



Risk management during the COVID-19 crisis: insights from an exploratory case study of medium-sized family businesses

Julia Riepl¹ · Christine Mitter^{1,2} · Michael Kuttner¹

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Abstract

Current crises pose uncertainties and threats to family businesses (FBs), demonstrating the importance of risk management (RM). Based on an explorative case study of nine Austrian medium-sized FBs, we examine the design of RM in FBs and how the COVID-19 crisis impacts their RM practices. The findings highlight that the medium-sized FBs analyzed generally rely on both formal and informal RM, and that these structures are strongly connected to their unique stewardship culture. In the wake of the COVID-19 crisis, formal RM gained increased relevance, prompting FBs to allocate additional resources for its professional upgrading. Likewise, when confronted with heightened risks during the COVID-19 crisis, informal practices such as family bonds and close ties to employees and customers are not only reinforced but also proven highly effective, resulting in increased loyalty. The COVID-19 crisis serves as a compelling illustration of how both informal and formal RM methods have grown in strength. The synergy between these RM methods enhances risk awareness within FBs, ultimately fostering resilience during unpredictable and uncertain times.

Keywords COVID-19 crisis · Exploratory case study · Family businesses (FBs) · Risk management (RM) · Resilience · Stewardship theory

✉ Julia Riepl
julia.riepl@fh-salzburg.ac.at

Christine Mitter
christine.mitter@fh-salzburg.ac.at

Michael Kuttner
michael.kuttner@fh-salzburg.ac.at

¹ Area of Accounting & Financial Management, Salzburg University of Applied Sciences, Puch, Salzburg, Austria

² Department of Economics and Finance, University of the Free State, Bloemfontein, South Africa

1 Introduction

The increasingly complex and uncertain environment that companies face due to various crises, such as the COVID-19 crisis, poses challenges for many companies (Kraus et al., 2020). In particular, crises and their effects might endanger the continued existence and stability of companies (Firfiray & Gómez-Mejía, 2021) and may generate additional risks (Maffei & Spanó, 2021; Santos et al., 2022). Especially family businesses (FBs) are threatened by the consequences of a crisis due to their specific ownership structure and limited (financial) resources (Kraus et al., 2020). Consequently, they appear to be particularly vulnerable during the COVID-19 crisis (Firfiray & Gómez-Mejía, 2021). The ability to adapt to new circumstances that have arisen during the crisis (Firfiray & Gómez-Mejía, 2021), and a forward-looking approach to managing a company during crises in general (Crovini, 2022) are thus of decisive importance for the success of companies. Risk management (RM) is essential for maintaining competitiveness and overcoming crises (Armeanu et al., 2017). It supports risk awareness (Braumann, 2018), can spur enhanced adaptability and thus promotes resilience (Dahms, 2010). Resilience encompasses the capacity of an organization to anticipate potential threats proactively, manage adverse events, and dynamically adjust to evolving conditions (Duchek, 2020). Given the uncertainty that prevailed during the COVID-19 crisis (Castro & Zermeño, 2021), RM, with its resilience-enhancing qualities, seems to be a decisive factor in the survival of FBs.

Although FBs are exposed to unique risks, such as succession risk (Mitter et al., 2022a), and aim at transgenerational survivability (Le Breton-Miller & Miller, 2009), formal RM is applied to a lesser extent in FBs (Hiebl et al., 2019). The high importance FBs place on social ties and stewardship culture (Gao et al., 2013; Mitter et al., 2022a) often leads to informal RM practices (Gao et al., 2013; Herbane, 2010; Mitter et al., 2022b). However, this tendency towards less formalized RM in FBs does not mean that informal RM methods are merely spontaneous and unplanned. Conversely, informal RM methods provide a holistic view of RM (Moschella et al., 2023) and turn out to be decisive risk strategies. In this context, risk strategies such as the better assessment of risks often emerge as a result of the trustworthy stakeholder relationships inherent to FBs (Mitter et al., 2022a).

However, external shocks and changing market conditions (Firfiray & Gómez-Mejía, 2021) impact management accounting practices such as RM (Soin & Collier, 2013). For instance, due to the actions taken in the wake of the COVID-19 crisis (e.g., limited face-to-face communication), social ties with FB stakeholders are suffering (Firfiray & Gómez-Mejía, 2021). Therefore, it remains largely unclear how the COVID-19 crisis impacts formal and informal RM practices in FBs. This largely unanswered question in the academic literature highlights the novelty of the topic of RM in FBs in the specific context of the COVID-19 crisis (Santos et al., 2022). Relying on an exploratory study (Stebbins, 2001), the present paper tackles this research gap. Taking medium-sized FBs as examples, we aim to answer the following research questions:

How is RM designed in medium-sized FBs?

How does the COVID-19 crisis impact formal and informal RM methods of medium-sized FBs?

The findings of our exploratory study contribute to the literature in several ways. First, our paper provides insights into the way Austrian medium-sized FBs draw on formal and informal RM methods, as well as the interplay between these instruments in addressing and managing risks. Second, we shed light on how the COVID-19 crisis affects RM in medium-sized FBs. The FBs investigated in our study exhibit an increased reliance on formal and informal RM during the COVID-19 crisis, which contributes to greater risk awareness and resilience during times of crisis. The impact of external forces and market conditions on management accounting in FBs is scarcely researched in the literature (Kapiyangoda & Gooneratne, 2021). We illustrate how one external shock, namely the COVID-19 crisis, influences RM in FBs, and we, therefore, contribute to the management accounting literature by demonstrating modifications in RM and the interplay between formal and informal methods associated with changing external conditions. Since our paper is one of the first to address this under-researched area, it ultimately underpins the benefits of RM methods during times of crisis.

Our paper is structured as follows: Following the introduction, FBs are defined, and their unique characteristics are explained by drawing on stewardship theory as our theoretical framework. Subsequently, RM and crises are described. Thereafter, the methodology is explained, and the main findings of the explorative qualitative case study are presented and discussed. Finally, our study ends with a concluding summary, limitations, and implications.

2 Family businesses and risk management during times of crisis

2.1 Family businesses from a stewardship perspective

FBs represent one of the oldest types of organizations and form the backbone of economies worldwide (Botero et al., 2015; Jovic et al., 2023). The high prevalence of FBs is particularly evident in Europe—depending on the definition and country chosen, between 55 and 90 percent of all firms are FBs (KPMG International Cooperative, 2018). Although the company size of European FBs ranges from one person to large international companies (European Commission, 2009), the majority can be categorized as small and medium-sized enterprises (SMEs) (IFB Research Foundation, 2019). In Austria, the FB share ranges from 50 to 87 percent of all companies, employing between 63 and 67 percent of all employees (Gavac et al., 2020), which emphasizes the predominance of this company type in the Austrian corporate landscape. Given the challenge of defining FBs (Handler, 1989; Steiger et al., 2015), our study refers to the broad definition given by Chua et al. (1999, p. 25), who define a FB as “a business governed and/or managed with the intention to shape and pursue the vision of the business held by a dominant coalition controlled by members of the

same family or a small number of families in a manner that is potentially sustainable across generations of the family or families.”

