Vaasan yliopisto
UNIVERSITY OF VAASA

Aaron Ikonen

Management Control Systems and External Crisis Effects: Testing Discretionary Budgets based on Statistical Co-citation Analysis

School of Management

Strategic Business Development Programme
Master of Science in Economics and
Business Administration

Vaasa 2025

UNIVERSITY OF VAASA
School of Management

Author: Aaron Ikonen
Title: Management Control Systems and External Crisis Effects: Testing Discretionary Budgets based on Statistical Co-citation Analysis
Degree: Master of Science in Economics and Business Administration
Discipline: Management
Supervisor: Ausrine Silenskyte
Year: 2025 **Pages:** 108

ABSTRACT:

Controllers are pivotal in the management of daily financial activities of an organisation through management accounting and through the development and maintenance of accounting systems to suit the organisational needs. As such, they attain first-hand information about early warning signs that entail an organisational crisis. However, even though the bulk of theory suggests a somewhat unified consensus that (management) accounting inscriptions have a stability creating effect, scholars and practitioners are not universally clear on what this implies in the context of the crisis.

Organic and mechanistic control approaches have been suggested to enhance innovation outcomes, but it is not fully clear how these concepts relate to the controller or how they are in motion within accounting or related systems. Different models, such as the Levers of Control (LOC), Balanced Scorecard (BSC), and Economic Value Added (EVA) have been proposed as a solution to navigate around environmental complexities. However, these models have been criticized for having limited innovation capacity, ambiguity of causal relationships, and limited potential in predicting distress. They also fail to fully assess the value that can be provided by the controller.

By utilizing a systematic co-citation based literature review, and the conventions of abductive qualitative thematic analysis in an interview setting, this study investigates how controllers may influence the crisis management effectiveness of limited companies. In this effort, the objective of budget feasibility in crises is tested as an accounting-related point of contact. Based on a functional covering of the associated theory from the past 25 years, this thesis delivers a crisis management framework as a reference for controllers for navigating through different organisational crises caused by external shifts.

The research suggests that controllers have a notable role in crisis management as a support function through financial modelling, which contributes to, for instance, real-time communication, scenario analyses and general sensemaking. In this effort, operational knowledge and information is essential in transforming numbers into a description for top management and other internal stakeholders. Budgets attain relevance in organisational crises, but they must be supported with forecasts as these structures complement each other. The relative value of physical accounting systems extend primarily to data sourcing and thus they are more contributive than what could be understood in the light of past research.

KEYWORDS: Controller inclusion, Management accounting, Budgeting, Crisis management

VAASAN YLIOPISTO
Johtamisen akateeminen yksikkö

Tekijä:	Aaron Ikonen
Tutkielman nimi:	Management Control Systems and External Crisis Effects: Testing Discretionary Budgets based on Statistical Co-citation Analysis
Tutkinto:	Kauppatieteiden maisteri
Oppiaine:	Johtaminen
Työn ohjaaja:	Ausrine Silenskyte
Vuosi:	2025 **Sivumäärä:** 108

TIIVISTELMÄ:

Controllereilla on keskeinen rooli organisaation päivittäisten talousasioiden hoidossa sekä johdon laskentatoimen kautta että laskentatoimen järjestelmien kehittämisessä ja ylläpidossa. Näin ollen heillä on ensikäden tietoa aikaisista varoitusmerkeistä, jotka voivat viitata tulevaan organisaatiokriisiin. Vaikka nykytutkimus puoltaa ajatusta, että laskentatoimella on vakautta edistävä vaikutus, tutkijat ja alalla toimivat asiantuntijat eivät ole yksimielisiä siitä, miten se kytkeytyy kriisin kontekstiin.

Orgaanisia sekä mekaanisia hallinnan lähestymistapoja on ehdotettu innovaatiotulosten parantamiseksi, mutta ei ole täysin selvää, miten nämä käsitteet liittyvät Controlleriin tai miten ne toimivat laskentatoimen- tai sen johdannaisissa järjestelmissä. Erilaisia toimintamalleja, kuten Levers of Control (LOC), Balanced Scorecard (BSC) sekä Economic Value Added (EVA) on ehdotettu ratkaisuksi ulkopuolisten monimutkaisuuksien navigointiin. Näitä malleja on kuitenkin kritisoitu muun muassa rajallisesta innovaatiokapasiteetista, epäselvistä syy-seuraussuhteista, ja rajallisesta kyvystä ennakoida kriisejä. Ne eivät myöskään täysin selitä sitä arvoa, mitä controlleri voi tarjota.

Tämä pro gradu -tutkielma tutkii, miten controlleri voi vaikuttaa kriisinhallinnan toimivuuteen osakeyhtiöissä käyttäen systemaattista yhteisviittaukseen perustuvaa kirjallisuuskatsausta sekä abduktiivisen (kvalitatiivisen) ja temaattisen analyysin keinoja haastattelun ympäristössä. Tässä pyrkimyksessä on keskeisenä tavoitteena tarkastella budjettien toimivuutta kriiseissä laskentatoimen rajapintana. Tutkimus rakentaa kontrollereille kriisinhallintamallin erilaisten ulkopuolisten tekijöiden aiheuttamien organisaatiokriisien hallintaan. Malli rakentuu tutkimuskatsauksen pohjalta soveltaen kattaen aiemmat keskeiset tutkimukset viimeisen 25 vuoden ajalta.

Tutkimustulosten perusteella voidaan osoittaa, että controllereilla on merkittävä rooli kriisinhallinnassa talouden mallintamisen kautta, mikä edesauttaa muun muassa ajantasaista kommunikointia, skenaarioanalyysien tuottamista, ja yleistä tulkintaa. Operatiivisella tiedolla ja informaatiolla on keskeinen rooli erityisesti numeroiden muuntamisessa kuvaukseksi yrityksen johdolle ja muille sisäisille sidosryhmille. Budjetit omaavat merkitystä organisaatiokriisissä, mutta niitä täytyy tukea ennusteilla, koska nämä rakenteet täydentävät toisiaan. Fyysisten laskentatoimen järjestelmien arvo ulottuu datan keruuseen, ja näin ollen ne ovat enemmän täydentäviä kuin mitä voitaisiin käsittää aiempien tutkimusten valossa.

AVAINSANAT: Controllerin osallistaminen, Johdon laskentatoimi, Budjetointi, Kriisinhallinta

Abbreviations

AIS | Accounting Information system

AST | Accounting System Technology

PMS | Performance Measurement System

MCS | Management Control System

MAS | Management Accounting System

MACS | Management Accounting Control System

SMA | Strategic Management Accounting

IMCS | Interactive Management Control Systems

IMM | Interactive Management Modes

CFOC | Controller Framework for Organisational Crises

TMT | Top Management Team

LOC | Levers of Control Framework

BSC | Balanced Scorecard

NPD | New Product Development

D/I | Diagnostic versus interactive

C/E | Constraining versus enabling

RA | Role Ambiguity

BM | Business Model

EO | Entrepreneurial Orientation

EC | Endangering Conditions

CO | Controller

BU | Business Unit

Contents

1. Introduction 8
1.1 Research Question and Objectives 11
1.2 Delimitations 12
2. Structure of the thesis 14
3. Literature Review 15
3.1 Control Definitions 20
3.2 Control Agendas 22
3.3 System Definitions 23
3.4 Usefulness of Systems 25
3.5 Crisis Definition 26
3.6 Crisis Recognition 28
3.7 Prerequisites of Crisis Recovery 29
3.8 Innovation and Reformation 30
3.9 Accounting as Source of Strategy 31
4. Framework Proposal 36
4.1 Controller Framework for Organisational Crises (CFOC) 36
4.2 Critical Success Factors 40
4.3 Preliminary Risk Assessment 42
5. Methodology 45
5.1 Research Approach 45
5.2 Data Collection 47
5.3 Interviewee Selection 48
5.3.1 Data Analysis 51
5.4 Validity and Reliability 52
6. Findings 56
6.1 Controller in the Crisis Cycle 56
6.2 Accounting Systems and Crisis Management 58
6.3 Budgets and the Crisis 59
6.4 Framework Coherence 60
6.5 Framework Development 63
7. Discussion 67
8. Limitations 73
8.1 Theoretical limitations 73
8.2 Methodological limitations 74
8.3 Analytical limitations 75
9. Suggestions for Future Research 76

9.1 Implications of Serial Crisis 76
9.1 Determinants of crisis management frameworks 77
9.3 Untested Model Versions 77
10. Conclusion 78
References 80
Appendix A. Interview Questions 102
Appendix B. Article screening for discussion 107

Figures

Figure 1 Research Gap (Author's own elaboration)

Figure 2. Force-directed graph of Janke et al., 2014 (Connected Papers, 2023)

Figure 3. Hierarchy of Controller Influence (Author's own elaboration)

Figure 4. Dimensions of Control (based on Langfield-Smith, 1997, p. 2).

Figure 5. Classification of Organizational Systems (based on Henri, 2006, p. 20; Otley, 1999, p. 5; Bouwens and Abernethy, 2000, p. 3).

Figure 6. Single and Sectoral Crisis (adapted from Hermann, 1963, p. 4; O'Connor, 1981, pp. 3-4)

Figure 7. Crisis Recognition Process (based on Heinicke et al., 2016, p. 15; Janke et al., 2014, p. 15).

Figure 8. Budgeting Tactics (based on Malmi, 2015, p. 17; Sponem and Lambert, 2016, p. 11).

Figure 9. TMT - Controller Collaboration (Based on Naranjo-Gil and Hartmann (2006, p. 21)

Figure 10. CFOC Framework for Controllers (Author's own elaboration)

Figure 11. Qualitative Research Process (based on Maxwell, 2021; Fife and Gossner, 2024, p. 3;)

Figure 12. Revised CFOC Framework (Author's own elaboration)

Figure 13. Cost Priority Classification (Author's own contribution)

Tables

Table 1. Participant Overview

Table 2. Interview Schedule Breakdown

Table 3. Constructive elements of CFOC

Table 4. Challenges of CFOC

Table 5. Development of CFOC

1. Introduction

The emergence of global economic volatility in recent years has highlighted how organisations must learn to identify the activities they can internally pursue to optimize their processes in periods of heightened uncertainty. The underlying reality is that crisis management entails uncommon circumstances without exception (Parnell, 2015, p. 2), leading to urgency. However, practitioners and scholars attain a high degree of non-consenus on how these events should be managed, which makes finding tangible solutions complex. Traditional solutions consider managerial priority of stakeholders over value maximization (Alpaslan et al., 2009, p. 9), knowledge accumulation value of consultants (Sarvary, 1999, p. 6) and the reduction of technology expenditure in response to abrupt financial strains (Campello et al. (2010, p. 9). Due to the dispersion of competing methods, it often remains unclear what organisational decisions and groups should attain a primary role in securing operational stability.

This paper defines crisis, or organisational crisis, as a condition that targets the main values of a company (Hermann, 1963, p. 4), distorts overall sensemaking (Wu et al., 2021, pp. 2-3) and hinders routines unexpectedly (Marsen, 2020, p. 2). Subsequently, crisis response refers to the methods devised inside an organisation, and especially by the controller to mitigate the adverse effects of the crisis.

To understand the nature and extent of the responsibilities of a controller, the difference towards actors with similar functions must be considered. The term management accountant is sometimes used interchangeably with controller even though it is not always clear if these roles are identical or distinct. A common definition of a management accountant is that they support the business and operational managers through a partner-like advisor role that draws from experience (Ala-Heikkilä and Järvenpää, 2023, pp. 22-23; Branicki et al., 2023, p. 25). In the Finnish context, Rautiainen et al. (2024, p. 2) point out that typical titles of a management accountant include “Controller” and “Business Controller” with responsibilities that primarily focus on profitability analysis and cost control functions, such as planning, budgeting,

profitability assessments and cost accounting. In the same way, “Financial Controller” is a synonym for “Controller”. Experienced controllers, such as CFOs and experienced business partners have a notable role in organisational sensemaking and information trust processes through the selection and screening of data according to firm preferences, such as cost efficiency (Järvenpää et al., 2023, pp. 9-10). With these considerations, financial decisions can be categorized as the decisions made by the controller in their primary accounting function.

Modern controllers are increasingly involved in roles that go beyond accounting, resulting in identity changes (Wolf et al., 2020; Tillema et al., 2022; Vaivio et al., 2023). When it comes to the use of non-accounting information to complement the accounting function, Robalo and Moreira (2020, p. 12) assert that the knowledge of organisational meanings, decision-making processes and resources enables a management accountant (controller) to assess organisational complexities for the successful implementation of an accounting information system (AIS). This argument highlights controller capacity to understand, position, and apply non-accounting knowledge into the accounting process. However, Erhart et al. (2017, p. 13) suggest that deep controller involvement leads to the deliberate creation of strategy long-term. Thus, controllers can be regarded as actors that have sectorial experience from accounting, have developed proficiencies that are not directly related to accounting and are providing input to the strategy-creation process with knowledge from both fields with long-term implications.

Current research has not sufficiently clarified the nature of connection between external crisis effects and controller involvement. The bulk of past research has investigated the reach of control (Kruis et al., 2016; Martyn et al., 2016; Heinicke et al., 2016; Ylinen and Gullkvist, 2014), control systems and innovation (Bedford, 2015; Bisbe and Malagueño, 2009), the designs of performance measurement systems (Guenther and Heinicke, 2019; Englund and Gerdin, 2015; Thomas, 2016) and budgeting amidst turmoil (Becker et al., 2016), to name a few. However, very few of these articles

underline the input of a controller as the initial respondent of a crisis event. Discussion surrounding the theme characteristically revolves around manifestations of control (controller or top management) or accounting innovation in general, both of which fail to distinctly include the strain of a crisis.

This research gap has been confirmed in several sources. First, Carter and Speklé (2024, p. 4) confirm that future research could cover whether or not some specific budgetary processes enable superior forecasts of financial impact and thus contribute to more immediate adaptation performance. Additionally, Dávila et al., (2024, p. 14) stressed that future research needs to assess the type of systems corporations implement for managing uncertainty amidst external complexity, including the specific information reported, and the routines created (also associated organisational capabilities, see Phan et al., 2023, p. 21). Finally, Truant et al. (2025, p. 20) highlight that future research needs to clarify whether or not the utilization of financial and non-financial measures are associated with different performance outcomes.

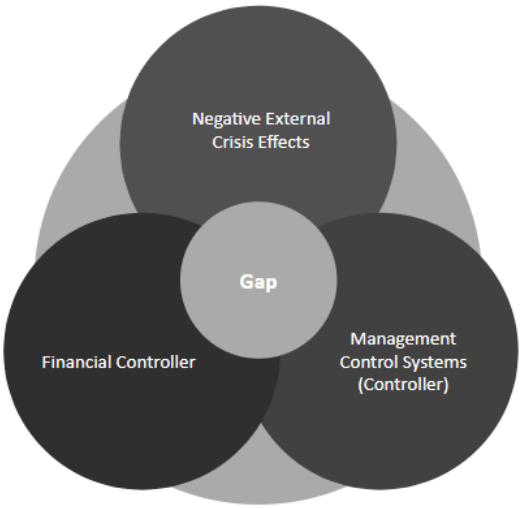


Figure 1 Research Gap (Author's own elaboration)

Several tactics have been suggested in literature as to how organisations should develop response mechanisms to crisis events, including knowledge gathering and training on early warning signs as perceived by individuals with crisis experience (Snoeijers and Poels, 2018, p. 7), resilience development that contributes to organisational crisis anticipation and improvisation (Lalonde, 2011, pp. 15-17) and complexity perception development in which crisis response is a living system, requiring the creation of conditions that solve several problems at the same time (Paraskevas, 2006, pp. 11-12). However, these tactics do not elaborate on the role of the accounting function, which results in partial discussion on the possibilities of crisis response. After all, organisations can adopt a systematic stance to manage the factors of recession through internal economic-financial reconfigurations, (Rosa et al., 2023, p. 16).

