we added banks that were active in segments other than wealth management. Future research may, therefore, test the generalizability of our findings to other contexts, such as benign environments.

Second, we acknowledge that CEO succession is not a single event but a lengthy process (Berns & Klarner, 2017). Future research could, thus, examine how the effects of temporal focus vary across post-succession stages (Giambatista, 2004). It is possible, for instance, that the positive contingency related to past orientation fades away once the tenure of a successor CEO increases. Building upon lifecycle theory, this appears to be reasonable because CEOs tend to become inert over time. Jansen and Shipp (2019), for instance, argued that perceptions of retrospect, present and anticipated fit change with organizational tenure.

Third, we call for additional research on the temporal fit between newly appointed CEOs and TMT members. Although the authors of some studies emphasized benefits related to temporal diversity (Briker et al., 2020; Mohammed & Harrison, 2013), others highlighted inherent risks due to misunderstandings and conflict. Gibson et al. (2007), for instance, advised new TMT members to adopt similar temporal foci “to survive within the firm” (1013). Resolving these seemingly opposing perspectives may provide another interesting avenue for future research.

Fourth, we exclusively examined the construct of temporal focus. In addition to temporal focus, however, a successor CEO’s overarching temporal personality encompasses other temporal dispositions (Shipp & Aeon, 2019). Hence, succession research could move beyond temporal foci to develop an even richer understanding of subjective temporality. Polychronicity, for example, refers to the “extent to which an individual prefers to be involved with several tasks simultaneously” (Slocombe & Bluedorn, 1999: 75). It is unrelated to temporal foci because it primarily structures managerial behavior in the present (Shipp et al., 2009). Hence, it may help provide a fine-grained view of successor CEOs’ present orientation.

Fifth, we had to deal with a sufficient, but sparse, set of company data because few of the private banks under study were publicly listed. Despite endogeneity controls and firm fixed effects, our findings may still be subject to bias due to omitted variables, which may diminish the potential to make strong causal claims. Hence, it would be interesting to draw on a larger set of control variables, such as CEO experience (Georgakakis & Ruigrok, 2017), CEO dismissal (Wiersema & Zhang, 2011), post-succession TMT change (Shen & Cannella, 2002b; Tushman & Rosenkopf, 1996; Virany et al., 1992) and board power (Datta et al., 2003).

To mitigate spurious effects related to earnings management, we measured post-succession performance on a three-year basis. Typically, new CEOs reduce corporate earnings in the year of the succession event but increase them in the subsequent year (e.g., Pourciau, 1993). Successors with a strong future focus are less likely than others to adjust short-term profits because they pay more attention to distant goals (DesJardine & Shi, 2021; Foo et al., 2009). Future researchers could, hence, explicitly control for earnings management tactics to rule out this alternative explanation.

Finally, we measured successor CEOs' temporal foci based on LTSs. Despite some criticism, this approach has become a common practice in management research (Gamache et al., 2015; Laamanen & Wallin, 2009; Nadkarni & Narayanan, 2007; Surroca et al., 2014). Numerous studies reported significant changes in the length, content and style of LTSs after the appointment of a new CEO (e.g., Eggers & Kaplan, 2009; Gamache et al., 2015). Future research may, however, replicate our study using other sources of textual data, such as earnings calls.

4.6.4 Conclusion

Despite the relative maturity of succession research, we were among the first researchers to examine contingency effects related to successor CEOs' temporal foci in the succession-performance relationship. Temporal focus is an important cognitive bias because it directs managerial attention and subsequent action to a particular temporal domain. Acknowledging the temporal heterogeneity of successors, we found that CEOs with a strong past focus strengthen post-succession firm performance, whereas those with a strong future focus weaken it. We hope our study encourages further research on the role of CEOs' temporal personality and executive succession.