To explain the characteristics of FBs, we draw on stewardship theory (Davis et al., 1997), which reflects the unique culture of FBs (Eddleston, 2008; Zahra et al., 2008). According to stewardship theory, the actions of the so-called stewards (e.g., family owners) primarily focus on non-financial or intrinsic motives (Zahra, 2003), which determine stakeholder relationships (van Puyvelde et al., 2012). Furthermore, stewards act in the collective interest of the firm (Davis et al., 2010). Stewardship theory includes three forms of expression: stewardship over continuity, stewardship over employees, and stewardship over customers (Miller et al., 2008). Stewardship over continuity implies that continuity has a high priority for the owners of the FB and that non-financial goals, such as image and reputation, are attributed a high significance (Le Breton-Miller & Miller, 2009). Continuity is expressed in the longevity of the FB or transgenerational survivability as the overriding goal (Le Breton-Miller & Miller, 2006, Miller et al., 2008; Zellweger et al., 2013). Consequently, owners have strong socio-emotional ties to the FB (Gómez-Mejía et al., 2007), which should be preserved for future generations (Zahra, 2003). The identification of family members with the FB, the sense of kinship ties, and personal and social fulfillment contribute to a careful responsibility for the welfare and continuity of the FB (Arregle et al., 2007; Miller et al., 2008). A culture of family commitment to FBs also helps to establish a solid organizational identity (Zahra et al., 2008). Stewardship over employees refers to responsibility towards employees and includes, for example, their further development and motivation. Creating a flexible working environment (e.g., home office options) and an inclusive culture also contribute to employee satisfaction (Eddleston et al., 2012; Miller et al., 2008). As a result, employees have close, trustful, and familiar relationships with the owners, which are intended to ensure the long-term continuity of the FB (Le Breton-Miller & Miller, 2006; Miller & Le Breton-Miller, 2005). Stewardship over customers is based on close, lasting ties with customers and other stakeholders (e.g., suppliers or banks) (Arregle et al., 2007; Sirmon & Hitt, 2003). Personal relationships between family members, employees, and other stakeholders optimize mutual understanding and increase loyalty (Miller et al., 2008). This interpersonal behavior contributes to the long-term survival of FBs (Miller & Le Breton-Miller, 2005).

When operating in an environment that is uncertain and characterized by risks, employees who act as stewards are more likely to be open to innovation, take calculated risks, and explore new strategic options without concerns for the potential negative consequences on their employment or professional standing within the company (Zahra et al., 2008). Hence, in such situations, of which the COVID-19 crisis is a pertinent example, the stewardship culture of FBs reflected in commitment, trust, and loyalty may have a positive impact on strategic flexibility, i.e., the ability to actively seek out novel opportunities and effectively respond to potential threats within the competitive environment. Since a culture of trust spurs resilience (Cheese, 2016), and FBs are characterized by such a culture (Miller & Le Breton-Miller, 2005), they should exhibit high levels of resilience (Amann & Jaussaud, 2012; Amore et al., 2022; Czakon et al., 2023; Salvato et al., 2020).

2.2 Risk management and crises

RM encompasses the identification and implementation of procedures and methods to handle unforeseen favorable or unfavorable events inherent to an organization's activities, intending to attain specific objectives and protect its assets (Ferreira de Araújo Lima et al., 2020; Hollman & Mohammad-Zadeh, 1984; Verbano & Venturini, 2013). Its primary focus is achieving the company's goals and ensuring its existence and continuity (Verbano & Venturini, 2013). Therefore, RM is a decisive factor for the company's survivability (Falkner & Hiebl, 2015; Ferreira de Araújo Lima et al., 2020). This aspect seems particularly important for FBs, as the corporate family attaches high importance to transgenerational survival and, thus, stewardship over continuity (Miller et al., 2008; Zellweger et al., 2013). In general, RM refers to the process that includes the identification of relevant risks as a first step and is followed by the analysis and assessment of the identified risks. The third step involves RM using risk strategies, based on which the risks are monitored in the last step (Gao et al., 2013; Marcelino-Sádaba et al., 2014).

Scholars and institutions distinguish between formal and informal (RM) methods, which differ in structure and documentation (e.g., COSO, 2017; Daft & Macintosh, 1984; Gao et al., 2013). Formal controls, such as formal RM instruments (Soim & Collier, 2013), are characterized primarily by a systematic and explicit approach comprising rules, procedures, and structures. These are designed to help managers ensure that their organizational strategies and plans are implemented effectively and thus involve monitoring, measuring, and counter-measures in case of deviations (Daft & Macintosh, 1984; Langfield-Smith, 1997). Formal RM often follows a clear plan of procedure. The steps that are carried out are clear, distinct, built on each other, and subsequently documented in written form (e.g., in a handbook). In general, management accounting instruments are often assigned to formal RM (Gao et al., 2013). Informal RM is not a systematic but rather an intuitive approach to managing risks. Instead of documented procedures and plans, informal RM relies on the experience and judgment of individuals to identify and address risks (Gao et al., 2013; Mitter et al., 2022a). Culture shapes RM and is crucial in achieving successful RM (COSO, 2017). Ethical values, beliefs, and traditions guide behavior (Norris & O'Dwyer, 2004), entail fostering a risk awareness culture (Braumann, 2018), and reflect informal RM (Braumann et al., 2020).

Pearson and Clair (1998, p. 60) define an organizational crisis as “*a low probability, high-impact event that threatens the viability of the organization and is characterized by ambiguity of cause, effect, and means of resolution*”. Characteristics of crises include uncertainty, time pressure, rapid decision-making, threat, and risk. Crises often impact key stakeholders (e.g., employees or suppliers) (James et al., 2011) and include, for instance, a deterioration of reputation, liquidity problems, or a threat to survival. As external crises occur infrequently, organizations are rarely prepared for them and/or may never have faced a crisis of this magnitude before (James & Wooten, 2005). The COVID-19 crisis is described not only as a drastic global health crisis but also as a global economic crisis (McKee & Stuckler, 2020). The ability to adapt to the new circumstances created by the COVID-19 crisis, and

therefore also resilience, are crucial to the success of companies (Firfiray & Gómez-Mejía, 2021; Salvato et al., 2020).