1.1 Research Question and Objectives

This paper seeks to understand the response mechanisms that can be employed by the business controller amidst endangering conditions. The controller is perceived as an actor who experiences the crisis in the context of their organisational position and is capable of delivering central information to key entities outside of this position for the attainment of resolve in the organisation. As such, the main research question for this thesis is as follows:

How can the controller influence crisis response effectiveness?

To address the above question, this research focuses on the available tools, methods and techniques embedded in the controller role, focusing on the primary accounting function. This designed focus is illustrated through budgeting and it attains merit in the context of a crisis based on several factors. For instance, enabling budget designs created before a crisis reduce emotional worker exhaustion through the clarity of problem-solving in the tasks of the worker (Bedford et al., 2022, p. 15). Also, the

classification of budget control approaches employed by primary and peripheral management can foster the creation of spontaneous solutions in crisis-stricken environments (Carr and Beck, 2023, p. 18). Thus, the following objective was devised:

What kind of budgeting decisions should Controllers pursue during financial crises?

Contributing to this designed objective, the agenda is to establish a budget-centered crisis management framework that can be harnessed by the controller in the ad hoc state of a crisis. This framework will be formulated based on a systematic literature review, entailing meticulous thought into the preliminary definitions of possible and preferable support mechanisms for crisis management that will be eventually tested.

1.2 Delimitations

Several crisis manifestations exist that do not fit the context of this research. For instance, this thesis does not seek to develop crisis management policies for environmental, political or humanitarian (reputational) crises. These forms tend to imply fault of the actor (organisation), resulting in extensive social and moral repercussions, such as lawsuits and reputational restoration strategies. These manifestations do not consider the organisation as the incumbent party of a threatening condition. Due to this factor and since the scope of this study extends to organisational revival in the context of economic recession, this thesis concentrates on the manifestations of organisational crises that endanger the financial stability of the firm.

Systems can be perceived as physical and non-physical systems that are being employed by the controller. This thesis does not focus on developing physical management control systems (such as SAP), even though the developmental agenda is deeply embedded in the controller function. In contrast, this thesis focuses on the accurate classification of such systems on the organisational level and on their effective

use towards accounting (budgeting) outcomes through the input of the controller. With the classification agenda, this thesis incorporates a more presentational approach to the systems discussed.

This research prioritizes strict controller performance considerations and thus, it does not inherently focus on the social variables of the controller, wherein the study of social variables can be perceived as the in-depth study of relationships between actors. Even though some variables, such as controller-manager relationships and top management teams are assessed in the literature review, they should not be understood as the core interest of this research. In essence, they can be regarded as embedded elements for controller work that demonstrate how controller activities can be influenced by other actors of the firm. Organisational functionalities that materialize in the immediate vicinity or such that overlaps controllers must be reviewed in conjunction with the accounting function to develop a holistic perspective of the controller function.

2. Structure of the thesis

This thesis begins with a systematic literature review that consists of the major aspects underlining and influencing the work of a controller from broader definitions of control, crises and physical systems to the assimilation of accounting as an enabler of successful crisis management. In the light of the review, this thesis proposes a crisis management framework which links accounting with operational practices. This process includes the presentation of the framework along with associated success factors.

Subsequently, this thesis presents the methodology for data collection along with the opportunities and restraints of the designs chosen. This includes the presentation of general methodology, validity and reliability, data collection process, and ethical considerations. The purpose of the interview is to test and develop the proposed framework and to establish how controllers can influence crisis response. Afterwards, findings will also be presented, including the demographic characteristics of participants, collected data, the schedule of data collection, and the success or failure of the sessions organised. Afterwards, the discussion part establishes connections between interview data, results of the literature review and prior research.

Limitations and suggestions for future research are then presented. Finally, the conclusion section establishes the information generated in this study along with theoretical and practical contributions to researchers and practitioners.

3. Literature Review

This research incorporates a systematic literature review; articles will be synthesized with a specific, narrow scope in the context of qualitative research, in which datasets are small and the results of the analysis are only suitable for qualitative review (Passas, 2024, p. 4). The review seeks to understand crisis management practices that are profoundly linked to management accountants (controllers), accounting systems and management modes through the use of statistical co-citation analysis. Statistical co-citation analysis is a sub-technique of bibliometric analysis, which covers the structural boundaries of this review. It consists of aim and scope definition, selection of techniques (analysis), data collection, analysis and reporting (Donthu et al., 2021, p. 11). Statistical co-citation analysis, in our case, is associated with the extraction of the investigative values of given articles and the comprehension of the dispersion of concepts in literature over time (Zupic and Cater, 2015, p. 12).

The literature review exploits a widely adopted research service tool called Connected Papers (CP), which creates a distinct graph from articles based on subject overlap, commencing from an article, which the user selects. The starting article based on which the Connected Papers service tool constructed the network graph, is the one of Janke et al. (2014), called *"An exploratory study of the reciprocal relationship between interactive use of management control systems and perception of negative external crisis effects".* To generate the pool of articles for this review, the service analyzes approximately 50.000 articles related to the original paper and selected 10 to 50 accurate examples for display (Connected Papers, 2023). Each node of the neural array represents an academic paper related to the starting paper wherein the node size implies the number of citations, while the color reflects the publishing year of the paper (Connected Papers, 2023). All of the articles provided by the service are systematically reviewed. In this case, 41 articles will be analyzed from 2004 to 2020, ensuring the key attributes of structure, transparency and comprehensiveness required in systematic literature reviews (Hiebl, 2023, p. 26).

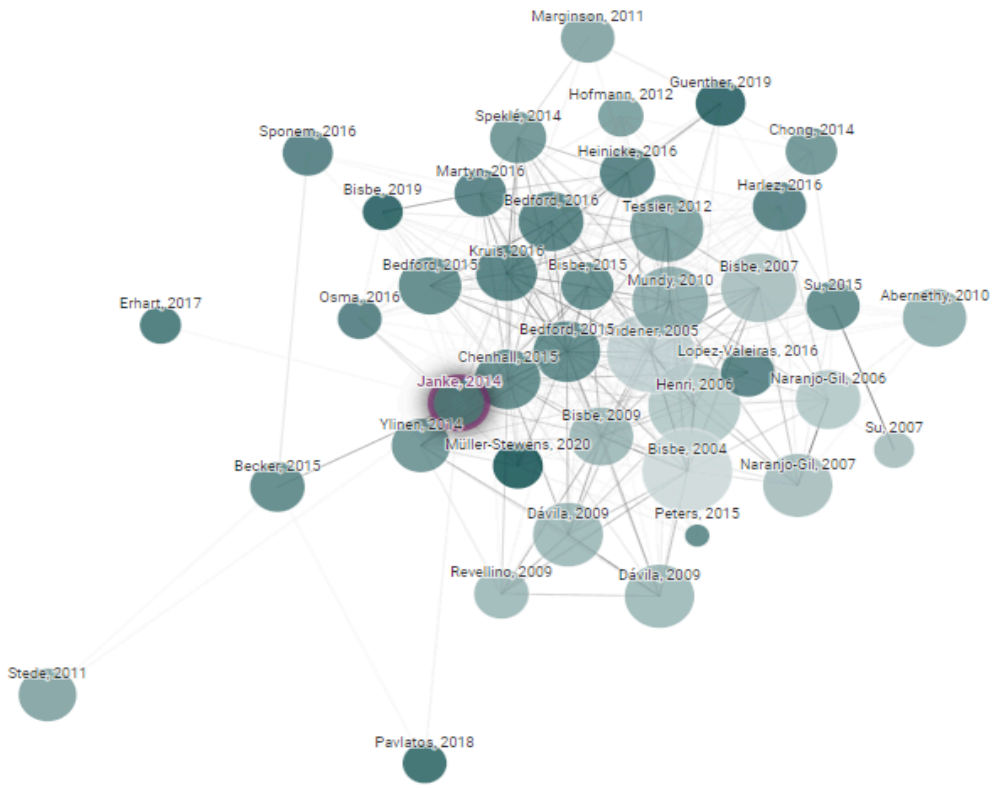


Figure 2. Force-directed graph of Janke et al., 2014

(Connected Papers, 2023)

From an algorithmic perspective, the service relies on Force-Directed Graphs that cluster similar papers together and vice versa (Connected Papers, 2023). The tool is based on co-citation (CC) and bibliographic coupling (BC), of which the latter relies on the consensus that two articles with increasingly overlapping citations will likely present related subjects (Connected Papers, 2023). As a processing method, BC outperforms direct citation and CC both in Unigram setups (relative probability of a word) and also in Bigram-based assessment setups that analyze the probability of consecutive words based on the previous (Kleminski et al., 2022, p. 19).

This paper (janke et al) was selected because it closely matches purpose of this thesis. After all, this study intends to assess how management control systems are used amidst crises and how the financial controller can contribute to desirable crisis response outcomes. Additionally, it strives to uncover the elements of the managerial attention of a controller that, either directly from or through systems, foster financial revival in periods of relative uncertainty. It responds to the previously established research questions by providing historical evidence on the nature and depth of controller work and the environment that influences controller performance outcomes. It also informs about physical systems, especially concerning structures and best practices.

In order to understand the controller as an actor, the environment and the “forces at play" must also be reviewed as controllers work closely with operational management and thus they are often actively involved in organisational activities beyond the accounting function. For instance, Goretzki et al. (2018, p. 24) point out that the duality of responsibilities between finance (also accounting) and operations management can force a controller to utilize information tactics to influence stakeholder perceptions or safeguard others’ reputation. Also, in the context of strategic management accounting (SMA) concerning the fusion of accounting and operational data, there is a risk for the emergent competing position of an operations manager and also for management accountant non-commitment in outcome-oriented organisations (Hadid and Al-Sayed, 2021, p. 13), resulting in the need to investigate operational variables. Hence, factors such as general organisational dynamics, innovation, and controller-manager relationships must be reviewed.

As prompted by the analysis of the neural network of Janke et al., visualizing the relationship between the role of the controller in the use of systems and control approaches is complex. This complexity primarily consists of 1) ambiguity of role definitions and boundaries, 2) definitions of systems that do not account for the operator 3) descriptions of systems that do not consider the hierarchy of related

systems. The neural network does not provide means to assess embedded role definitions, which renders the analysis of the controller and other stakeholders challenging. Ambidextrous roles are clearly visible in the literature, culminating in extended controller responsibilities (accounting and operations) and extended management responsibilities (operations and non-numerical operations of accounting). However, there is no definition to the boundaries of said actors as the discussion does not elaborate on how the considerations of accounting and operations can and cannot be combined. Subsequently, judging by the literature, it is not clear how far the modern controller can or should be involved beyond accounting.

This shortfall also extends to the relationship of the systems presented, resulting in the the need to deduce the contexts where different systems are meant to be used. For instance, this thesis has to review management control systems, performance measurement systems and management accounting systems not necessarily because of the scope of this investigation, but because there is a great complexity in each one and all of them are inevitably linked to each other. Hence, there can be no understanding of one without the others.

This review intends to assess accounting considerations combined with crisis management and, as such, themes are presented with the intent to inform where the controller is involved and why, how the controller is being influenced, and what possibilities and restrictions are present. The controller is viewed as an ambidextrous actor who not only attains a more diverse reach of influence than what traditional definitions suggest (operations and accounting), but also distinct possibilities related to these two aspects. Ultimately, the controller needs to maintain standards of accounting, technical specifications and configurations of accounting-related systems, and operational considerations when the operational activity closely influences accounting. These considerations form the basis for informed crisis management practices.

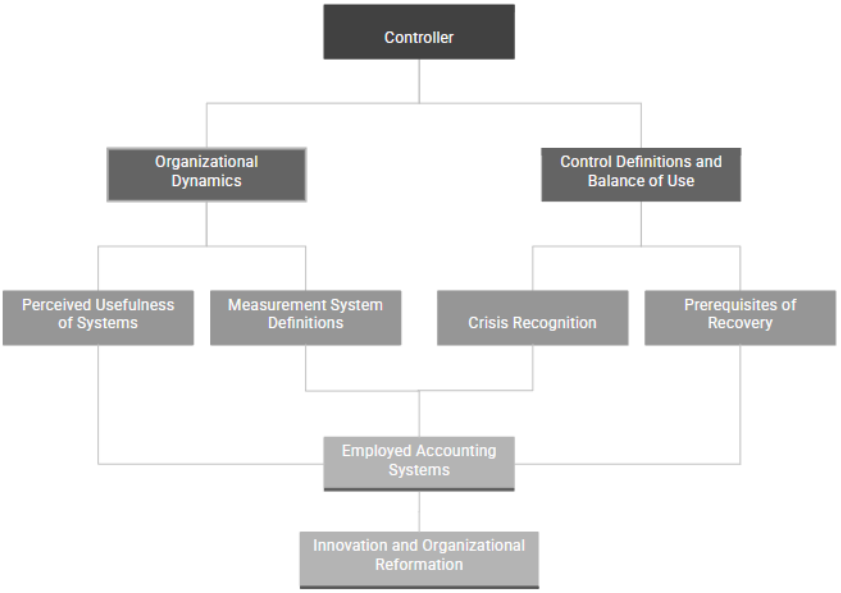


Figure 3. Hierarchy of Controller Influence (Author's own elaboration)

Figure 3 elaborates on the influence of the controller when it comes to the variable of the crisis. The use of accounting systems can be classified through a twofold process. Firstly, organisational dynamics comprises the perceptions of physical systems and the adopted performance definitions employed by the controller that are being influenced by the instruction of top management. Secondly, the adopted definitions and use of control influences how swiftly the crisis event can be recognized and the relative preparedness to face and recover from crises. These factors ultimately influence how the accounting systems are being utilised. However, as these factors are often qualitative due to the involvement of top management, and because the technical skills might not be sufficient to influence management (ten Rouwelaar et al., 2021, p. 18), the controller must strive to understand organisational dynamics and the uses of control.

This literature review is built around Figure 3 as it visualizes how accounting relates to crisis management. The review attempts to untangle the multifaceted relationship of accounting and crisis management in the context of the controller, with considerations to physical and non-physical systems as the main instrument of the controller.

3.1 Control Definitions

Control can be divided into formal and informal control. Langfield-Smith (1997, p. 2) points out that formal controls typically include budgeting systems and standard operating rules and that formal controls represent a section of the visible, objective components of the larger control system. On the other hand, informal control can be best conceptualized in non-conscious designs that often stem from the corporate culture (Langfield-Smith, 1997, p. 2). Building upon these definitions, Bedford and Malmi (2015, p. 17) point out that accounting is invested in a wide scale of control setups and scenarios and that the justification of accounting mechanisms and designs requires in-depth contextual knowledge and insight into the wider control functionality in which accounting has been placed.

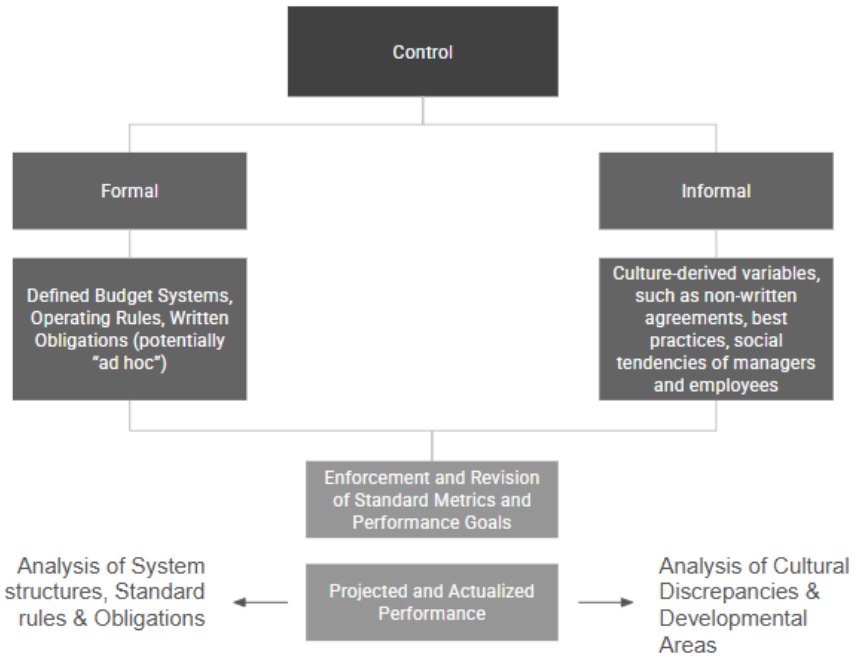


Figure 4. Dimensions of control (based on Langfield-Smith, 1997, p. 2).