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5. Concluding Remarks

My dissertation contributes to a nascent but steadily increasing research stream on the role of top management's temporal biases in strategic decision-making (Kunisch, Bartunek, Mueller, & Huy, 2017; Shipp & Jansen, 2021; Tang et al., 2019). Referring to Figure 1, I want to restate and critically reflect on its four overarching contributions to management theory.

First, in this dissertation, I shed light on the important relationship between top management's temporal biases and organizational performance (Back et al., 2020; Nadkarni et al., 2016). Study 1 reported temporal foci to be associated with survival prospects, whereas Studies 2 and 3 established a relationship between temporal foci and profitability. In these three studies, I found that top management's past and future orientation have significant effects on firm performance. In contrast, a strong focus on the present was not found to be related to firm performance in any of the studies. This lends further support to the distinction introduced by Zimbardo and Boyd (1999). They conceptualized past and future orientation as *top-down* constructs because they involve complex mental processing, such as thinking, feeling and intuition (Hurst et al., 1989). Present orientation, however, has been presented as a *bottom-up* construct that serves as a reference point for past- and future-oriented cognition but lacks meaning on its own.

Second, I addressed explicit calls in the management literature to examine the interplay between subjective and objective temporality (Shipp & Cole, 2015; Shipp & Jansen, 2021). Accordingly, I drew on notions of linear clock time and cyclical event time. In Study 1, the effect of past orientation on firm survival is contingent on clock time. Specifically, top management's past orientation reduces survival prospects during institutional change, but this positive effect becomes weaker over time because environmental uncertainty is gradually resolved. Drawing on event time, I centered Study 3 on the phenomenon of executive succession, which divides the continuous passage of clock time into smaller episodes. I found that the temporal foci of successor CEOs influence post-succession firm performance in distinct ways. Successor CEOs with strong past orientation are positively associated with post-succession performance, whereas those with strong future orientation are negatively associated with it. Taken together, I have not controlled for temporal effects through year dummies only but explicitly searched for hidden patterns of objective temporality.

Third, I addressed frequently expressed concerns about whether temporal foci are indivisible and operate in isolation from other psychological attributes (Dane & George, 2014; Levasseur et al., 2020). In response to these calls, Study 2 examined temporal and affective foci in concert (Carelli et al., 2011; Kooij et al., 2018; Park et al., 2017; Zimbardo & Boyd, 1999). To the best of our knowledge, it is among the first studies in which the micro-level construct of temporal attitude is applied to strategy research. Future research may also study the interplay of top management's temporal and regulatory foci (Strobel et al., 2013; Tuncdogan & Dogan, 2020). In Study 1, I examined temporal and regulatory foci but not their joint effects because these effects could be driven by relatively few observations. Depending on their regulatory foci, however, executives with a strong past focus may be motivated to expand traditional business models or reduce exposure to new ones. Similarly, those with a strong future focus may cultivate new business models or abandon traditional ones.

Fourth, I presented evidence that top management's temporal biases help explain differences in firm performance during an environmental crisis. Each of the three studies has been situated in an industry context of transformation and change. The dissertation, therefore, extended prior strategy research in which industry dynamism was applied as a potential contingency (e.g., Back et al., 2020; Nadkarni & Chen, 2014). I examined the impact of top management's past and future foci during a major industry-level discontinuity that threatened the survival of an entire industry population (KPMG, 2016) and depreciated the industry's median ROE for many years (KPMG, 2015). Future researchers may test the generalizability of the findings presented here, for example, by applying the research designs to benign industry environments.

As previously outlined, there is plenty of opportunity for future research on top management's temporal foci. Although temporal focus theory has gained noteworthy traction in strategy literature, its journey has just begun. In the foreseeable future, scholars may gain access to an expanded arsenal of research methods, such as video-metric analysis. I sincerely hope this dissertation will join a lively stream of strategy research on the role of top management's temporal foci during transformation and change. I will keep an eye on this important research stream because it offers a nuanced understanding of strategic decision-making and firm performance in an increasingly complex and uncertain world.

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