Given that crises are, to some extent, unexpected and sudden events (James et al., 2011), particular importance should be attributed to RM due to its proactive nature (Ferreira de Araújo Lima et al., 2020). RM should identify crises before they occur so that measures can be derived early and contribute to crisis preparedness (Somers, 2009). Consequently, using RM methods can enable better adaptability and flexibility during times of high uncertainty (Dahms, 2010; Settembre-Blundo et al., 2021). This way, RM contributes to firm resilience, resulting in a competitive edge by enabling a more adaptable and flexible organization (Armeanu et al., 2017; Dahms, 2010; Duchek, 2020).

2.3 Risk management in family businesses

Although growing in recent years, the extant literature on RM in FBs is still scarce (Hiebl et al., 2019; Mitter et al., 2022b). Thus, we sometimes draw on research on RM in SMEs. Concerning RM, small and medium-sized FBs and/or SMEs are confronted with different risks (Falkner & Hiebl, 2015; Henschel, 2006; Mitter et al., 2022b) and accordingly exhibit a high degree of vulnerability (Firfiray & Gómez-Mejía, 2021). They tend to have a small customer and supplier base, which can lead to strong interdependencies (Mitter et al., 2022b). In addition, limited human capital and knowledge can lead to further risks. The loss of important and experienced employees is particularly risky (Gilmore et al., 2004).

Although FBs face various risks that pose a threat to their long-term existence, they mainly follow a limited identification of risks and a passive, reactive approach to risks (Brustbauer, 2016). Moreover, RM is adopted to a lesser extent in FBs (Faghfoury et al., 2015; Hiebl et al., 2019). However, the formalization of RM or management accounting depends on the company size (Feldbauer-Dürstmüller et al., 2012; Giovannoni et al., 2012; Hiebl et al., 2019). Smaller FBs often do not have the necessary resources or hardly recognize the benefits of formal RM (Mitter et al., 2022a, b). This is similar to SMEs, whose RM is also found to be rudimentary (Verbano & Venturini, 2013) or less sophisticated (Britzelmaier et al., 2015; Crovini, 2019; Henschel, 2006). RM is often still considered a “spot” project within SMEs (Crovini et al., 2021a). As companies grow in size, the use of risk analysis and quantitative methods also increases (Crovini et al., 2021b; Hoyt & Liebenberg, 2011), and RM becomes more sophisticated (Paape & Speklé, 2012).

To close the company size-related gap in RM, previous scholars (Britzelmaier et al., 2015; Henschel, 2006; Verbano & Venturini, 2013) have advocated for the implementation of international standards and formalized procedures, such as the COSO framework for SMEs. Such a framework provides a clear structure for the identification, analysis/assessment, management, and monitoring of risks. By applying the COSO framework, companies are able to make better decisions as they develop a greater understanding of their risks and opportunities. This supports a

more long-term and strategic approach, which strengthens the potential for overcoming crises (COSO, 2017). As SMEs are often FBs (IFB Research Foundation, 2019), this may also apply to FBs.

However, such approaches neglect the unique characteristics of companies and the limitations that arise from applying practices initially designed for larger and more established firms (Crovini et al., 2021b). Indeed, RM is strongly influenced by corporate characteristics and culture (Falkner & Hiebl, 2015). FBs are characterized by a unique stewardship culture that also impacts RM, particularly in smaller FBs (Mitter et al., 2022a). In smaller companies, the owner often carries out RM (Henschel, 2006; Henschel & Durst, 2016; Watt, 2007). This is also applicable to FBs, where risks are primarily managed through the personal intuition of the owner-manager (Mitter et al., 2022a), and is explained by the owner-manager's desire to maintain control over the company. The desire to preserve control hinders the implementation of formal tools for enhancing crisis prevention, as doing so would necessitate greater transparency and objective oversight of corporate processes, potentially resulting in a compromise of their privacy and authority (Faghfour, 2012). Thus, the owner strongly shapes and influences RM in FBs (Mitter et al., 2022a). The relevance of the owner or CEO in setting the stage for RM and creating risk awareness is captured in the "tone from the top" concept, an informal control practice that comprises two dimensions: First, the CEO's top-down commitment to RM by dedicating time, effort, and resources to risk issues and communicating behavioral expectations concerning RM. Second, a bottom-up perspective, whereby the CEO encourages organizational attention to risk and risk-related communication throughout the company (Braumann et al., 2020). Within FBs, the relevance of the "tone from the top" is also reflected in the strong role of the corporate family in specifying the risk approach and RM practices. Potential risks are primarily addressed within the corporate family, often occurring outside regular working hours, highlighting the significance of ensuring the ongoing existence of the FB (as a manifestation of stewardship over continuity) (Mitter et al., 2022a). Moreover, long relationships with employees (as a manifestation of stewardship over employees) imply a risk mitigation strategy by counteracting risks such as the shortage of skilled workers or staff turnover. In addition, the personal and trusting relationship should facilitate the assessment of risks (Mitter et al., 2022a, b). Likewise, close ties with customers and other stakeholders (as a manifestation of stewardship over customers) help FBs identify and manage risks (Mitter et al., 2022a, b). Hence, these examples demonstrate that FBs strive for a holistic approach in RM endeavors that integrate the family's, employees', and customers' perspectives as a reflection of their stewardship culture.

The above mentioned RM methods are rooted in stewardship culture and serve as social controls. Social controls include mechanisms and strategies designed to achieve a high degree of congruence on norms and values (Brenner & Ambos, 2013) and are, therefore, informal in nature. Informality, however, does not lead to a reduction in the effectiveness and efficiency of companies, nor does it pose a threat to the continued existence of companies (Speckbacher & Wentges, 2012). This indicates

that informal controls should not be considered irrelevant to the exercise of RM in FBs. Furthermore—as already stated—informal RM enables a holistic perspective (Moschella et al., 2023) and adds to risk awareness (Braumann et al., 2020). A risk awareness culture is generally promoted by open communication between the management and employees, creating an environment of trust and openness towards discussing risks. By analyzing and discussing key figures, for example, in face-to-face meetings between top management and employees, employees can be motivated to consistently address risk-related issues, resulting in increased risk awareness (Braumann et al., 2020). Employees should become an integral part of the RM process, perceive risks, and communicate them to the manager (Domańska-Szaruga, 2020). Accordingly, involving trusted employees in RM can strengthen RM approaches and risk awareness of FBs. Strong risk awareness enables businesses to leverage their understanding of the major risks and adapt proactively to changing environmental conditions (Banks, 2012), which enhances resilience (Morsut et al., 2022).