Since corporate culture affects employed systems (physical and non-physical) though the dynamics of corporate activity, it is fair to argue that informal controls hold merit. However, it may not be evident how these controls materialize. Ouchi (1980, p. 4) elaborates on the use of control by asserting that industrial organisations can, to a certain extent, rely on socialization as the primary path to control since the employees of an organisation tend to act according to the interests of their superiors and their parent organisation. Interestingly, this argument is confirmed by O'Grady and Akroyd (2016, p. 23) who argue that organisational control can be achieved without traditional budgeting through systematic setups of administrative, planning, cybernetic, reward and cultural systems in clustered, non-budgeting organisations. These arguments imply that flexible control may produce desirable performance outcomes if organisations can trust that the interests of top management and employees align.

3.2 Control Agendas

Kruis et al. (2016, p. 13) reflect on general control balance manifestations with the following categorization: firms can pursue *strategic vigilance* (tight compliance), *strategic exploitation* (focus on current targets with high-risk communication), strategic responsiveness (prioritize employees' future desires) or strategic stability (highlight current targets with loose control). These strategic orientations act in conjunction with belief, boundary, measurement, and feedback systems that ultimately facilitate the interplay between accounting and strategy controls, often leading to either a prospector strategy with tight budgetary control or a defender strategy with bonus compensation schemes based on existing preferences (Martyn et al., 2016, p. 3).

Based on Tessier et al. (2012, p. 13), managerial agendas may be understood as *technical - social* control types and *compliance - performance* control objectives that are in motion within operational, strategic, conduct, and strategic boundary aspects. These underlying agendas are present in control role classifications that can be perceived as diagnostic or interactive (D/I), coercive or enabling (C/E), or consequences, which classify as punishments and rewards (Tessier, 2012, p. 13). Also, Bisbe et al. (2019, p. 14) argue that MCS can be utilized either through D/I or C/E approaches and they reflect types of use. Enforcing these agendas may not be easy as the use of control must attain an element of discretion; considerate leadership styles allow the discreet use of control and planning systems as an informal device for communication, enabling the exchange of agendas and views (Abernethy et al., 2010, p. 11).

Henri (2006, p. 20) points out that the balanced use of interactive and diagnostic control may create positive dynamic tension, which fosters the development of practical, valuable capabilities amidst uncertainty. However, diagnosticity may attain a more central role in when it comes to innovation as Müller-Stewens et al. (2020, p. 19) emphasize that diagnostic controls are appropriate in new product development (NPD) amidst crisis response and strategy formulation since they enhance the rate of

innovation either directly or indirectly through the fostering of coordination routines. This consideration is essential, because NPD in our case is associated with the development of accounting systems, a central agenda of the controller.

In addition, the decision to introduce performance measures interactively or diagnostically can be incorporated as a consideration into the organisational design frameworks (Bedford et al., 2016, p. 11), influencing the design of a system. Ultimately, this means that agendas related to diagnostic, interactive, constraining, enabling uses or the appropriation of consequences may have a significant role in the production of systems.

3.3 System Definitions

The definitions of management control systems, performance measurement systems and management accounting systems might be increasingly ambiguous due to the extensity of adopted definitions (see for example Malmi and Brown, 2008). This section strives to clarify these concepts.

Chenhall (2003, P. 3) defines a management control system (MCS) as a “broad term for a system that incorporates management accounting, clan controls (organisational control) and personal controls” (also Malmi and Brown, 2008). Subsequently, a management accounting system (MAS) can be classified as an extension of a formal control system that is harnessed for informed decision-making with accounting data (Bouwens and Abernethy, 2000, p. 3)

Strauß and Zecher (2013, p. 32) conclude that standard elements of a MCS include planning, performance measurement, incentives (rewards), feedback, and feed-forward cycles. Due to this classification, Henri (2006, p. 20) categorizes performance measurement systems (PMS) as a sub-construct of a MCS, which Otley (1999, p. 5) further defines as significant organisational constructs that seek to fulfill

the selection of "means-to-end", or concluding relationships that ultimately respond to organisational strategic intent.

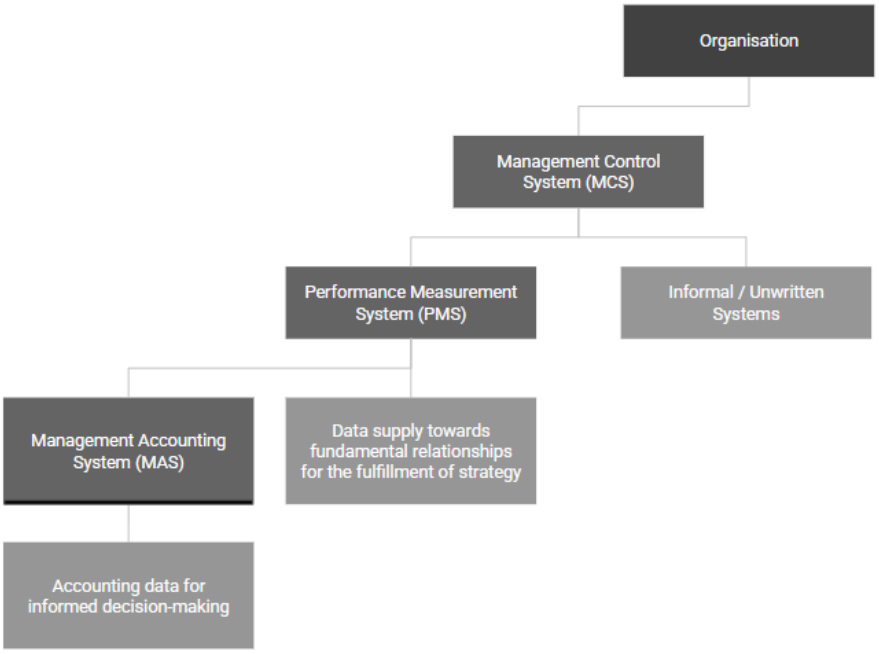


Figure 5. Classification of Organisational Systems (based on Henri, 2006, p. 20; Otley, 1999, p. 5; Bouwens and Abernethy, 2000, p. 3).

Chenhall and Moers (2015, p. 10) argue that management accounting has evolved into management control with the introduction of additional corporative and technological structures to cover the inherent need to accommodate innovations in environmental unpredictability. This implies that he traditional predictability characteristics of MAS where it contributes to resolving uncertainty if the needed managerial information is not directly in the organisation's grasp (Bouwens and Abernethy, 2000, p. 7), have been deemed insufficient. Based on these considerations, and since crisis events are technical, operational and social constructs, the concluding system of interest for our study falls closer to the MCS as opposed to the more traditional MAS. Hence, this thesis discusses MCS to describe the system setup employed by the controller.

3.4 Usefulness of Systems

Given the complexity of organisations, it is vital to understand what conditions enhance or hinder the use of MCSs. Mundy (2010, p. 13) analyzes balance and dynamic tension by pointing out that balance is directly linked to the use of MCSs and that the purposeful use of MCS can empower meaningful change if senior management can foster the creation of favorable positive tensions. This insight persuades the narrative that the controller can bring revival if they can communicate MCS deliverables, such as cost control assessments, reporting needs, and forecasts in a timely manner, enabling the participation of senior management.

In order to mitigate illusions, it is important to distinguish how and when the usefulness of a system is acknowledged. For example, the existence of a control system that involves interactivity does not automatically imply that it is used intensively by top management, as only the existence of intensity related to system use across and between actors and authority levels of an organisation in daily activities supports the notion of interactivity (Bisbe et al., 2007, p. 19). This argument confirms the necessity of controller involvement as they are inherently invested in the creation, use and revision of control systems and thus they have influence over how intensely a given system is utilized.

In addition, since controllers may use performance management systems (PMSs) interactively and diagnostically at the same time, they produce functional and dysfunctional outcomes regarding PMS benefits: incorporated design choices and types of use should be viewed as a complete, distinct system instead of separate variables (Guenther and Heinicke, 2019, p. 20).

Organisational size also affects the extent to which organisations can attain value. Guenther and Heinicke (2019, p. 20) point out that large, midsize firms can attain more notable benefits from interactive performance measurement systems (PMS) when compared to smaller firms, often culminating in the shift from technical to social

controls within larger firms due to necessity. However, Bisbe and Malagueño (2009, p. 22) argue that firms incorporating similar cognitive definitions and heuristics with interactive management modes (IMM) and management accounting control systems are not as effective in responding to dysfunctional challenges arising from innovation processes compared to those that lack this alignment. In essence, this is a question of system design and usability and the arguments imply that controllers must employ different cognitive frames for accounting systems, and operational techniques.

3.5 Crisis Definition

The full comprehension of crisis as a concept and as a process calls for a thematic overview. In the next section, the widely adopted definitions will be reviewed. Although the overview is not exhaustive, it contributes to the core discussion of this research by naming the adopted definitions of crises. However, since the literature does not adequately define some manifestations of a crisis, these definitions only provide a working basis for further discussion.

Hermann (1963, p. 4) classifies an organizational crisis as a condition that *"threatens a firm's high-priority values, presents a restricted time in which decisions can be made, and is unexpected by the organization".* In essence, this classification is endorsed in this study as it adequately summarizes the associated urgency.

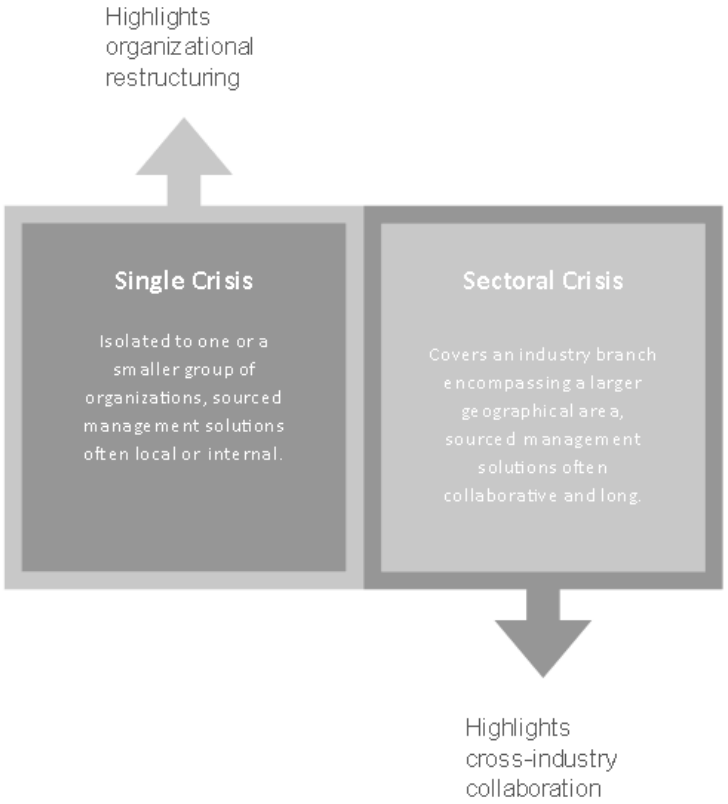


Figure 6. Single and Sectoral Crisis (adapted from Hermann, 1963, p. 4; O'Connor, 1981, pp. 3-4)

Crisis can also be perceived and experienced as a sectoral phenomenon. In the context of Marxist theory, O'Connor (1981, pp. 3-4) defines a sectoral crisis as a typical outcome of combined and uneven development in which profit rate differences materialize between sectors and geographic regions at the expense of others, often facilitated by large-scale capital concentrations. That said, it must be acknowledged that a sectoral crisis may often be a longer-term phenomenon in which the standard definitions of a small-scale organizational crisis might not fully apply.

3.6 Crisis Recognition

From a functional perspective, understanding what intrinsic factors can help to assess prevalent extrinsic conditions could be useful. Janke et al. (2014, p. 15) elaborate on crisis perception by arguing that the interactive use of MCSs can facilitate the appropriation of a crisis and increase the perception of external crisis effects. However, this argument does not account for informal variables associated with the use of MCSs.

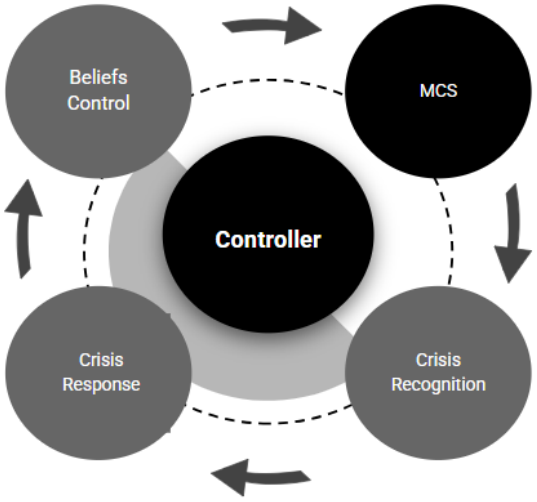


Figure 7. Crisis Recognition Process (adapted from Heinicke et al., 2016, p. 15; Janke et al., 2014, p. 15).

For instance, Heinicke et al. (2016, p. 15) argue that a belief, as a product of flexible culture, is a driving control factor for a MCS and that belief control functions as integration technique for the employed control system. Based on this argument, the existence of beliefs mean that the controller may have positive or negative notions relate to systems and designs, leading to revisions.

Existing internal culture may have a more significant role in the design of a MCS than what has been previously suggested. Van der Stede (2011, p. 14) argues that studying structure without the acknowledgment of culture may lead to incorrect risk

assessments about the relative usefulness of values and metrics employed. Yet, there is a distinct risk that the information value of accounting may be undermined by trivial considerations. For instance, the joint utilization of interactive approaches with performance measures within a system may present social and other challenges because the inclusion of non-financial metrics may lead to added resistance due to the revealed subordinate actions in the context of strategic uncertainties (Tuomela, 2005, p. 22). In conjunction, these arguments imply that controllers should prioritize financial metrics over non-financial in the attempt to find operational stability.

3.7 Prerequisites of Crisis Recovery

Considering that the timely use of financial techniques rely on the judgement of the controller, it may not be evident which performance management techniques should be employed. Su et al. (2015, p. 11) emphasize that revival-stage organisations should assess critical performance variables and actively rely on exception reports for monitoring processes in the collective effort to enhance financial performance (see also Su et al., 2017, p. 16). Also, in the context of innovation and crisis response, Bedford (2015, p. 13) stresses that the more conventional and often passive accounting control approaches are highly suitable for tailoring the innovation process for organisational resolve.

However, since the crisis is not a stable environment, it is important to acknowledge that formal accounting control may only be feasible if there is an adequate consensus on the distinct activities that each controller is meant to pursue. As demonstrated by Marginson et al. (2014, p. 10), the presence of role ambiguity (RA) within an organisation implies adverse outcomes for interactive and diagnostic controls, resulting in an additional strain for decision-making.

3.8 Innovation and Reformation

Innovation should be exploited as a soft, dynamic design. Solid strategic commencement is fruitless because the claims prompted by actors (employees) are prone to challenges, vulnerable to drastic adjustments, and often question the reasoning behind the claimant (Revellino and Mouritzen, 2009, p. 25). Timing is a substantial factor especially in early-stage firms as key individuals of an organisation (controllers) may decide to adopt a new MCS based on capability assessments where insufficiencies are spotted (Davila et al., 2009, p. 21).

Since the strategic context of the firm does not dictate management control design choices (Bedford et al., 2016, p. 11), controllers have the flexibility to decide on organic and mechanistic system constructs at any given time. Interaction enhances innovation outcomes in exploitative and exploratory projects, creating value in both organic (human interaction) and mechanistic (system) control approaches (Ylinen and Gullkvist, 2014, p. 15).

Another factor revolving around management mechanisms is the extent to which systems can enable or disable creative initiatives and how innovation acts in this process. Speklé et al. (2017, p. 20) demonstrates that it is possible to enact such control systems that retain the elements of a foundational control system while providing the space necessary for creativity. Moreover, Davila et al. (2009, p. 18) bring forth the notion that control innovation can be a twofold process; it can either actualize in the present business model (BM) or define a new model structure, stemming from either employees (controller) or top management.

In the effort of trying to comprehend controller outputs, the possible outcomes of innovation should be considered. Bisbe and Otley (2004, p. 21) reflect on the outcomes of innovation by arguing that product innovation and performance can contribute to the interactive use of MCS, which, in turn, can enhance the ongoing processes of an organisation through added awareness. In other words, product innovation and

performance may enable the controller to use MCSs more interactively, leading to better observations of organisational processes. Lopez-Valeiras et al. (2016, p. 17) build on the same agenda by pointing out that interactive MCSs also hold a pivotal position in process development, mainly through the promotion of creation and assimilation of innovation as they screen intrinsic and extrinsic information flow. Ultimately, value and control systems are notable factors in securing value from creative input. Knowledge integration, coordination, and filtering processes result in the necessity to address the entrepreneurial orientation (EO) of the organisational instances meant to accommodate creativity (Bisbe and Malagueño, 2015, pp. 29-30).

3.9 Accounting as Source of Strategy

Accounting is often the variable that experiences structural changes, leading to changes in the characteristics of controller activities. These accounting-related structural changes can be observed through budgets' different uses and outcomes. Budgets can be classified in a threefold manner: yardstick budgets respond well in mobilizing managers to pursue a long-term strategy, whereas interactive and coercive budgets are effective in evaluation and reward processes (Sponem and Lambert, 2016, p. 11). Finally, low budget evaluation and immersion may indicate either loose or indicative budgets, both of which attain a weak link between the budget itself and the incentives devised (Sponem and Lambert, 2016, p. 11).

That said, these characteristics do not elaborate on definitions, requiring further clarification. Interactive budgeting can be regarded as a participative process; data creation, dialogue and learning concerning different organisational levels enable participative budgeting through real-time feedback and analysis of critical innovation variables (Jarrar and Smith, 2014, p.10). In contrast, coercive budgeting can be perceived as the delivery of specified steps for the manager with limited budget target discretion potential, involving accountability of planned targets with a reduced space

for maneuveraility (Mucci et al., 2021, pp. 6-7). Ultimately, both can be considered essential techniques for organisational adaptability.

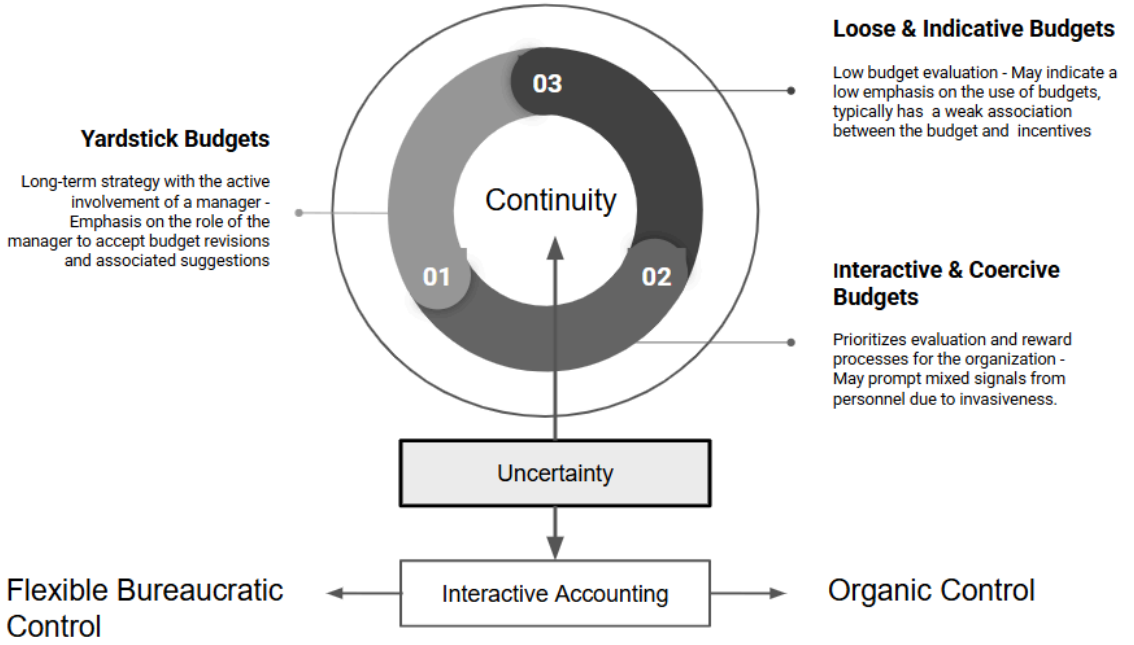


Figure 8. Budgeting Tactics (Based on Malmi, 2015, p. 17; Sponem and Lambert, 2016, p. 11).

The emergence of uncertainty leads to the interactive use of accounting, which typically intertwines with flexible bureaucratic or organic control setups (Bedford and Malmi, 2015, p. 17). Also, the extensive interactive use of budgets within a team corresponds with enhanced team performance while simultaneously influencing the degree of its motivation (Chong and Mahama, 2014, p. 13). However, even though the intended strategy of an organisation has a notable influence on controllers as it leads to their prompt involvement, the collaborative effect where controllers can provide value in response is notably slow (Erhart et al., 2017, p. 13). These arguments imply that successful organisational resolve, to a certain degree, is based on how management teams can contribute to the conditions and spaces where the controller engages in value-generating activities.

In the context of established accounting systems, the role of a Top Management Team (TMT) might not be self-evident. In the context of accounting system development, TMT commitment is often associated with securing resources (also incentives) for the adoption of a system (Tawse and Tabesh, 2023, p. 7). Also, Naranjo-Gil and Hartmann (2006, p. 21) assert that TMTs utilizes formal control mechanisms, such as MAS for decision-making in such contexts that do not belong to their professional (operational) background. Hence, they operate by accessing the information maintained by the controller, leading to an exchange of information. Information, which might be out of reach if this interaction does not take place.

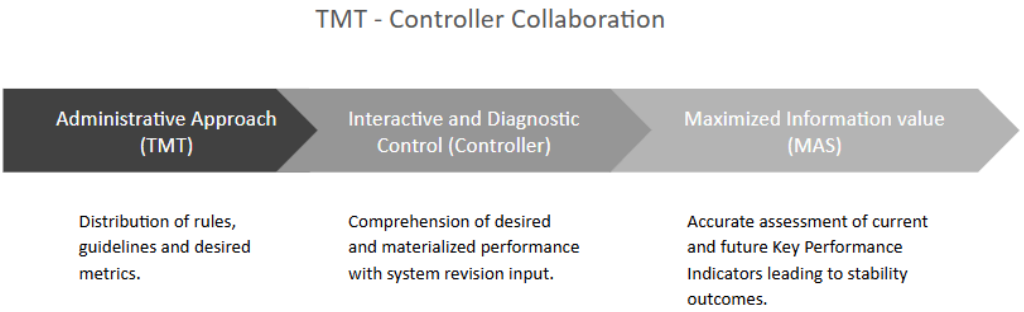


Figure 9. TMT - Controller Collaboration (Based on Naranjo-Gil and Hartmann (2006, p. 21)

One of the notable benefits of the collaboration between a TMT and a controller might be the informed exchange of strategy. After all, the assimilation of accounting and strategy leads to setups that incorporate either prospector setup with tight budgets or defender setup with additional compensation schemes (Martyn et al., 2016, p. 3), involving both the controller and upper management. Arguably, in the light of the crisis event, finding and securing a prospector position should be the primary agenda of the controller and, by extension, the TMT. In this attempt, having TMT heterogeneity positively influences strategic change outcomes in the pursuit of prospector positions (Naranjo-Gil and Hartmann, 2007, p. 16). Ultimately, in the prevalence of instability, the administrative approach of TMTs might become a stability factor for the controller.

Ultimately, it is not certain that traditional controller activities remain viable in crisis scenarios. Hofmann et al. (2012, p. 22) emphasize that both interactive and diagnostic budget use facilitate the creation and employment of intended and emergent strategies, which in turn highlights the need to revise budgeting definitions and activities. In addition, Becker et al. (2016, pp. 20–21) point out that budgeting activities employed amidst a crisis highlight resource allocation and planning over performance measurement considerations, leading to changes in the primary purpose of budgeting. Based on these arguments, it could argued that fixed budgets may become less usable when applied to contexts involving increasing levels of instability.

Many frameworks have been proposed over the years by scholars and practitioners with mixed adoption rates. These models have typically sought to either directly combine accounting and control or consider the other to explain the factors influencing a primary function. The insufficiencies of these models include inadequate classifications of the modes of control, superficial considerations of accounting and dysfunctional combinations of accounting and strategy. This section reviews models presented in the neural network that have notable implications for crisis management from the perspective of the controller.

A widely used control model is the Levers of Control (LOC) - framework devised by Widener (2007), which focuses on the identification and employment of organisational crisis response techniques through the detailed categorizations of strategic risks and uncertainties, highlighting the influence of diagnostic and belief systems over management attention and the attention-consuming properties of interactive systems (Widener, 2007, p. 25). In theory, these considerations allow the incumbent actor (controller) to conceptualize different risks while allowing them to also assess the resources invested into different systems. However, the model has been criticized for limited innovation capacity due to the disregard of informal control (Chenhall and

Moers, 2015, p. 7), ambiquity of interactive control explanations (Martyn et al., 2016, p. 17), and unclear definitions of organisational balance (Kruis et al., 2016, p. 13).

Balanced scorecard (BSC) is an evolutional product of financial and non-financial measures used by accountants, which utilizes elements of LOC and BSC interactively in enabling the employment of innovation (via executive input) towards strategy, and thus it is inclusive of organisational conditions (Chenhall and Moers, 2015, p. 6). Even though BSC has been estimated to have a moderate future adoption potential (Kumar et al., 2024), it is not perfect. The model has attained criticism for having ambiguous causality of perspectives and measures (Madsen and Stenheim, 2015, p. 9).

Economic Value Added (EVA) is a profitability tool, which is concerned with the actual financial value of a firm based on the employed capital; it considers a firm's ultimate goals, and most importantly translates (reconstructs) information amidst a crisis event into economic (production) artefacts with higher stock return correlation strength compared to traditional accounting tools (Pavlatos and Kostakis, 2018, p. 11; Chen and Dodd, 1997, p. 14). That said, EVA has notable flaws; it has been criticised for not having much contributive value in predicting distress (Sabol and Sverer, 2017, p. 8) and for falling short on stock return claims (Kyriazis and Anastassis, 2007, p. 24).

Based on this brief assessment, a few important design considerations can be established. First, informal considerations must be embedded in solutions for risk assessment, because their value cannot be proven or disproven beforehand. Secondly, the cause-effect links of the presented ideas must be identified as far as possible to increase clarity. This also extends to design considerations; they must be tangible, actionable, clearly documented, and devised in a way, which enables the identification of the current conditions of the firm to mitigate theoreticism and generalism. Thirdly, ideal models would provide predictive value for crisis recognition.

4. Framework Proposal

Fourné, et al., (2023, p. 11) highlight that controller inclusion in strategy creation depends on how well the controller tasks have been tailored to the business partner function. In other words, how well the primary accounting function of a controller is embedded with attained non-accounting proficiencies towards the role of a business partner. A fundamental consideration at this stage is how a controller can be meaningfully involved in organisational processes other than accounting or in such processes that combine accounting with operational data. In short, since management accounting untangles complex cause-effect links (Alsharari, 2024, p. 13) and strategic MAS applications contribute to higher TMT budget slack allocations via future-oriented controller communication (Namazi and Rezaei, 2024, p. 21), the input of a controller holds merit beyond the accounting context. As demonstrated below, a controller can be involved directly in the crisis recognition and response processes through knowledge of organisational conditions and the accounting function.

4.1 Controller Framework for Organisational Crises (CFOC)

This thesis proposes a new framework that can be utilized to assess budgeting items amidst a volatile operating environment. The model, named the *Controller Framework for Organisational Crises (CFOC)*, builds on the literature review outcomes and informs how the various theoretical concepts, such as budget tactics and control modes, can be used in conjunction to achieve desired operational outcomes. More specifically, the model proposes that controller activities should be closely paired with the budget tactics defined by Sponem and Lambert (2016) and systematically applied in the crisis recognition, response, and contingency planning processes. The pretext for the CFOC model is that the consideration of profitability indicators (for which budgeting tactics are a response) are vital for declining organisations to assess their performance when facing an external threat (Moores and Yuen, 2001, p. 32). CFOC continues the work of Naranjo-Gil and Hartmann (2006) on strategy implementation capabilities of MAS, and

the work of Widener (2007) on control innovation capacities systematically as it elaborates on the crisis response techniques of controllers combined with the diagnostic and interactive uses of budgets.

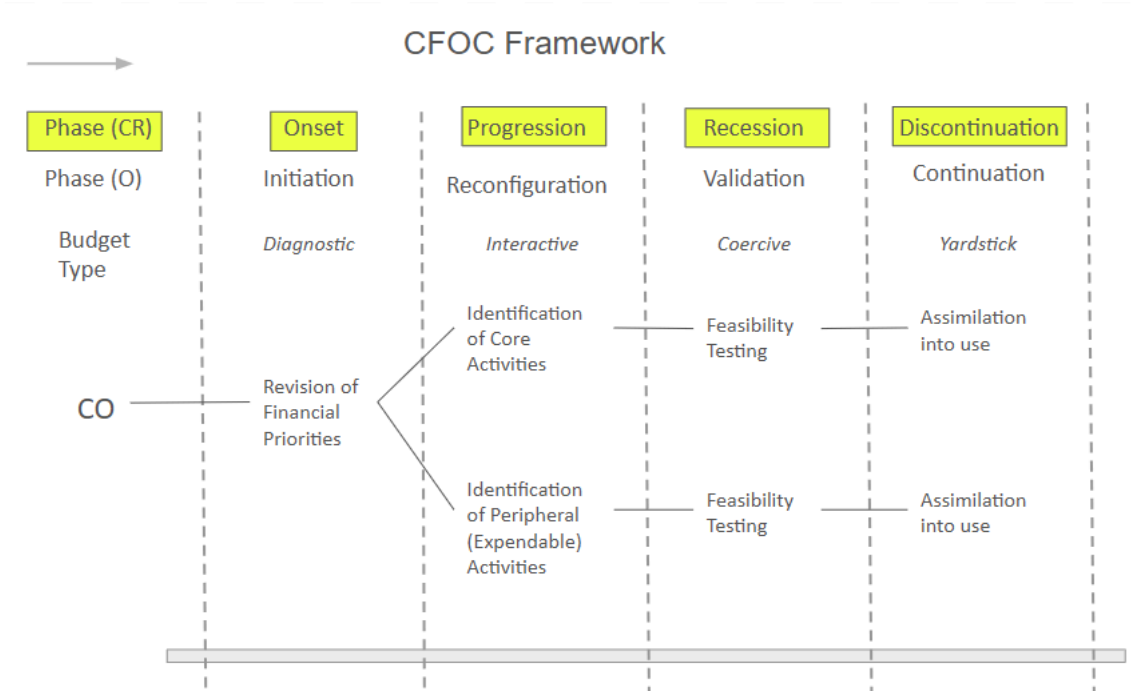


Figure 10. CFOC Framework for Controllers (Author's own elaboration)

Figure 10 illustrates the steps of a controller that materialize when they assess, recognize and respond to single organisational crises. The abbreviations used in the framework are as follows: the controller will be referred to as CO and the crisis process will be referred to as CR. The figure combines the phases of a crisis (CR) with the organizational phases that initiate in response to the related experience (abbreviation (O). Finally, budget tactics are illustrated in each step of the cycle to exemplify what types of budgets should be considered. Each section will be described as a combination of organizational and crisis phases. For example, "*Onset-Initiation*" is the first phase, in which onset considers the phase of the crisis and initiation considers organisational responses.