Although the literature review underlines the predominance of informal RM methods in (smaller) FBs, the neglect of formal RM methods is also associated with drawbacks. Even though informal controls are characterized by a high degree of flexibility and allow managers to decide more “situationally” (Kreutzer et al., 2016), they lack clear guidance and structure, which can have serious consequences (Chenhall & Morris, 1995; Davila et al., 2009; Henri, 2006). Relying strongly on social controls can increase the risk of groupthink and isomorphism, which might lead to less openness or collective blindness (Villena et al., 2011). Therefore, the predominance of informal controls can impair adaptability to new contexts (Kreutzer et al., 2016). This narrow-mindedness (Adler & Kwon, 2002) seems to have been particularly problematic during the COVID-19 crisis, as government restrictions (e.g., lockdowns) almost forced many companies to change their business model (Leppäaho & Ritala, 2022). In the context of FBs, social ties with employees as an informal RM method (Mitter et al., 2022b) can lead to an aversion to layoffs (Block, 2010), causing inflexible cost structures. Close relationships with stakeholders may also lead to trust-based rather than rational decisions, increasing the risk of bad debts (Mitter et al., 2022c). Formal RM might be essential for safeguarding against these threats. It allows FBs to identify potential risks early, such as excessive dividends, rigid cost structures, or deteriorating customer creditworthiness, and take timely countermeasures (Mitter et al., 2022b). However, the predominant use of formal RM also comes with disadvantages. Although formal controls provide companies with clear guidance (Ouchi & Maguire, 1975) and structure (Chenhall & Morris, 1995), they also entail rigidity and inflexibility (Burgelman, 1983).

A complementary use of formal and informal controls provides opportunities to reduce the constraints inherent in depending on only one form of control (Kreutzer et al., 2016). Recent literature (see Ströbele & Wentges, 2018 for a review) emphasizes higher performance in terms of returns on investment and sales growth by integrating formal and informal control, particularly in organizations with higher

levels of social capital,¹ such as FBs (Pearson et al., 2008). Especially during times of crisis, this combination should unfold its advantages, as decisions must be made quickly due to volatility (in favor of informal controls). At the same time, clear guidance and explicit procedures are needed to navigate the company through the crisis in a structured manner (in favor of formal controls). Whether and how external forces affect management controls remains largely unexplored (Kapiyangoda & Gooneratne, 2021). Taking the external shock of the COVID-19 crisis as an example, we aim to investigate the impact of this crisis on RM methods in an exploratory, qualitative study.

3 Methodology

As knowledge about RM in FBs in general and in particular in the specific context of an external shock such as the COVID-19 crisis is scarce, we conducted an exploratory, qualitative study. An exploratory study aims to investigate a topic or phenomenon in an initial, preliminary way and generate insights and ideas that can be used to inform further research (Stebbins, 2001). A qualitative research design is particularly suitable for complex phenomena (Queirós et al., 2017). Accordingly, conducting an exploratory study using qualitative research appears to be the most appropriate approach for gaining in-depth insights into the RM of FBs and the impact of the COVID-19 crisis. Data was collected using semi-structured interviews with medium-sized FBs. Interviews are of particular importance in the context of qualitative research and data collection, by providing access to aspects of subjective experience. This method of data collection thus allows deep insights into experiences, opinions, processes, or behaviors (Rowley, 2012). As interview partners, we approached the owners of the medium-sized FBs since they are the predominant players in RM (see Sect. 2.3). An internet search using convenience sampling was conducted to identify possible FBs that meet Chua et al.'s (1999) FB definition. This yielded 957 FBs in Austria. This initial search was broad and had no size constraints. We aimed to restrict our sample to medium-sized FBs according to the European Commission's (2003) recommendation with 50 to 249 employees, an annual turnover of more than 10 million euros up to a maximum of 50 million euros, and/or total assets of more than 10 million euros up to a maximum of 43 million euros. Since the annual turnover and/or total assets are often not apparent on the webpage, we initially relied solely on the number of employees for size categorization. Annual turnover and total assets were then verified in the next step when contacting the companies. According to the number of employees, nearly three-quarters of the FBs could be categorized as a micro (one to ten employees), small (eleven to 49 employees), or large (at least 250 employees) company and were therefore excluded. Subsequently, we checked the webpages of the remaining FBs to

¹ Social capital refers to the network of relationships, trust, norms, and social connections that exist within a community and is built through social interactions, mutual trust, and shared values among individuals or groups (Pearson et al., 2008).

determine if they are headquartered in Austria or if it is only a branch with a foreign mother company. Ultimately, we identified 99 FBs that met the required employee size and were located in Austria, including FBs from various industries and federal states in Austria, to allow a more comprehensive exploration of our research topic. These FBs were contacted via email; if no response was received, we followed up by phone. This finally resulted in a sample of nine medium-sized FBs.

Table 1 provides an overview of the descriptive information of the nine FBs. The investigated FBs operate in four different industries. All of them are organized as limited liability companies. Furthermore, they were founded between 1886 and 2004 and are managed by at least the second generation. At least one member of the corporate family works in the FB. The interviewees have different educational backgrounds, including both academic and professional qualifications, and have predominantly gained commercial work experience prior to their current roles.

The interviews were conducted according to a semi-structured interview guide, which provides a framework for orientation, but the sequence of the questions was adapted where necessary. After asking general questions about the interviewee (e.g., highest educational attainment) and the company (e.g., business activity, year of establishment, or generation), we proceeded to discuss RM in the investigated FB in general and the impact of the COVID-19 crisis. In detail, the interview guide encompassed the following aspects: (1) FB culture and its influence on the firm's risk culture and approach; (2) FB's definition of risk (management) and specific risks; (3) methods (including formal and informal methods) in managing these risks in general; (4) changes due to the COVID-19 crisis in the risk areas investigated under (1) to (3). While only the latter two points specifically aim to answer our research questions, the former aspects (1) and (2) contribute to a better understanding of the precise RM methods of FBs and the changes that result from the COVID-19 crisis. The questions were designed to be as broad and open as possible, i.e., only general aspects of the characteristics of FBs (such as long-term commitment and close stakeholder relationships) were addressed, and deliberately no reference was made to the stewardship dimensions. Similarly, questions were not yet asked that would allow classification into formal and informal RM. The first interview served to test the interview guideline, which was subsequently adapted. The interviews were conducted from April to May 2020 and varied in duration, lasting between 30 and 70 min each. The interviews were digitally recorded with the informed consent of the participants and subsequently transcribed. The completed transcripts were then sent back to the respondents for approval and correction of misunderstandings. Data collection persisted until authors began encountering recurring information, signifying the attainment of "saturation" (Saunders et al., 2018). This method was instrumental in uncovering clear trends within the core concepts, connections, and underlying rationale (Eisenhardt, 1989; Eisenhardt & Graebner, 2007).

The collected data was evaluated using cross-case pattern searching methods (Eisenhardt, 1989). Based on this, a multiple case study approach allows for identifying subtle similarities and differences in the analyzed cases. If similar patterns emerged in multiple cases, there was support for developing a preliminary theory (Eisenhardt, 1989; Eisenhardt & Graebner, 2007; Yin, 2014). We followed the general inductive approach outlined by Thomas (2006), which allows issues to emerge

Table 1 Descriptive information on the medium-sized FBs

Industry/case	Business activity	Year of establishment	Generation	Number of employees ^a	Revenues ^b (million €)	Total assets ^b (million €)	Family members in the firm
Food industry 1	Processing and sale of meat	2004	2	90	25	N/A	5
Food industry 2	Bakery	1893	4	168	12	8	3
Food industry 3	Beverage production	1886	4	52	48	N/A	1
Food industry 4	Breeding and sale of poultry	1909	5	175	103	30	6
Construction industry 1	Construction and sale of real estate	1996	2	200	45	16	5
Construction industry 2	Plumbing and building services	1982	2	80	14	5	5
Construction industry 3	Construction and sale of real estate	1951	3	120	20	6	2
Automotive industry	Automotive distribution	1983	2	54	79	31	1
Wood industry	Production and sale of wood floors	1919	2	110	20	12	4

^aFull-time equivalent

^bYear 2019

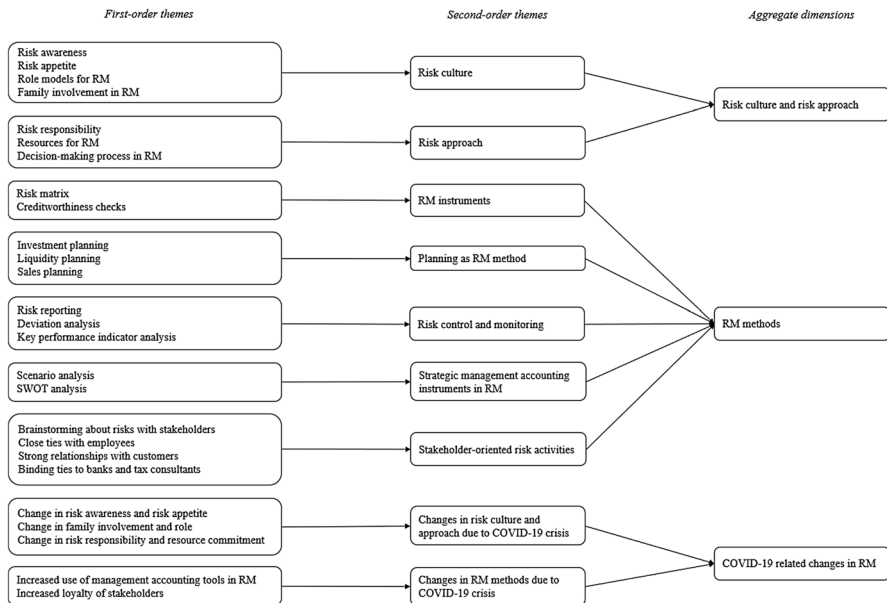


Fig. 1 Data coding

without establishing a coding scheme before. An inductive approach represents an alternative to deductive coding (Azungah, 2018) and is often used within qualitative studies related to RM (e.g., Gao et al., 2013; Mitter et al., 2022a, b; Poba-Nzaou et al., 2014). The general inductive approach by Thomas (2006) is characterized by a systematic procedure whereby the content of the text material is successively reduced by reading it several times until a general level of abstraction is reached. If a pattern was identified in one transcript, all other transcripts were also analyzed and coded according to this pattern, thus highlighting significant aspects. Similar patterns were then clustered into categories. Since a code could be a word or phrase (Saldaña, 2021), we generated an initial code when this word or phrase was mentioned several times in various interviews. Examples include risk awareness, risk responsibility, risk matrix, or SWOT analysis. Subsequently, these first-order themes were clustered into second-order themes by sorting and summarizing (e.g., risk culture, risk approach, RM instruments, or strategic management accounting instruments in RM). In the next step, the second-order categories were aggregated into broader RM dimensions: risk culture and risk approach, risk methods, and COVID-19-related changes in RM. See Fig. 1 for an overview of our data coding. Moreover, we analyzed our codes by their formality. Depending on the existing structure and documentation, we assigned them to formal RM methods (e.g., SWOT analyses follow a clear structure and are documented in written form—see Sarsby, 2016) or informal RM methods (e.g., risk awareness is culture-driven and cannot be carried out in a structured manner—see Braumann, 2018). As a last step, we related the codes to the three stewardship dimensions to contribute to theory building. For example, SWOT analyses help to ensure the long-term survival of the FBs and could

thus be assigned to stewardship over continuity. Based on our findings, the identified patterns were compared with RM research and related studies to discuss differences and similarities.

4 Findings and discussion

4.1 Risk management in family businesses in general

All investigated medium-sized FBs are 100% owned by the corporate family. Therefore, disagreements with non-family shareholders are avoided, and a stable structure of FBs (as a manifestation of stewardship over continuity) is secured. In all FBs, the ultimate responsibility and decision for RM are clearly defined and lie with the corporate family. Establishing clear responsibilities for RM requires a certain degree of formalization and documentation, which reflects formal RM. However, risks are not only discussed among in-company family members; external family members (e.g., children of the owner-managers) are also included in RM by discussing risks privately outside the FB (e.g., during meals). This might be attributed to the principle of stewardship over continuity. The long-term existence should be ensured through the involvement of family members, even those outside the firm. This illustrates the central role of the corporate family, both internal and external to the company, in the RM of FB. This appears to be informal and subtle, reflecting informal RM in FBs.

Risk appetite depends on the characteristics of the owner. However, no matter whether the investigated FBs generally describe themselves as more risk-averse or risk-taking regarding capital-intensive and thus risky projects, the thought of the future and possible risks prevails in all FBs in every such decision. This might be explained by stewardship over continuity, as the owner of the construction industry 3 illustrates: *“Of course, one also has to ask oneself: What company size do I need to be able to survive on the market in the future? Is it 10, 20, or 30 employees? Will construction companies still have 100 employees in 10 years, or will they no longer exist? These are very controversial things, where you ask yourself: What does the company need to be competitive in the future?”* Being aware of risks also helps to preserve the company and thus promotes resilience.

However, not only does general risk awareness contribute to FBs' resilience, but close stakeholder relationships also help FBs to manage risks. All owners of the FBs describe their relationship with employees (as a manifestation of stewardship over employees) as close, friendly, open, and partly familiar. However, there is a difference between long-tenured employees and those who have only recently joined the company, with the former showing more loyalty (e.g., lower fluctuation). As a reflection of the responsibility felt for their employees, all nine medium-sized FBs offer further education or training programs. This serves as an informal social control, where employee turnover is mitigated through initiatives such as offering opportunities to attend courses from the Austrian Chambers of Commerce, enabling them to advance within the FB. Although stewardship over employees implies the risk that employees might exploit this personal relationship with the owner for their own benefit and thus harm the FB, the companies

investigated demonstrate mutually beneficial relationships and a high degree of reciprocity.