The *Onset-Initiation phase* incorporates the recognition of the impending threat, and this factor motivates the creation of response mechanisms inside the organization, culminated in the initiation of organizational activities (O) as a response. The CFOC suggests that in this first phase, the diagnostic budgeting tactic should be employed, which enables the controller to have the necessary space to review core financial priorities. Considering that this stage is the initial touchpoint for the organization, it can be argued that the actions taken here might be have the highest implication for the success or failure of the controller.

At this stage, it is arguable that the "review of financial priorities" should be further defined to establish the nature of what is effectively needed from the controller and what activities are essential. In the CFOC model, financial priorities are mostly associated with cost controlling of financial items towards budgeting outcomes, culminated in the design, creation, control and development of associated information systems with adequate understanding of technical insights (eg. SAP Modules) for the accurate reporting of the economic overview of the firm (Weber, 2011, p. 6; Rautiainen et al., 2024).

In the *Progression-Reconfiguration phase*, the crisis evolves and takes both tangible and intangible forms inside the organization. In this phase, many of the widely used descriptions and definitions used in the context of the crisis become standard, which clarifies the general direction and the activities that the controller needs to pursue. Controller activities evolve into the interactive (and creative) exploration of primary and expendable priorities through interactive budgeting, which has a stability-creating influence. The organisational focus is to be on reconfiguration as the phase focuses on deliberate responses to the crisis.

It could be argued that this phase does not attain sufficient categorizations for the items that are being reviewed. For example, the model could consist of *"Core"*, *"Secondary"*, and *"Expendable"* lines of thought for the financial item identification as the twofold classification may raise concerns of insufficiency. However, since countermeasures, including changes of direction, should be applied early (Probst and Raisch, 2005 p. 12) and the success of crisis management efforts is greatly enhanced by the swift dismantling of information to critical stakeholders (Pearson and Clair, 1998), the CFOC model proposes limited controller obligations.

The *Recession-Validation phase* entails the early signs of the end of the crisis. The interest of the organisation should be on the validation of current organisational state both relative and in the context of the on-going crisis. This includes the validation of budgeting items through coercive budgets, which enables the confirmation of the budgeting decisions coming from previous stages through rigorous and focused effort and limited personnel involvement. Effort in conjunction with limited personnel effort is expected to reduce negative echo that arises from the immediate environmental vicinity of the organisation or from individual responses to the crisis and/or the devised budgeting decisions that are not related to the mission of the controller. Ultimately, this approach allows the organisation to establish a functional state in which the adverse influences of the crisis have been accounted, contributing to the shift to future-oriented planning.

The motive for utilizing coercive budgets in the feasibility testing may not be evident, especially when considering that organisations might opt for coercive budgets before considering interactive budgets. Since a coercive management style employed in the decentralisation of knowledge, rewards (also power and skills) in high-involvement firms can be effective in the execution of non-rountine tasks (Adler and Borys, 1996, p. 21), the logic of coerciveness holds merit in this phase. Also, since the Recession-Validation phase is concerned with the validation of knowledge and because it might include less in-depth evaluative processes compared to the

Progression-Reconfiguration phase, the use of screening functionalities is justifiable from a developmental perspective.

In the *Discontinuation-Continuation Phase*, the decline of the crisis becomes more observable and evident. The organisation is expected to slowly fall into a space in which it may resume its processes with impetus that is somewhat relative to the state prior to the crisis. For this reason, the budgeting function should focus on the long-term planning (Yardstick budgets) to establish an operational portfolio around the decisions (financial items) chosen in the previous phases. Budget items passing the previous feasibility tests will be systematically put to use. These budgeting decisions are expected act as the basis upon which future operations are rooted.

It may not be evident how long-term planning, as presented in the *Discontinuation-Continuation Phase,* contributes to organisational recovery and planning for the prevention of future incidents. In essence, since high strategic planners tend to develop a more higher level of perceived environmental change (Peel and Bridge, 1998, p. 7), the operational (non-accounting or SMA) proficiencies of a controller become important. That said, it must also be acknowledge that the strategic planning of a controller is limited to the support function. Considering the SMA function of a controller, the Discontinuation-Continuation phase can be labeled as the learning sub-process where the early signs of a threat combined with the distinct budget concentrations are understood deeply, enabling the establishment of maturity and experience.

4.2 Critical Success Factors

The framework has several notable success factors that should be considered, most of which are related to social factors and the ways the model can be used. First, it could be argued that commitment underlines most of these factors behind the presented budgeting agenda. As put forth by Hansen and Stede (2004, p. 22), multiple budget

uses require the consideration of the levels of budget participation and target difficulty. Also, in the context of budget innovation, Becker et al. (2020, p. 27) point out that the popularization strategies employed by core actors (committed advocators) and the innovation potential of peripheral actors (partially committed advocators) must be carefully considered.

The organizational budgeting function may also influence the success or failure of the framework. Hartmann and Maas (2010, p. 16) point out that management involvement coupled with the creation of budget slack (space) can be positive or negative and that the outcomes ultimately depend on the gaming activity (playful exploration) of the Business Unit controller (BU) as a product of the pressure posed by the involvement of management (see also Libby and Lindsay, 2010, for gaming activity).

Role Ambiquity remains one of the main success factors for the use of the CFOC Framework. All active participants (actors), and especially the controller, must understand what their contribution should be as the clarity enables the reduction of adverse outcomes (Marginson et al., 2014, p. 10). The potential confusion related to roles can be understood in a few different ways. First, ambiquity can be about not being able to acknowledge the developmental state of the crisis at hand. Additionally, it can concern the inability to employ the correct or budget tactics according to what the model suggests. Lastly, it can be that the controller does not recognize the core or expendable activities that need to be classified correctly so that they might be appropriated and thus adequately addressed for contingency planning.

It must be acknowledged that the actors' viewpoints (eg. controller and the TMT) on performance measures and operational knowledge are profoundly connected and, depending on the context, sometimes even substitute each other (Englund and Gerdin, 2015, p. 24). Hence, it must be considered that the implementation of the CFOC Framework should always retain an appropriation of non-financial metrics, which in the case of controller-TMT relationships may primarily originate from the latter.

4.3 Preliminary Risk Assessment

Given the complexity of industries, and since learning behavior correlates with present and future preparedness in varying crisis situations (Carmeli and Schaubroeck, 2008, p. 12; Bundy et al., 2017, p. 17), it is crucial to consider the obstacles that may materialize in the use of frameworks. This section identifies three preliminary risk scenarios (S) and presents some advice as to how controllers might opt to resolve them.

S1: Failure to recognize the stage of the crisis

Even though the crisis as a phenomenon may be widely understood in an organisation, the identification of its developmental stage may be complex. In this scenario, controllers should focus on identifying the characteristics and evolutionary speed of the crisis event inside the organisation. Also, it is necessary to consider if the event is focused on selected organisational resources or if it presents a more comprehensive threat. Observed early warning signs may provide some guidance into this identification.

S2: Failure to implement budget tactics as a response to crisis event

As the core organisational processes are being threatened, it is not unusual to experience confusion. In this scenario, the focus should be to prioritize evidence-based identification of core activities (financial items) over the type of budget that is inherently suggested. This approach serves to clarify what functionalities ultimately need to be retained. The consideration of top priorities enables the organisation to operate and provides room for the controller to assess obstacles, even if the CFOC implementation fails.

S3: Failure to navigate a successful crisis response to contingency

Since the effectiveness of preparation exercises (and thus learning) is at its peak only after the realization of the most vulnerable stage of the crisis (Robert and Lajtha, 2002, p. 9, see also Wang, 2008), the extraction of this information towards contingency planning is vital. However, it is not evident how this outcome should be achieved. In the scenario where a successful crisis response is hindered by the inability to orientate towards future planning, the controller should focus on how and with what control decisions success was achieved and what organisational activities supported the process. Since the financial prioritisation has likely resulted in the reduction of activities, the controller must seek to understand what variables are crucial to sustain the organisation in the new environment.

The research questions concern if and how the controller can influence crisis response effectiveness and also whether budgeting as a function can influence this interaction. Based on the literature review, it can be argued that the controller does attain a role in crisis management. Accounting can be seen as a source of strategy, but also as the context of development for the associated systems. Conventional (passive) accounting approaches have been noted to have higher innovation outcomes for crisis resolve, and the interactive use of systems has been linked with the swift appropriation of a crisis. That said, it is not certain if budgeting, as a single sect of accounting, can assist in the crisis management process or whether some other constructs employed and maintained by the controller attain a higher effectiveness. In addition, even though the relationship between the controller and the top management team has been explained to a certain degree, the boundaries of responsibility between these two actors have not been addressed. These are notable grey areas, which will be addressed in the empirical section of this thesis.

Since, the framework covers aspects of accounting, decision-making, and crisis management considerations, and elaborates on the duality of operational and traditional controller roles suggested in contemporary research, it provides first-hand information whether this modern role is feasible. In addition, since it tests whether budgeting is a compatible construct in the established crisis context and, on the other hand, if it does not reflect the activities that the controller should implement, it elaborates on such processes that need to be addressed in the crisis with the input of the controller.

5. Methodology

This section provides a research design, covering the general approach to research, validity and reliability considerations, collection and analysis of data and finally interviewee selection. It elaborates on the measures used to fulfill the standards of research and also presents associated criticisms. Ultimately, this section provides the basis for reviewing findings, initiating discussion, establishing results and finally seeking comparisons between results and additional literature.

5.1 Research Approach

This thesis aimed to answer the following research questions: "H*ow can the controller influence crisis response effectiveness?" and "What kind of budgeting decisions should Controllers pursue during financial crises?".* These research questions were covered through the use of pragmatism; ultimate approach was to establish practical solutions, with initial arguments and topics that were altered during the cycle of the thesis to accommodate practicality (thephdclub, 2024). The objective therefore, was to form an understanding of the decisions and activities the controller should pursue in crises, which includes the pursuit of some universal guidelines. To facilitate the understanding of the previous, the function of a budget was tested to screen whether it could provide desirable outcomes. For this reason, a group case study with structured interviews and with a predetermined questionnaire was utilized over a period of time to form cumulative data for the investigation of crisis handling practices of controllers operating in various distinct sectors. Qualitative methods enabled the collection of descriptive field data responses, which were essential for storytelling in our context. It contributed to a higher understanding of concept relationships, dependencies, and requirements concerning crisis management which may not be compatible with quantitative approaches.

Qualitative research is inherently an open process for the in-depth sourcing of meaning (Khoa et al., 2023, p. 15). It considers the specific factors of a given context as a source for crucial insights (Humphreys et al., 2021, p. 9), aims to understand why events materialize through a textual, constructivist investigation process (Pilcher and Cortazzi, 2024, p. 10), and analyzes how and what outcomes occur in the implementation of constructs (Hamilton and Finley, 2020, p. 6). Qualitative inquiry fulfills these conditions typically by establishing an assessment focus, revising it through the examination and immersion of past knowledge, establishing connections and comparing similarities and gaps and engaging in the deep interpretation of data (Flemming and Noyes, 2021, pp. 7-8).

Qualitative research consists of internal generalizability and external transferability. Internal generalization refers to the study of groups and associated environments in which the (non-statistical) research findings are not observable in the initial source data (Maxwell, 2021, p. 4). Transferability is a simplification-oriented value-seeking process, which focuses on the application of sourced information into contexts and actors that have not been initially investigated, requiring the in-depth recording of initial variables to ensure optimal probabilities for success (Drisko, 2025, p. 7). In essence, considerate internal generalizations confirm the quality of outputs within a group and between similar groups, whereas external transferability challenges the boundaries of research through added contexts, resulting in a comprehensive investigation. The validity of these internal and external elements are equally important (Peters et al., 2018, p. 17).

Figure 11. Qualitative Research Process (based on Maxwell, 2021; Fife and Gossner, 2024, p. 3)

Qualitative research has been criticized for focusing too much on transcripts instead of the exchange of interview interaction (Ivey, 2023, p. 27). In essence, this argument attains some merit when it comes to inter-rating (agreement on results between researchers) because the qualitative replication of research generally does not seek to achieve complete replication of previous studies (Tuval-Mashiach, 2021, pp 6-7). However, this does not mean that qualitative approaches are not useful. Qualitative researchers harness real-time evidence in the form of quotations to support the views presented (Morgan, 2022, p. 12). Also, qualitative research is invested in various modes of observation, resulting in lucrative opportunities to recognize and highlight the linkages between themes present in the acquired data (Pratt et al., 2022, p. 9; Fischer and Guzel, 2022, p. 4).

5.2 Data Collection

For data collection, this research utilized a problem-centered interview, for abductive theory building where systematic combining is orchestrated to evaluate reality with existing theory to find overlaps and diversions in a lateral process (Dubois and Gadde (2002, p. 4). In this effort, the participant is considered both an expert and a traveler in their field (Döringer, 2021, p. 6). The interview explored whether controllers employed in Finnish or International limited companies could contribute to organisational stability amidst a crisis event with their daily activities. This context was decided because the Limited company is the most common legal organisational entity in Finland, which can incorporate both non-listed and listed companies. Simultaneously, it is the primary context of a controller.

Data collection was orchestrated via electronic recording and via manual note-taking in the interview process. In order to ensure efficiency and quality of respondent outputs, the interview template along with the questions was sent to the consented participants prior to the interview session. This approach ensured that the respondents

were aware of the nature of questions and thus it contributed to higher quality outputs.

Semi-structured interviews were utilized to achieve the intended outcomes of data collection. As opposed to fully structured interviews, the semi-structured interview involves the exchange of dialogue where interviewer is building knowledge while the interviewee builds responses, resulting in scenarios where the latter may be required to consider topics explicitly and in-depth possibly for the first time, enabling critical assessments (Husband, 2020, p. 8). The success of a semi-structured interview is influenced by the the degree of trust, relationship and connection (Brown and Danaher, 2019, p. 12). In this effort, the presentation of secondary questions in the interview process was occasionally required, focusing on the aspects of “why” and how”.

5.3 Interviewee Selection

The nature of qualitative data posed challenges for limiting data collection and ensuring the representativeness of data. Hence, the scope for the selection of participants was determined in the light of several factors. First, a consensus exists by which qualitative research should attain a broad sample beyond statistical methods for internal generalization to ensure that results are generalizable to the settings and groups examined (Maxwell, 2021, p. 6). However, using a broad numerical sample entails a heightened data saturation risk where the boundaries for data saturation, or thresholds after which data collection does not provide further value for the understanding of a topic (Braun and Clarke, 2021, p. 5) may be rapidly exceeded. This factor is especially relevant for qualitative research as it focuses on textual data with in-depth records of experiences. Ultimately, with a homogenous population, saturation may be achieved in qualitative data collection with the sample size range of 5 to 24 participants (Hennink and Kaiser, 2022, p. 6) if the purposive focus is on the quality of evidence (Staller, 2021, p. 7).

The primary criterion used for participant selection was educational background consisting of business, accounting, or another closely associated study field, Finland as the location of employment due to investigative interest, and gender to ensure the representativeness of sample. Care was taken to include participants from novel, intermediate and senior experience levels. Also, care was taken not to include industry overlaps between participants to ensure richness of data. Lastly, to ensure up-to-dateness of views, the active status of employment was inquired. These considerations contributed to the review of controllers and crisis management effectiveness in distinct contexts.

For the interview, 70 controllers were contacted through LinkedIn, out of which 12 responded by the internal deadline and ultimately 8 were interviewed. The controllers selected for the interview had diverse backgrounds from 8 distinct industries, enabling a rich collection of views and experiences on the priorities of controllers amidst crises. Eventually, 100% of the final pool of participants consisted of males.