This close relationship (as a manifestation of stewardship over customers) also applies to customers, which is described as personal or friendly by all FBs. Correspondingly, the interview participant from the construction industry 1 postulates: “*We actually think that nothing can function positively independently of each other.*” Almost all interviewees consider the personal and appreciative approach to customers and stakeholders as innate to the culture of FBs. Furthermore, owners of medium-sized FBs usually know some regular customers personally and spend a significant amount of time with them. Close ties with representatives of partner companies are also used to discuss potential risks at trade fairs in the FBs of the construction industry 3 and food industry 2, for example, to identify risks and share ideas about ways of managing them. However, this unique relationship not only helps to identify and manage risks but is also used to enhance risk analysis/assessment. In the FBs of the automotive industry, construction industry 3, food industry 3, and wood industry, external stakeholders such as banks or tax consultants are consulted to improve risk analysis/assessment. Close ties and brainstorming with external stakeholders serve as social controls, thus reflecting informal RM. Despite this personal relationship with clients, transaction-based measures are used primarily in the construction industry 3 and food industry 3 for new orders of unknown customers. Creditworthiness checks (a formal RM instrument) are conducted before order commitments to enhance risk analysis/assessment and thereby protect the FB from adverse effects.

Other formal RM methods, which complement the informal methods, are derived from traditional management accounting and help to identify, analyze/assess, manage, and monitor risks (as a manifestation of stewardship over continuity). For example, liquidity, sales, and investment plans or SWOT analyses are prepared regularly or as required, thus enabling potential risks to be identified at an early stage in most FBs (construction industry 1, 2, and 3, food industry 2, 3, and 4, and wood industry). Furthermore, key performance indicator analyses and deviation analyses are carried out in some FBs (construction industry 1, and food industry 2, and 4) to identify negative trends quickly and to be able to develop counter-measures. For risk analysis/assessment, the FB of the food industry 4 uses formal risk matrices, which are evaluated based on the probability of occurrence and the degree of risk exposure. For RM, the FBs mentioned above (construction industry 1, 2, and 3, food industry 2, 3, and 4, and wood industry) again refer—in addition to the social controls that counteract risks—to planning and deviation analyses of selected key performance indicators. To monitor risks, deviation analyses are used as well. These examples illustrate that medium-sized FBs have formalized RM structures, even if they are only traditional management accounting instruments. However, in general, the scale of the project or effort is influential regarding whether risks are dealt with formally or informally. The owner of the food industry 3 explains: “*Depending on the scale of the business, you invest more effort or less effort.*” However, with the increasing size of a project, more emphasis is placed on formalized RM structures, as the owner of the construction industry 2 explains: “*With larger projects, there is more money involved than with smaller ones. Such projects are also combined with*

higher risk. We think about realizing such projects quite long and we also focus more on planning.”

4.2 Impact of the COVID-19 crisis on risk management in family businesses

The family’s responsibility for FBs’ risk strategy becomes particularly evident during the COVID-19 crisis. A major topic the corporate family is concerned about and discusses privately is the FB’s survival during the COVID-19 crisis, as the following quote exemplifies: *“Sales have fallen by 60%, but costs are still 100%, and suddenly you get into a situation where you ask yourself (...) can we survive this or not?”* (food industry 2). Moreover, the corporate family always decided on strategic measures (e.g., closing unprofitable branches or reducing opening hours) to ensure the company’s survival during the COVID-19 crisis (as a manifestation of stewardship over continuity). In this context, the corporate family’s communication of risk mitigation measures to employees is particularly important, as the following quote exemplifies: *“If there are very important things like (...) opening hours. We have closed certain branches in the afternoon. We know that in two weeks we will open the branch again on afternoons, and then the employees will be informed as soon as we decide”* (food industry 2). The clear specification of risk mitigation measures by the corporate family also helps to ensure that they are perceived as role models by the employees. The owner of the food industry 4 explains: *“My brother and I walk around in masks all the time because (...) as a manager you also have a certain role model function for the employees. We have a mask obligation and if we don’t keep to it, our employees won’t do so either.”* The role of family members as role models is primarily rooted in informal social dynamics and lacks fixed structures or rules, making it an informal RM method.

Although the ultimate responsibility for RM always lies with the corporate family, RM accountability is extended to non-family department heads to allow the broadest possible view on RM to better handle the COVID-19 crisis. The interviewee of the food industry 2 explains: *“First of all, we discuss risks internally, where we don’t have that many decision-makers and people involved. But we have an organization where we ultimately have specialists in each department for the respective area, and this is simply discussed relatively quickly in a larger circle. The participation of the department heads in the joint brainstorming, the joint derivation of measures naturally also strengthens the entire management group in the company”*. The extension of RM responsibility implies formality and documentation (e.g., adaptation of the task description). Hence, the crisis context spurs formalization. Involving employees and discussing potential risks with them helps not only to identify potential risks but also to manage them: *“If someone notices that an order is very urgent in terms of time, then there are often several employees who offer that they could take over the work and so employees always help each other”* (construction industry 2). Brainstorming with employees requires neither a clear structure nor documentation, and, therefore, has an informal character.

Regardless of whether FBs generally describe themselves as risk-averse or risk-taking, most of them exhibit a decrease in risk-taking during the COVID-19 crisis.

For example, investments are hardly made due to the uncertainty that accompanies the crisis. The transgenerational focus as a manifestation of stewardship over continuity may explain this risk aversion during crises. Security, often a top priority for investments, has sharply declined since the crisis outbreak, as stated by the owner of the second-generation managed food industry 1: *“I think in the last six weeks we have seen that there is no security”*. However, one FB, already in the fourth generation (food industry 2), also made more than twice as many investments in 2020 than in 2019 due to the COVID-19 crisis. In this case, stewardship over continuity contributes to increased risk-taking during times of crisis in that the FB has modernized the production facility. Moreover, due to the financial grants for investments given by the Austrian government at the beginning of the COVID-19 crisis, this FB seized the opportunity to make risky investments that otherwise would not have taken place or would have cost more: *“We took advantage of this opportunity and invested; (...) bringing forward investments that we might not have made otherwise”* (food industry 2). However, just as before the COVID-19 crisis, the thought of future generations is always prevalent when investing, and risk awareness seems to be further strengthened by the COVID-19 crisis. Furthermore, as a manifestation of stewardship over continuity, all available resources of the corporate family are utilized to stabilize the business model in some FBs (automotive industry and food industry 2), enhancing resilience during the crisis. The owner of the automotive industry explains: *“My mother, who has already retired, helped out in the company recently and took over the reception and all the phone calls. Now that so many employees have a COVID-19 infection or have to look after their children at home, I am glad that she has helped me here.”*

Close stakeholder relationships can help FBs manage risks during times of crisis as well. Responsibility of the FBs towards their employees is particularly evident during the COVID-19 crisis. To relieve the employees who worked many overtime hours during the COVID-19 crisis due to the absence of other employees, the FB of the food industry 2, for example, relies on external personnel service providers. In turn, the positive working atmosphere leads to increased loyalty to the medium-sized FBs by employees during the COVID-19 crisis. The following quote illustrates this: *“The cohesion among each other has become even stronger as a result of the crisis. People show more consideration for each other.”* (food industry 2). This willingness to help is exemplified by the sales staff of food industry 2, who are willing to work on their days off at other branches where there is a staff shortage to prevent the closing of these branches. Accordingly, external personnel service providers and the positive working atmosphere during the COVID-19 crisis serve as informal social controls by counteracting risks such as employee overload or branch closures and indirectly ensure the continuing existence of FBs. These examples demonstrate that FBs aim for a holistic approach to RM, integrating the employees' perspectives as part of their stewardship culture.