Table 1. Participant Overview

Participant	Location	Firm size	Experience	Status	Industry
Controller 1	*Finland*	*Over 200 People*	*2-5 years*	*Active*	Staffing
Controller 2	*Finland*	Over 200 People	*0-2 years*	*Active*	Energy Sector
Controller 3	*Finland (period abroad)*	Over 200 People	*Over 5 years*	*Active*	Research
Controller 4	*Finland*	Over 200 People	*2-5 years*	*Active*	Mechanical Engineering
Controller 5	*Finland*	1-50 People	2-5 years	Non-active	IT
Controller 6	*Finland*	Over 200 People	*2-5 years*	*Active*	Healthcare Sector
Controller 7	*Finland*	Over 200 People	*Over 5 years*	*Active*	Environmental Technology
Controller 8	*Finland*	1-50 People	*Over 5 years*	*Active*	Management Consulting

All controllers screened for the interview had an identifiable work history in Finland and six out of eight controllers had worked in large organisations. Only two controllers had worked in small-medium sized organisations. Concerning experience, one participant could be considered a starting professional (0-2 years), whereas the largest group was the 2-5 year experience category with four participants. Finally, three controllers had worked in a controller position for well over 5 years, which classified as senior in the controller function according to our categorization. Seven out of eight were currently working in a controller position.

Table 2. Interview Schedule Breakdown

Interview	Date	Mode	Duration	Result
Controller 1	14.8.2025	Online (Teams)	1 h 15 min	Success
Controller 2	19.8.2025	Online (Teams)	45 min	Success
Controller 3	27.8.2025	Online (Teams)	1 h 15 min	Success
Controller 4	29.8.2025	Online (Teams)	55 min	Success
Controller 5	29.8.2025	Online (Teams)	1 h 10 min	Success
Controller 6	1.9.2025	Online (Teams)	1 h 15 min	Success
Controller 7	2.9.2025	Online (Teams)	1 h 10 min	Success
Controller 8	3.9.2025	Online (Teams)	1 h 45 min	Success

The sourcing process was conducted between 07/25 - 09/25 and most of the interviews were held online in August through Teams. Each session was initially estimated to last approximately 45 minutes. However, this target was over-extended on several instances, mainly due to the restricted pace of manual note-taking, but also because of the depth of answers provided by the participants. The median duration of the interviews was 1,01 hours cumulatively. All of the scheduled interviews were conducted successfully.

The questionnaire used in the interview consisted of 21 questions, out of which 4 questions covered demographic details, such as work history, experience, location of employment and general sizes of the organisations represented. Questions 5-8 touched upon concepts such as financial reconfiguration needs, roles of physical systems (accounting), roles of operational data in the work of the controller, and the usability of budgets in the crisis phase. Questions 9-10 assessed the decision-making processes of controllers and organisations in general that commence after crisis recognition.

Questions 11-16 covered the applicability of interactive, coercive, and long-term budgeting, primary and secondary costs, methods to confirm the direction of organisations, and the central support-oriented activities of controllers during and after the crisis phase. Question 17 bridged the gap between the controller function and the use of frameworks, reflecting their applicability and popularity in organisations, and enabling the assessment of the CFOC model.

After these questions, the CFOC framework devised in the context of this thesis is presented and all the basic principles are consecutively explained in the continuum of the model to ensure a unified understanding between interviewees. Finally, questions 18-21 cover the perceived usefulness, possible and probable issues, and key developmental priorities of the model.

5.3.1 Data Analysis

Interview data was analysed through the use of thematic analysis. Thematic analysis (TA) covers the abductive approach of this study, requiring precise linkages with the main theme, which is supported by contributive substance-enhancing themes, and results in outcomes where potentially high volumes of data are summarized in precise, transparent declarations (Lochmiller, 2021, p. 16). In other words, the main theme of crisis management effectiveness was substantiated with the financial function of

budgeting, resulting in accurate yet summarized outcomes. Within thematic analysis, this study focuses on the codebook approach, which involves the processing of predetermined themes processed in their domain while characteristically allowing some subjectivity for the researcer (Morgan, 2022, p. 8). Hence, the qualitative primary data collected was screened to spot new and unexpected themes and characteristics. In this effort, much of the value came from direct excerpts, which provided insight into dimensions and themes, which were then compared against the literature review and other sources.

5.4 Validity and Reliability

Validity and reliability must be considered as a group as they have a distinct link to each other. Validity considers the extent to which pieces of the analysis device are relevant to a targeted design, encompassing factors, such as grammar, instruction clarity, appropriateness of response format and representativeness (population) of the sample (Koller et al., 2017, p. 2). As an evaluative construct, it is dependent on the aims of the methods employed by a researcher, and the overall context to which it has been applied, resulting in opportunities to assess materialized applications towards improved methodology (Moret et al., 2007, p. 3). Validity was addressed in the empirical study by ensuring the starndardization of grammar between participants, meaning that the same presentations with identical or highly similar word choices were provided for all. Additionally, the response format was designed to remain the same throughout the process.

Reliability is a standard (quantitative) measurement construct, which is mostly associated with the trustworthiness of a given research design in the qualitative inquiry (Golafshani, 2003, pp. 5). Reliability focuses on whether the collected results are valid assessments, where positive reliability leads to enhanced assessor (reader) confidence (Cole, 2024, p. 2). Reliability was addressed in the empirical study by ensuring that the participants have experienced conditions resulting in the need for financial

reconfiguration. In other words, conditions which this study aimed to understand. Additionally, reliability was addressed by ensuring that controllers respond precisely to the posed questions, extending primarily to follow-up questions and corrections to the wording of the questions.

The enforcement of research validity and reliability (rigour) in qualitative research is typically fulfilled by the researcher in data acquisition and subsequent assessment through techniques that include, but are not limited to, standardized output coding, extended engagement, description substance, translation bias acknowledgement, inter-rater reliability (replication of research), briefing, and negative case assessment (Morse, 2015, p. 8; Cole, 2024, p. 26). Out of these techniques, extended engagement, description substance, briefing and translation bias acknowledgement were the primary methods to ensure validity and reliability; prolonged sessions were risked to ensure the appropriateness and completeness of data, descriptions were provided if any indication of unclarity emerged, the briefing of complex structures were self-initiated, and the presentation of the knowledge, views and agendas of the translator were minimized to ensure a neutral collection of data. Both of the validity and reliability approaches were suitable for the study, because the research question supported descriptive rather than quantifiable data collection, producing either affirming or disproving results or both. In addition, as the ultimate objective of this study was to learn about practices of crisis management effectiveness, these qualitative techniques were considered the most suitable.

This research is invested in both online and face-to-face interview setups. The ethical standards and principles remain the same with both, encompassing risk disclosure, privacy, confidentiality, anonymity, intellectual property, consent (confirmed before execution) and finally purposive participant withdrawal (Khan and MacEachen, 2022, p. 8), which characteristically takes place during or after the interview cycle when circumstances change. Due to power imbalance, all of these principles must be enforced by the researcher. Consent must be continuously confirmed, self-awareness

must be employed to recognize changes in the interview process, and unconscious behavior changes need to be monitored before, during and after the interview cycle (Taquette and Borges da Matta Souza, 2022, p. 13) to ensure that appropriate ethical standards are covered discreetly.

These conditions mentioned above were addressed in the interview process by requesting permission to record sessions, informing about data storage decisions and duration, requesting input to desired industry classifications. Prior to interview, the designed anonymity and contributor privacy of questions was communicated and the preliminary delivery of interview questions supported this endeavor. During the interview cycle, this was again highlighted by communicating that the participant can provide an answer based on general personal experiences on the subject. Finally, in preparation for possible withdrawal, it was established how the author can be contacted in case of issues or concerns.

By design, this study was prone to risks for data-related incidents, such as data leaks and privacy violations (Smith, 2008, p. 11) because qualitative research is inclined to collect participant and company data. In practice, any data or interaction focused on exchange that touches upon personal history or company characteristics should be carefully considered before results are reported because they may enable identification. In practice, the management of these risk factors commenced with the design of questions, neutral, cautious discussion, and with the careful handling of collected data. In response to these risks, the questions devised for the interview did not collect any personal or company data, apart from a generic industry classification. Additionally, recording only commenced after all potentially sensitive information exchanges were carried out. After the interview cycle was complete, direct communication about the use of data along with its disposal was included to all interview participants.

The researcher must also strive to ensure that participants will not be exposed to tracking during interviews conducted via third party software (Thunberg and Arnell, 2022, p. 9) by non-wanted, invisible actors with malicious intent. Since this risk is present in online interview setups, and since consideration must be given to the security of the interview, the option to arrange an interview onsite in a location endorsed by the participant was given. However, since all participants requested an online interview, software security became a relevant topic. For online interviews, this study utilized Microsoft Teams for online interviews for its wide adoption, security features and participant preference.

6. Findings

This section reviews and analyzes the data collected according to the main subjects presented in the research questions and in prior review of literature. Subjects covered in this section include crisis-contextual roles of the controller, feasibility of accounting systems and operational knowledge as tools in the crisis, usability of budgets in sense-making, and the review of the proposed crisis management framework.

The research has proposed that modern controllers are vested in the assimilation of operational considerations into financial modelling, extending traditional role boundaries. In short, all controllers (1-8) confirm that operational knowledge is essential for the comprehension of the business, culminating in, for instance, link creation between top management and the financial function, ensuring up-to-date views, story construction around numbers, identification of causes related to changes, and informed corrective action. Hence, it can be stated that operational knowledge is embedded in the role of the controller based on several angles.

6.1 Controller in the Crisis Cycle

In the abruptness of a crisis, it may not be clear how the controller should react. In short, the argument put forth by Controller 8 summarizes the urgency, stating that "*the worst decision amidst a crisis is inactivity*". This argument suggests that resolve might be found as long as the controller presents initiative. However, it does not yet provide substance as to where the controller can contribute. In short, *"the inclusion of the controller in the crisis cycle extends to financial modelling"* (Controller 2), and they *"present information for the support of resolve"* (controllers 7, 8).

The controller inclusion in the crisis may extend to profitability, liquidity or expense analyses or all three depending on preference or need. In the context of profitability, controllers should focus on the *"monitoring of the achievement of planned targets through operating margin, sales margin, adjusted sales margin, EBIT and EBITDA"* (controller 1, 2). Addressing the crisis also entails operational variables. For instance, "*the collection of financial and operational information enables the estimation of cash flow and cost changes, culminating in a short-term liquidity assessment via cash flow calculation"* (Controller 6). Finally, with large-scale crisis events, *"daily calculations may be required to establish an understanding of the situation"* (Controller 8). Appropriating the crisis in the controller function can also be summarized as a sequential process. For instance, *"liquidity-related considerations may be the starting point, which then evolves into readjustments on costs and finally ends in the operational priority identification, which involves risk assessment"* (Controller 6).

Several expense categories can also be examined to enhance financial standing. Important tangible proposals which the controller can present are associated with short and long-term savings, termination of projects, new recruitments (Controller 3), personnel reductions, production relocation (Controller 4), and additional financing needs (Controller 5). However, the duration of cost cuts is a key consideration as *"long-term cost reduction initiatives can indicate an on-going crisis"* (Controller 3). Hence, it must be carefully considered when these restrictive agendas should be concluded.

At this stage, it may not be evident how cost categorization should be approached. In essence, even though *"all cost categories should be considered as potential reductions"* (Controller 7,8), the observed categories may need to be nominated into primary (critical) or expendable classifications. In responding to expendable costs, the suggested expenses were *"other than sales related non-obligatory refreshment and well-being costs"* (Controller 1), *"overlapping costs in distinct cost structures"* (controller 2,4, 6), *"fixed costs such as rents of properties"* (controller 2), *"costs of*

support that do not affect revenue generation" (controller 3), *"license costs, employment benefits, ultimately personnel costs"* (controller 5), and finally *"non critical investments, such as marketing and representation expenses and travel costs"* (controller 6).

Primary costs, or such costs that cannot be easily removed or replaced, are related to revenue generation, including *"legal obligations or mandatory expenses, such as financial statements"* (Controller 3), *"personnel costs, rental costs, production costs, IT and system costs"* (Controller 6). Also, *"recreational costs should not be completely cut due to adverse employee well-being outcomes"* (Controller 5), which renders it a somewhat of a conditional element to primary costs. Although these classifications may already be acknowledged in organisations to varying degrees, they summarize how the controller can approach costs.

Several key considerations were also provided for the period after the crisis. By *"adopting swift reactions"* (Controller 6), it was pointed out that "*the financial department needs to focus on clearing technical and developmental debt"* (Controller 5) with *"a conscientious focus on covering general controller vacancy requirements, especially adopted key numbers and routines"* (Controller 4). In practice, these requirements would ideally be fulfilled through measures, such as the *"progression monitoring of objectives"* (Controller 3), creation and maintenance of KPIs, investment assessments (Controller 6), flexible forecasting models (Controller 5) and *"reporting to secure feasible developmental paths"* (Controller 1).

6.2 Accounting Systems and Crisis Management

The literature review suggested that controllers work with, but not solely through accounting systems. However, this knowledge does not elaborate on how embedded or how constant the systems are in reality. This question was answered on several accounts in this study. For instance, *"systems should not have total directional control*

over operations and that the characteristics of an operation should be the determining factor in selecting a system for implementation" (Controller 5), Also, since *"systems are ultimately only data sources"* (controller 4) *"with a defined purpose"* (controller 5) and *"essential controller activities materialize outside the systems"* (controller 8), it can be argued that, in responding to crises, there should not be an extensive reliance on accounting systems.

6.3 Budgets and the Crisis

The overall objective of the financial department in the crisis cycle must be carefully defined. This factor was highlighted both in the financial ratios presented and in the priorities the department should have in a crisis. In short, *"sales margin and operating profit per individual can be utilized to identify loose resources"* and *"attention must be preserved for human resource efficiency"* (Controller 1). That said, it is important to also note that *"several budgets with different precision levels need to be utilized"* (Controller 2). Given the slight variances of answers, there is a need to review how the budget as a construct can be used.

Interactive, coercive and long-term budgets, as initially discussed, may be associated with operations during a crisis cycle. The interactive budget is considered *"an important element of both small and large decisions"* (Controller 4) *"useful to assess the sufficiency of planned measures against sufficient outcomes"* (controller 1), *"crucial for the up-to dateness of modelling"* (Controller 5) and *"necessary for stakeholder inclusion in financial planning"* (Controller 6). The coercive budget on the other hand, is considered useful in *"dire situations"* (Controller 2) for the recovery process (controller 4), for straightforwardness and efficiency (Controller 1), and *"to rectify the crisis"* (Controller 3). Finally, the long-term budget is considered useful for "assurance through permanence" (Controller 1), coordination of top management, developmental project assessments (Controller 3), future modelling (Controller 5), strategic direction,

predictability, employee commitment (Controller 6) and directional awareness (Controller 8).

However, since *"a mere budget selection is an insufficient action as the recovery phase relies on crisis monitoring and the new organisational state can already be proper in the aftermath of cost cuts"* (Controller 8), additional considerations must be evaluated in the effort to understand how resolve might be achieved. Responding to this insufficiency, Controller 5 argues that *"it is necessary to use a rolling budget and construct a system around it, even if the concept has not been previously implemented".* Although indirectly, this argument was confirmed by Controller 6 with the notion that *"a rolling budget with real-time forecasts represents such budgets that generally work the best in a crisis cycle".*

Moreover, in some instances, budgeting was not considered pivotal. Controller 4 considers yearly and quarterly forecasts sufficient especially for *"non-severe crises".* Yearly and quarterly forecasts were also brought up by Controllers 7 and 8 as *"necessary structural components".* Finally, it was stated that *"a rolling forecast is more important for the leadership of a company than long-term budgets"* (Controller 5). These arguments present an interesting opportunity to further acknowledge the relationship between budgeting and forecasting in the development of the framework associated with this study.

6.4 Framework Coherence

By discussing controller involvement, value of accounting systems and the usability of budgets in the crisis cycle, the study provides materials for the development of the framework proposed. These materials inform how controllers generally engage in abnormal situations, how individual performance in the core functions of a controller are linked with positive and negative outcomes for the incumbent organisation, and how technology can be perceived as a mechanism in the crisis cycle. Finally, the review

of perceptions of widely adopted frameworks and models during the interview depicted what prerequisites need to be addressed prior to the development of such tools.

In establishing some of the principles of well-functioning frameworks, several important characteristics were named. In essence, the most important model manifestations are *"scenario-related intrinsic models from organisational sources"* (controller 2), *"tailored models for the background use of individuals"* (controller 3, 6), *"models with high levels of developmental sophistication"* (controller 7), and *"models with high approachability, which enable the concretization of subjects"* (controller 8). Out of these characteristics, developmental sophistication and approachability were relatively well addressed by design in the CFOC framework based on the interview outcomes.

Table 3. Constructive elements of CFOC

Participant	Element	Value	Result
C1	Clear continuum	Progression	Easier model adoption
C3, C4, C5	Process realism	Applicability	Better direction
C8	Crisis Awareness	Response	Faster decision
C6	Crisis cycle structuring	Response	Informed decision
C6	Concrete action (activities)	Value attraction	priority establishment
C7, C4	Controller guidance	Resolve	Closure, learning
C7	Internal dialogue	Exchange	Faster communication

Interestingly, process realism and controller guidance were highlighted in the responses, which suggests that the initial design as well as the presentation of the design was somewhat correct. The initial design was described as a setup which *"depicts well what could happen"* (Controller 3) and *"can provide a useful theoretical*

frame" (Controller 5), and even one that *"closely matches our ways of working"* (Controller 4). Additionally, it was presented that the *"phases go approximately in the suggested order"* (Controller 5) and that it "attains many correct elements" (Controller 8). However, since *"the operations are more iterative and more reactive than what the model suggests and the suggested phases do not necessarily materialize in the context of the budget"* (Controller 8), it must be acknowledged that, from the perspective of the crisis, budgeting may not suffice alone.

Table 4. Challenges of CFOC

Participant	Issue	Context	Result
C5	Verbal unclarity	Substance	Implementation challenges, potential dismissal
C7, C5	Theoreticism and Generalism	Substance	Unrealism
C6	Linear thinking	Structure	Incorrect crisis assessments
C1	Fixed phases	Structure	Potentially irrelevant activities
C8	Budget Application	Structure	Potentially irrelevant analyses
C6	Qualitative variables	Structure	Partial assessments, lack of interactivity
C6	Resource requirements	Application	Spontaneous obstruction of application

The issues prompted by the participants can be categorized based on the substance and structure of the model, and application challenges of the incumbent organisation. With these categories, the single most highlighted aspect was theoreticism and generalism, which attains merit since *"the benefit of use will be largely determined by the areas of responsibility of the controller and the role description as the work of a controller varies greatly depending on the business sector"* (Controller 1). Hence, there are certain limitations as to how pragmatic the model can be. That said, the challenges were described with words such as *"the crisis does not necessarily evolve according to what the model suggests"*, *"does not consider qualitative aspects", and "requires resources from the organisation, which have not been taken into consideration"*

(Controller 6). However, challenges were not always perceived to be explicitly about the model. More specifically, *"the issues of the model are essentially a question of the user as people may enforce different priorities. Ultimately, this depends on the organisation and the operational sector"* (Controller 4).

6.5 Framework Development

Establishing all of the variables that could be used to develop the model may be increasingly difficult because of the different organisational structures, priorities and controller-level variables, such as positional (vacancy) characteristics and distinct ways of working. After all *"there are no models that can work for all. The key is to tailor models to suit one's needs"* (Controller 5). However, this does not overwrite the necessity to examine the correctness of measures and structures that can be evaluated. This section summarizes the developmental propositions made during the interview cycle and introduces the revised framework.

Table 5. Development of CFOC

Participant	Input	Value
C1	Real-time controller communication	Information and knowledge transfer
C2	Model indicators	Organisational positioning
C3	Comprehensiveness of financial planning (budgets)	Awareness of economic dynamics
C4	Monitoring phase (budgeting)	Feasibility testing
C5	Tools for priority recognition	Decision quality
C6	Qualitative variable consideration	Dynamism
C6	Real-time data and analytics consideration	Insights, data quality
C7	Crisis categorization (manifestations)	Model versions
C8, C6	Forecasting construct	Functionality

The developmental propositions presented may be examined through the expected values or desirable elements pointed out by the participants. The values highlighted in the propositions can be classified as 1) ease of information exchange, 2) comprehension of organisational position, 3) recognition of economic functionalities, 4) Apprehension of insights, 5) confirmation of functionality, 6) pragmatic model versions. Out of these considerations, the single most highlighted aspect was functionality, and more specifically the forecast construct. After all, it was stated that *"the consideration of real-time data and analytics could be improved, for instance with rolling forecasts, scenario modelling and data analytics"* (Controller 6). Additionally, *"if the context of the model would not be budgeting, but instead economic forecasting, then all of the phases would function together as suggested. Crucial matters will be recognized and acted accordingly."* (Controller 8).

Another highlighted aspect central to this examination concerned feasibility testing and more specifically monitoring to accommodate the budgets. In essence, it was stated that the model *"could incorporate a monitoring phase, for instance, to supplement the long-term budget to see how they have influenced the situation"* (Controller 4). This construct could be a natural extension of the model since the preliminary design of the model already incorporated some related functionalities, such as feasibility testing for the decisions made (see p. 36 for the Recession-Validation phase).

On top of functionality and feasibility considerations, another highlighted aspect concerned dynamism, and more specifically the inclusion of qualitative aspects.
In essence, it was stated that *"dynamism is important and that a flexible mobility between phases of the model must be ensured. Concerning this matter, the model could incorporate structures, which enable the consideration of qualitative variables"* (Controller 6).

One increasingly qualitative aspect concerning information and knowledge transfer was highlighted. In the context of real-time communication of a controller, it was stated that *"controllers must communicate on the developments that materialize. Otherwise the information (data) will be arranged into different setups merely for the sake of information"* (Controller 1).

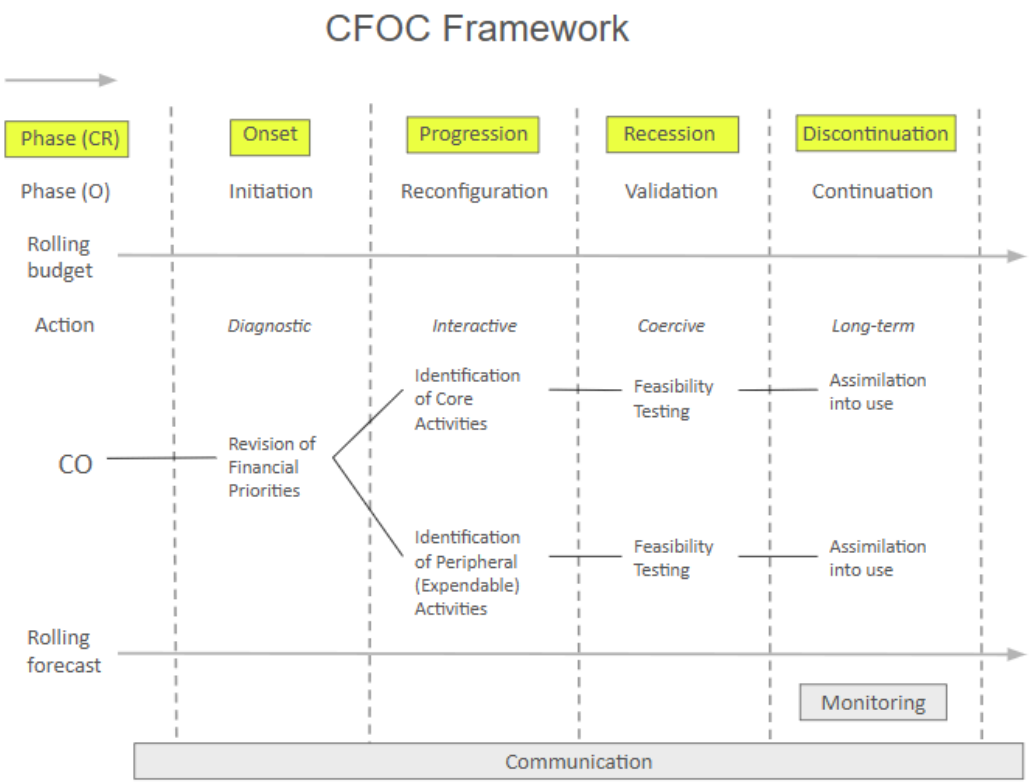


Figure 12. Revised CFOC Framework (Author's own elaboration)

Figure 12 presents the revised version of the framework in which the concerns on budgeting and forecasting constructs, monitoring, and controller communication have been addressed discreetly. A Rolling forecast is now included as the central function, which is supported by a rolling budget. The previously discussed diagnostic, interactive, coercive and long-term budgets are now considered as views under the rolling budget, which indicates a type of thought logic. As suggested, the monitoring phase now evaluates whether or not the longer-term decisions made in the context of the budget and the forecast are feasible. Additionally, as suggested, the need for communication is

highlighted at the bottom of the figure, visualizing in practice how the controller must communicate on the decision made.

At this stage, it must be acknowledged that models may only be useful if sufficient economic comprehension of the organisation exists. In short, *"effective crisis management approaches must entail a sufficient economic overview of the firm, including the representation of diagnostic, interactive and long-term-budgets that relate to stable environments"* (Controller 3). Based on this argument, it could be further argued that particularly novel controllers may attain less value from frameworks because inexperience may affect how sufficient the economic overview of the firm can be. However, since the presentation of the initial framework prompted the arguments that *"controllers can remind themselves about the current situation and where one should focus"* and *"It (CFOC model) can act as a reference for the controller especially if crisis situations are new and no prior experience exist"* (Controller 4), the framework may be valuable in its developed format.

7. Discussion

Current research has not sufficiently explained how the controller acts nor how they can influence crisis effectiveness. Controller involvement must be investigated because crises unexpectedly threaten firms' high value targets with a limited reaction opportunity (Hermann, 1963, p. 4), budgeting control is linked with spontaneous solutions in crises (Carr and Beck, 2023, p. 18), and because controller identities and roles are prone to changes (Wolf et al., 2020; Tillema et al., 2022; Vaivio et al., 2023).

Controllers experience crises, but also attain information that can be used to handle them. They can translate the influences of the crisis to the organisation through financial data and operational (sectorial) information. The primary research question of this study is whether controllers can influence crisis response effectiveness. As an objective of this research question, this study investigates what budgeting decisions, if any, should be considered in crises. These questions must be solved because crises are complex, volatile and even financially crippling events and preparedness must be ensured before crises commence. Key groups, such as controllers and executive teams form the structures upon which resilience, maneuverability, and adaptability, as essential variables of resolve, are based.

In seeking results to these questions, this study first utilized a systematic co-citation based literature review to establish the views of current research and also to gather materials for the framework. Then an interview study extending to a range of industries with an abductive approach was orchestrated to test the concepts selected. Finally, thematic analysis was conducted to analyze the findings and to develop the framework. The results provided an in-depth descriptive insight on how the work of the controller can be associated with processes that are either effective or ineffective in clearing the crisis.

A central finding of this study was that controllers do not solve the crisis but support the top management in this effort. Controllers are the main actors of financial modelling who work with data, associated tools and management accounting systems and managers draw on their expertise when support is needed for decision-making. This support can extend to a wide variety of needs such as scenario-modelling, path justification and financial structuring. Budgeting, as a flexible continuum, can assist in different phases of the crisis, and especially coercive budgets can assist in rectifying it. However, a budget must be complemented with a forecast because the previous is associated with planning and evaluation whereas the latter is associated with real-time data and analytics.

In the context of mutual interests between the controller and the top management, the concept of control through socialization can be examined. More specifically, as observed in the literature review, organisations can trust in socialization as a control technique because employees generally act according to the interest of the company (Ouchi, 1980, p. 4). This argument was confirmed in this study to a certain degree as, in the context of real-time communication, it was pointed out that data cannot be compiled merely for the purposes of data management. Instead, the controller must ensure that all events, including performance and other deviations will be communicated to the top management in real-time. Hence, the timely delivery of data may be considered equally as important as the data itself.

Although the connection between the controller and crisis management was established, some future screening controller role classifications remain somewhat contradictory. In short, as presented in the literature review, Chenhall and Moers (2015, p. 10) argue that controllers must consider operational knowledge to harness innovation amidst uncertainty. Additionally, this research confirmed that controllers work with data, which is supported by operational (sectorial) information. However, despite pressures to acquire skillsets associated with data science, daily practices may not include data analytics tasks or exhibit the need to develop skills linked with such

tasks (Oesterreich et al., 2019, p. 21). In the end, despite having a notable role in crisis mediation, controllers may strive for neutrality in presenting accounting data as the latter is already linked with the construction of trust in figures and neutrality assists in promoting impartiality (Henttu-Aho et al., 2023, p. 13). Hence, in responding to crises, controllers may rely on traditional role boundaries to find meaning.

However, as confirmed in this research, it could be argued that the traditional role boundaries of management accounting may not be sufficient. Even though crisis management can benefit from the incorporation of techniques, such as the monitoring of exception reports concerning critical performance variables (Su et al., 2015, p. 11), the disregard of culture in the assessment of structure in crisis recognition may result in flawed analyses of risks concerning the usefulness of metrics and values utilized (Van der Stede, 2011, p. 14). These arguments imply that the comprehension of conventional performance metrics may be enhanced through a sufficient understanding of culture, or, by extension, the sector in which one operates, which may lead to better crisis recognition.

In short, firms may attain a higher likelihood of survival if finance management capabilities exist organisationally, if management associated facts concerning the creation of forecasts can be predicted sufficiently, if key (business) information can be directed into a single system and finally if there are unused supportive financial resources that can be attained (Roffia and Dabić, 2024, pp. 16-17). However, as apprehended in this study, survival requires real-time communication, which needs to happen at all organisational levels. In part, this finding was confirmed in the literature review, especially by the notion that uncertainty is associated with the interactive use of accounting (Bedford and Malmi, 2015, p. 17). Additionally, the development of intended and emergent strategies is linked to the utilization of diagnostic and interactive budgets, which pressures the re-examination of definitions and processes (Hofmann et al., 2012, p. 22), highlighting the requirement of sufficient communication.

Despite having a somewhat limited visibility in a crisis, budgeting holds merit based on several considerations. Since the budgeting activity during the crisis cycle is more invested in resource allocation and planning rather than performance measurement (Becker et al., 2016, pp. 20–21), it creates a suitable position to estimate organisational priorities. Moreover, the planning of budgeting is connected to organisational resilience through planning capability and adaptive capability, and adaptive capabilities are simultaneously also linked with competitive advantage prior and during a crisis (Eichholz et al., 2024, p. 34). Simultaneously, in the prevalence of internal and external uncertainty, the existence of external pressure is associated with higher rolling budget adoption rates (Bhimani et al., 2024, p. 30).

This study proposes a framework for reactive planning by combining rolling budgets with rolling forecasts, contributing to evaluation duties, and enabling the use of the same methods and resources between these two constructs in an organisation by one group of people in a categorically hybrid setup (Henttu-Aho, 2018, p. 26). The co-existence of budgets and forecasts is based on enablement; forecasts can contribute to the formation of a reliable budget and to the support of profit planning and control (Bukh et al., 2025, p. 24). In this continuous process, the rolling forecast uses current data from key departments for a continuous planning outlook (Zeller and Metzger, 2013, p. 7), whereas the rolling budget enhances future predictions (Bhimani et al., 2024, p. 41).

The framework adheres to the principles presented in the literature review, accumulated insights from the interview, and observations based on further investigation of literature. The initial model was constructed with discretion; the incorporation of new design elements had to attain a certain discretion to the structure and functionality of existing elements as the design options and use types should not have been understood as separate variables but instead as a complete, distinct system (Guenther and Heinicke, 2019, p. 20). Subsequently, it sought to find the correct measures that are linked with improvement from the adverse effects of an

organisational crisis. This focus was relevant because the selection of incorrect measures coupled with improvements in the context of those measures can result in notable improvement and yet they cannot be linked to the desired performance outcomes, which creates confusion (Ittner and Larcker, 1997, p. 17) and inevitably prolongs the duration of the crisis. However, some arguments made indicated such measures which could not be addressed cohesively in the development of the model. One such measure was the capability to recognize primary and peripheral costs.