Not only does the COVID-19 crisis strengthen the relationship with employees, but the intimate and reciprocal relationship with external stakeholders is also reinforced by the COVID-19 crisis. Similar to employees, customers also display loyalty to FBs during times of crisis, especially in the construction industry 2 and food industry 2. For example, customers have shown support by placing additional orders

with FBs. Therefore, the unique relationship with customers serves as an informal social control during the COVID-19 crisis to counteract risks such as counterparty default and thus secure the long-term survival of FBs.

Despite the effectiveness of social controls and, thus, informal RM, FBs aim to create a better basis for decision-making due to the uncertainty accompanying the COVID-19 crisis. As a result of the endangered continuity of the FBs (stewardship over continuity), formal RM is becoming more important in most FBs (construction industry 1, 2, and 3, food industry 2, 3, and 4, and wood industry) and is also reflected in the degree of formalization of the RM tools used. During the COVID-19 crisis, the FB of the food industry 2 has established its own management accounting department and has employed a professional management accountant. Especially during times of crisis, rethinking and redesigning existing systems by experts becomes particularly important. The owner of food industry 2 explains: *“It is important, especially in such times, that you (...) can still grow over the next few years. And with management accounting, you can plan better and more professionally.”* In this FB, management accounting takes on a supporting role for RM and ensures that RM is more present, especially during times of crisis: *“Management accounting makes risk management more aware at our company, which is definitely necessary in the crisis. You have a management accountant who always reminds you, for example, why we have a bus standing around that nobody is driving because increasing motor vehicle costs is a risk.”* (food industry 2). Before the COVID-19 crisis, most medium-sized FBs considered formal RM instruments for investments in high-risk projects as secondary. Instead, investment decisions were made based on personal intuitions and judgments. However, the COVID-19 crisis has heightened risk awareness and, consequently, emphasized the importance of formal RM.

In addition, the existing formal RM systems, already in use before the COVID-19 crisis, are more intensively applied in most FBs (construction industry 1, 2, and 3, food industry 2, 3, and 4, and wood industry). As the dynamics of the environment during times of crisis increase, the timely identification of potential risks becomes more important. Therefore, planning and deviation analyses were intensified as a result of the COVID-19 crisis, as the owner of food industry 4 explains: *“Especially now in this situation, we are taking a closer look at the planning or analyses and carefully analyzing every deviation, that we might have overlooked before the crisis. Right now, this is more important than ever, as many companies have already had to close in this short period of time.”* Intensifying these planning or deviation analyses and identifying risks at an early stage indirectly contributes to the long-term survival (as a manifestation of stewardship over continuity) of the FBs. The FB of the food industry 4 also introduced scenario analyses for investments during the COVID-19 crisis, which are used to analyze and assess risks using best- and worst-case scenarios. If the worst-case scenario endangers the survival of the company, the FB refrains from the investment. The owner of this FB explains the value of the scenario analysis during the crisis: *“You shouldn’t invest in something without a plan, because if it doesn’t succeed, the company will fail.”* Risks are reported in the management report in all investigated FBs, but it becomes apparent during the COVID-19 crisis that significant risks (e.g., shortage of skilled workers during the COVID-19 crisis) and their management are described in more detail. Therefore,

informal RM reaches its limits in the uncertain environments of the COVID-19 crisis, and the endangered stewardship over continuity contributes to FBs' efforts to complement informal methods with formal instruments.

5 Summary of findings and discussion

The main findings on RM in the investigated medium-sized FBs, in general, and the impact of the COVID-19 crisis on RM are summarized in Table 2. Generally, responsibility for RM is clearly defined in FBs and lies within the corporate family. However, not only do family members within the company shape RM, but risks are also discussed with family members outside the FB. This central role of the corporate family in RM, or “tone from the top” (Braumann et al., 2020), spurs high levels of risk awareness (prevalent among all investigated FBs) and promotes the long-term orientation of FBs (as a manifestation of stewardship over continuity). Whereas previous literature (Mitter et al., 2022a, b) highlights that small FBs manage risks mainly informally, our findings show that medium-sized FBs apply not only informal but also formal RM instruments (such as planning or risk matrices). Therefore, the predominance of informal RM practices seems to reach its limits with increasing company size, as suggested by Crovini et al. (2021b) or Hoyt and Liebenberg (2011). Formal RM provides companies with clear guidance (Ouchi & Maguire, 1975) and structure (Chenhall & Morris, 1995). The stakeholder orientation of RM in smaller FBs (Mitter et al., 2022a, b) is also evident in all investigated medium-sized FBs as a manifestation of stewardship over employees and customers. Close ties with employees, customers, banks, and tax consultants are drawn on for RM.

In the context of an external shock, namely the COVID-19 crisis, the growing uncertainties and potential threats accompanying the crisis (Castro & Zermeño, 2021) lead to heightened risk awareness among the investigated FBs. Family members act as role models in these difficult times, and family resources are mobilized. The crisis context prompts the FBs to intensify their utilization of formal RM tools. Moreover, our findings indicate that medium-sized FBs do not suffer from insufficient resources for RM, as is the case for smaller FBs (Gao et al., 2013; Mitter et al., 2022b). They proactively employ resources to upgrade formal RM practices during times of crisis, reflecting their stewardship over continuity. In this context, FBs require more robust decision-making foundations, similar to SMEs (Crovini, 2022), which can be provided by formal RM instruments. Consistent with the findings of Zahra et al. (2008), stewardship over continuity has a positive impact on the strategic orientation of FBs. They consciously perceive the COVID-19 crisis as an opportunity to explore alternative strategic possibilities without harboring apprehension about potential adverse outcomes.

But not only formal RM structures are intensified during times of crisis, but also informal RM practices. Employees are becoming involved more intensively in RM endeavors. Close ties with employees foster responsibility for RM and higher risk awareness among them (this aligns with the findings of Braumann et al., 2020). In this context, the crisis once again spurs formalization, as evidenced by the delegation of RM responsibilities to department heads. Therefore, employees become an

Table 2 RM and the impacts of the COVID-19 crisis in the case FBs

	Formal methods		Informal methods	
	In general	During the COVID-19 crisis	In general	During the COVID-19 crisis
Stewardship over continuity	<p>Formal responsibility of family for FBs' risk strategy</p> <p>Formal responsibility of family for final decisions on RM Planning</p> <p>SWOT analyses</p> <p>Risk matrices</p> <p>Key performance indicators analyses</p> <p>Deviation analyses</p>	<p>Increased importance of formal methods</p> <p>Deployment of resources for the upgrading of formal methods</p> <p>Scenario analyses</p> <p>Intensification of planning</p> <p>Intensification of deviation analyses</p> <p>Reporting of significant risks</p>	<p>Discussion of risks with corporate family outside the FB</p> <p>Risk appetite depends on owners</p> <p>Risk awareness prevalent</p>	<p>Communication of risk mitigation measures by the family</p> <p>Family members as role models</p> <p>Increased risk awareness</p> <p>also increased risk taking</p> <p>Mobilization of resources of the corporate family</p>
Stewardship over employees		<p>Extension of formal RM responsibility to employees</p>	<p>Close ties with employees</p> <p>Offering training programs</p>	<p>Brainstorming with employees</p> <p>Using external personnel service providers to relieve employees</p> <p>Increased loyalty of employees</p>
Stewardship over customers	<p>Creditworthiness checks of new customers</p>		<p>Close ties with customers, banks or tax consultants</p> <p>Brainstorming with representatives of partner companies</p> <p>Involvement of banks or tax consultants for risk analysis/assessment</p>	<p>Increased loyalty of customers</p>

integral part of RM, as suggested by Domańska-Szaruga (2020). In addition, contrary to Firfiray and Gómez-Mejía's (2021) remarks, the limited face-to-face communication resulting from COVID-19 mitigation measures does not weaken the relationship with employees in the investigated FBs but instead reinforces mutual loyalty, which helps to counteract employee-related risks. Likewise, the crisis has reinforced the bonds with customers, evident in their display of loyalty through increased orders. Therefore, stewardship over employees and stewardship over customers serve as informal social controls that are even strengthened during the COVID-19 crisis. In summary, our findings demonstrate that stewardship culture shapes RM and promotes risk awareness in general and in the context of the COVID-19 crisis in particular.

Formal and informal RM methods are used as complements and mutually supplement each other, even during the COVID-19 crisis. This contradicts the findings of Braumann et al. (2020), whose study proved formal and informal RM methods to be substitutes during times of high perceived environmental uncertainty when informal practices should manifest their advantages. Thus, it appears that in the case of an extreme external shock (such as the COVID-19 crisis), both RM practices are needed to cope with the crisis in the best possible way. Hence, even in a crisis context, the interplay between formal and informal practices, which is suggested as most beneficial for firms with strong social capital (see Ströbele & Wentges, 2018), appears valuable. Sophisticated management accounting tools, utilized as formal RM methods, provide clear guidance and structure, helping FBs to better understand their potential risks and opportunities for optimization. This level of clarity should be considered crucial when navigating through crises, as it equips FBs with the insights and preparedness necessary to respond effectively. However, due to the high volatility during the COVID-19 crisis (Castro & Zermeño, 2021), strong stakeholder relations, which foster mutual loyalty, are also crucial in enabling a rapid response during times of crisis. Close ties among stakeholders lead to increased support, flexibility, and awareness when it matters most. High risk awareness empowers businesses to adapt proactively to shifting environmental conditions (Banks, 2012). A combination of formal and informal RM methods thus ensures the long-term survivability of FBs and should help to cope with future crises. This way, combining formal and informal RM in FBs spurs resilience.

6 Conclusion, limitations and implications

By drawing on an exploratory study (Stebbins, 2001), we examine the design of RM in FBs in general and provide initial insights into the influence of the COVID-19 crisis on FBs' RM, an under-researched area in management accounting literature. In FBs, RM generally is closely intertwined with their unique stewardship culture and designed formally as well as informally. The close relationships of the corporate family with employees and customers help them to identify, analyze/assess, and manage risks and serve as social controls. These informal RM methods were strengthened and proved effective during the COVID-19 crisis but are complemented with formal RM structures that are just as well needed in the

investigated medium-sized FBs. As a result of the COVID-19 crisis, formal RM has gained more relevance, and FBs commit resources for its professional upgrading. Likewise, informal RM practices are intensified as well. Thus, the COVID-19 crisis illustrates the need to strengthen both RM methods, informal and formal practices, in the context of a crisis. Their interaction helps achieve greater risk awareness, promoting resilience during challenging times.

Regarding the limits of this study, no generally valid statements can be derived due to its qualitative nature and specific focus on Austria. Furthermore, while a sample size of nine interviewees is suitable for explorative studies, larger samples allow for broader conclusions. We aimed at a diverse sample to allow some variation and limited our sample to medium-sized FBs from the Austrian food, construction, automotive, and wood industries. However, this poses the risk that the results of our analysis might be highly specific and applicable only in this particular context. In addition, the interviews were conducted at the onset of the COVID-19 crisis; therefore, they may not accurately reflect the long-term impact of the crisis on RM.

These limitations illustrate that further research on RM in FBs in the context of crises is needed. First, a comparative analysis of RM practices in FBs and non-FBs will help to understand the unique aspects of RM in FBs and how it differs from non-FBs. Furthermore, considering different contextual factors (e.g., company size) could generate additional findings. Researchers should also investigate the long-term effects of the COVID-19 crisis on RM in FBs. Thus, separate interviews with FBs regarding RM before, during, and after the COVID-19 crisis could yield additional insights. They should analyze how the COVID-19 crisis has influenced risk awareness, risk appetite, and RM in the long run. Further studies could also investigate how the strengths of both formal and informal RM methods can be leveraged to enhance RM effectiveness and foster a risk-aware culture within FBs. Finally, investigating the relationship between RM and business sustainability in FBs seems promising. In particular, researchers should examine how RM practices contribute to the long-term survival and resilience of FBs during times of crisis.

Our findings illustrate that within the investigated FBs, formal and informal RM methods are drawn on and are valuable. This also applies in the context of the COVID-19 crisis, during which enhanced formalized RM structures are needed, but informal practices are also relied on more intensively. Consequently, FBs should strive to balance informal and formal RM methods, acknowledging both benefits. Our findings provide evidence for the central role of the corporate family in RM, which becomes even more crucial in the crisis context. Family members should, therefore, be aware of their vital role in mobilizing resources and guiding employees' behaviors, which might be a key benefit under an external shock. Moreover, given the heightened risk awareness among FBs during the COVID-19 crisis, they should promote a culture of risk awareness and continuously adapt their RM strategies to changing circumstances. This fosters resilience and allows FBs to better cope with future crises to ensure transgenerational survivability.

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