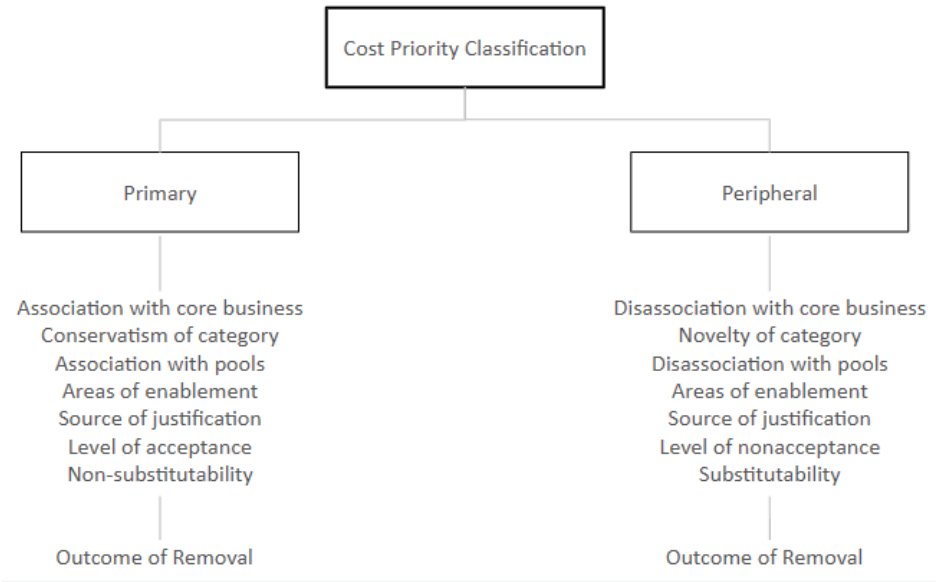


Figure 13. Cost Priority Classification (Author's own contribution)

The findings of this study suggested that it is necessary to assist controllers to rexognize primary and peripheral costs. After all, these concepts were only presented in principle without notable substantiation to the indicators or defining features of either costs types. Cost reviews are necessary because potent organisational responses might require fundamental changes related to costing processes (Heberle et al., 2025, p. 22) and because managers (controllers) may ultimately endorse inclusion over exclusion in chasing the decided budget goals (Jackson et al., 2025, p. 23). Accordingly, some factors, which controllers may assess in analyzing the category of a particular

cost, are relationship with core business, age of cost category, potential association with larger cost pools, activities or areas they permit, descriptions and sources of justification, degrees of acceptance inside the organisation, level of substitutability, and finally the probable outcome of removal. That said, these variables are not exhaustive; they merely hint how a particular cost can be categorized. The evidence of existence concerning a single variable may not be sufficient in establishing the overall picture. In conclusion, all variables should be reviewed for a given cost to determine a probable category.

Based on this study, management accounting systems are borderline tools, useful as contributive data sources rather than central devices. However, it must be acknowledged that they have a place in crisis management. In short, Integrated Information Systems (ERP), Management Control Systems, and available resources are vital elements of resilience development, which in turn allows firms to address and recover from crises (Roffia and Dabić, 2024, p. 16). Additionally, digital tools enable a higher accuracy of assessment on prevalent economic conditions as financial budgets and forecasts and may be updated without delay, leading to flexible crisis responses (Ylinen et al., 2024, p. 31). In this effort, higher decentralization of authority and participation in control system creation contributes to a reduced degree of adverse cynicism, enabling organisations to maintain performance (Burney et al., 2025, p. 18). Finally, these outcomes may be achieved if the employed (pricing) systems are readily accessible, and modular to an extent where they can be dismantled with low technical restrictions (Korhonen et al., 2021, pp. 22-23).

8. Limitations

This research has several limitations, most of which stem from the framing of the literature review, the general design of this study, limited views on organisational environments (prerequisites), and forced assumptions on dependencies. These limitations influence how well the findings of this study can be integrated into practice, and especially how much value can be attained from the presented framework. This section categorizes the limitations based on theoretical coverage, design and empirical outcomes.

8.1 Theoretical limitations

A notable limitation of this study is the emphasis on investigative theoretical argumentation prompted by the use of the Connected Papers tool in the literature review. Secondary research entails limited data analysis, leading to reduced quality of exploration (Baldwin et al., 2022, p. 4). It is also prone to systemic biases and the loss of vital observations if the original purpose of the articles viewed are not fully understood by the reviewer (Bevan et al., 2013, p. 8). In short, since the extensive systematic literature review was used in this study, it places limits as to how well the themes and concepts discussed are being understood and internalized by the reviewer. The approach creates several risks for research. First, there is a potent risk of misinterpreting the arguments made, which may be further substantiated in later phases of the research. Also, either because of misinterpretation, or simply due to the multifacetedness of sources, it could be that discussion is being derailed from central concepts and considerations to sub-phenomena in an environment where securing new discoveries remains difficult. Hence, it can be said that this design can be difficult to conduct in practice.

8.2 Methodological limitations

Considering the theoretical section, and more specifically the extent of the literature review, one notable limitation is the time variable. Since the study examines a large pool of articles, and builds on top of them, it is inevitable that subsequent articles corresponding to one or many nodes of the co-citation network of the literature will be released by the time this research is carried out. In short, this limitation might have several outcomes. First, it may be that for some elements, such as the twofaceted approach of budgeting-forecasting, it may be that new research prompted in the Connected Papers database already covers the findings presented in this thesis with either Additionally, it may be that, by the time thai research is published, the database already incorporates explicit definitions of crisis-contextual practices that can and should be employed.

Concerning the empirical side, this thesis attains a confirmatory approach as the presented framework assumes that organisations can monitor the phases of a crisis and comprehend its cycle accurately. This topic was confirmed in this study on several accounts. It was confirmed that the model attains linear thinking and that clarity is needed so that organisations can place themselves on the framework. These arguments attain merit because the model tends to incorporate a vision in which the crisis process has a definable start, duration, and ending, making it somewhat straightforward. Thus, it also assumes that organisations can understand and place themselves in the crisis cycle in such a way that the methods proposed can be harnessed and value can be attained. Finally, it does not reflect on instances where some crisis scenarios faced by an organisation may not be feasible for the implementation of the framework. By approaching the topic without the agenda of model development, it could have been possible to attain more open-ended answers as opposed to the now collected answers that were observably either confirming, disproving, or mixed, influencing the analysis.

8.3 Analytical limitations

Since this thesis does not elaborate on the characteristics of any single industry, but instead presents an overview of the controller function in different fields, it simultaneously attains cross-sectorial value while lacking a certain depth in industry-specific variables. One outcome of this limitation is that the framework presented does not empirically elaborate on what prior inter-organisational conditions should exist before the model is put to use, apart from a few mentioned topics, such as sufficiency of economic planning and up-to-dateness of crisis procedures. Also, a related limitation is the limited discussion on required resources. In short, the findings reflected that the proposed model does not elaborate on the organisational resource investments that need to materialize for the adoption of the model. In essence, the covering of descriptive, empirically sound prerequisites for the use of the model and the required organisational resources could have improved discussion.

9. Suggestions for Future Research

This section reviews the topics raised which were not covered during the study. These suggestions can be categorized based on context. First, some suggestions can be traced to insufficiencies spotted in past research, whereas others were provided by the participants during the interview cycle. Finally, some suggestions are related to methodological design limitations. In short, these suggestions provide diverse paths for future researchers to engage.

9.1 Implications of Serial Crisis

This study attempted to classify crises based on duration and context to enable investigation into the possibilities of the controller role. However, this attempt attained a mixed level of success. In short, in finding suitable definitions for the intended framing of this research, it became necessary to utilize relatively old sources. On many occasions, the definitions presented were not pure as explanations were bound to a context. Additionally, some definitions which could have enabled a more refined discussion, were not present. More specifically, this study was not able to explicitly define the concept of a serial crisis, as a continuum of single consecutive crisis events. Some relevant definitions were Organisational crises (Hermann, 1963; Probst and Raisch, 2005; Carmeli and Schaubroeck, 2008; Snoeijers and Poels, 2018), Sectoral crises (O'Connor, 1981), Continuous crises (Hällgren and Buchanan, 2024), Financial crises (Makkonen et al., 2014), and Economic crises (Osiyevskyy et al., 2020). However, none of these articles reflected on the phenomenon of a serial crisis. This limitation influenced how topics, such as the framework could be viewed in the discussion and analyses.

That said, this shortcoming presents several new angles for future researchers. In short, future research can utilize the findings of this study to investigate how controllers should act in a continuum of distinct crisis events, and also how the use of

rolling budgets and forecasts differ between single and consecutive crisis events. Additionally, using these approaches, further research can determine whether the social aspects of a controller, such as real-time communication highlight novel results in the consecutive crisis event that have not been discovered in this study.

9.1 Determinants of crisis management frameworks

This study investigated controller activities effective in supporting the firm to reach resolve in the crisis, and attempted to illustrate such activities in a framework. However, this study incorporated a relatively brief assessment on the correlation of frameworks, adoption rates and the link to performance. This limitation presents an interesting research avenue. Further research could opt to investigate the determinants of success for crisis management frameworks in more detail. In doing so, the research could cover, for instance, structure archetypes and desirable incorporations of practice in theory-derived setups, and the role of presentation in the relative adoption rates of frameworks.

9.3 Untested Model Versions

Several notable opportunities to develop the model were presented. Future researchers may tailor the model into different setups based on the characteristics of occurring crises and the incumbent organisations. These setups can relate to a particular function pertaining to the controller, such as scenario modelling and data analytics, or to distinct manifestations of single, serial or sectorial crises. However, it must be acknowledged that these setups require deep insight into the roles of a controller and an accurate definition of the crisis that resides at the center of investigation. The investigation might not be feasible if the definitions have not seen notable adoption.

10. Conclusion

This research elaborated on controllers can contribute to the crisis management and what kind of budgeting activities should be endorsed. Controllers are notable support actors who contribute to the decision-making processes of top management through financial modelling, which extends to areas, such as real-time communication and scenario analyses. They work with financial data, but for the purposes of sense-making, it is crucial to also indulge in learning about operational variables to form a comprehensive picture. Budgeting, or a rolling (continuous) budget as one possible sub-element of reactive crisis management, can function as a source of data, which contributes to planning and evaluation processes. However, forecasting, or a rolling (continuous) forecasting is a prominent tool which ensures a continuous outlook. Jointly they provide a setup, which is generally representative of those budgets that work best in a crisis cycle. This thesis has several theoretical and practical contributions.

Theoretical Implications

This study elaborates on how crises should be perceived with the tools available in management accounting. More specifically, it extends current research by investigating the role and value of the controller in the crisis cycle, the applicability of budgets and forecasts in the ad hoc state, and the mediating role of physical systems operated by the controller. This elaboration opens up further opportunities to investigate the theoretical dimensions of the evolving controller function, which thus far has been perceived as position of a single (accounting) function and contributive operational elements. Also, this study extends theory by disclosing how budgets and forecasts complement each other in principle and how they can be utilized based on the definitions created in past research.

Practical Implications

This study demonstrates in practice, through a careful review of past research, how the controller needs to approach crisis management. In this effort, the crisis itself and the associated cycle is defined, substantiated and phased to form a tool that can be used in a reactive manner in organisations. This elaboration was further supported by the assimilation of traditional financial techniques, namely the budgeting and later the forecast function. Through meticulous investigation, this study shed light on the aforementioned elements of the crisis and the budgeting function in conjunction to demonstrate how the volatile phenomenon of the organisational crisis can be addressed through discretionary setups of traditional controller activities, operational key considerations, and continuous communication. These outcomes reflect how the resources required in crisis management, and especially resolve, are inherently embedded in common daily functions.

References

Abernethy, M. A., Bouwens, J., & van Lent, L. (2010). Leadership and control system design. Management accounting research, 21(1), 2-16. https://doi.org/10.1016/j.mar.2009.10.002

ABS Journal Ranking (2024). Journal Ranking Portal. ABS Journal Ranking 2024 - Journal Ranking Portal

Adler, P. S., & Borys, B. (1996-03-01). Two Types of Bureaucracy: Enabling and Coercive. Administrative science quarterly, 41(1), 61-89. https://doi.org/10.2307/2393986

Ala-Heikkilä, V., & Järvenpää, M. (2023-05-04). Management accountants' image, role and identity: Employer branding and identity conflict. Qualitative research in accounting and management, 20(3), 337-371. https://doi.org/10.1108/QRAM-04-2021-0064

Alpaslan, C. M., Green, S. E., & Mitroff, I. I. (2009-03). Corporate Governance in the Context of Crises: Towards a Stakeholder Theory of Crisis Management. Journal of contingencies and crisis management, 17(1), 38-49. https://doi.org/10.1111/j.1468-5973.2009.00555.x

Alsharari, N. M. (2024-01-05). The interplay of strategic management accounting, business strategy and organizational change: As influenced by a configurational theory. Journal of accounting & organizational change, 20(1), 153-176. https://doi.org/10.1108/JAOC-09-2021-0130

Baldwin, J. R., Pingault, J., Schoeler, T., Sallis, H. M., & Munafò, M. R. (2022-01). Protecting against researcher bias in secondary data analysis: Challenges and potential solutions. European journal of epidemiology, 37(1), 1-10. https://doi.org/10.1007/s10654-021-00839-0

Becker, S. D., Mahlendorf, M. D., Schäffer, U., & Thaten, M. (2016). Budgeting in Times of Economic Crisis. Contemporary accounting research, 33(4), 1489-1517. https://doi.org/10.1111/1911-3846.12222

Becker, S. D., Messner, M., & Schäffer, U. (2020). The Interplay of Core and Peripheral Actors in the Trajectory of an Accounting Innovation: Insights from Beyond Budgeting. *Contemporary accounting research, 37*(4), 2224-2256. https://doi.org/10.1111/1911-3846.12593

Bedford, D. S., & Malmi, T. (2015). Configurations of control: An exploratory analysis. Management accounting research, 27, 2-26. https://doi.org/10.1016/j.mar.2015.04.002

Bedford, D. S., Malmi, T., & Sandelin, M. (2016). Management control effectiveness and strategy: An empirical analysis of packages and systems. Accounting, organizations and society, 51, 12-28. https://doi.org/10.1016/j.aos.2016.04.002

Bedford, D. S., Speklé, R. F., & Widener, S. K. (2022). Budgeting and employee stress in times of crisis: Evidence from the Covid-19 pandemic. *Accounting, organizations and society, 101*, 101346. https://doi.org/10.1016/j.aos.2022.101346

Bedford, D. S. (2015). Management control systems across different modes of innovation: Implications for firm performance. Management accounting research, 28, 12-30. https://doi.org/10.1016/j.mar.2015.04.003

Bevan, S., Baumgartner, F. R., Johnson, E. W., & McCarthy, J. D. (2013-11). Understanding selection bias, time-lags and measurement bias in secondary data sources: Putting the Encyclopedia of Associations database in broader context. Social science research, 42(6), 1750-1764. https://doi.org/10.1016/j.ssresearch.2013.08.003

Bhimani, A., Sivabalan, P., Soonawalla, K., & Wakefield, J. (2024). Annual budgets and rolling budgets use in UK and Australian firms. *Journal of management control, 35*(4), 509-561. https://doi.org/10.1007/s00187-024-00382-5

Bisbe, J., & Malagueño, R. (2009). The Choice of Interactive Control Systems under Different Innovation Management Modes. The European accounting review, 18(2), 371-405. https://doi.org/10.1080/09638180902863803

Bisbe, J., & Malagueño, R. (2015). How control systems influence product innovation processes: Examining the role of entrepreneurial orientation. Accounting and business research, 45(3), 356-386. https://doi.org/10.1080/00014788.2015.1009870

Bisbe, J., & Otley, D. (2004). The effects of the interactive use of management control systems on product innovation. Accounting, organizations and society, 29(8), 709-737. https://doi.org/10.1016/j.aos.2003.10.010

Bisbe, J., Batista-Foguet, J., & Chenhall, R. (2007). Defining management accounting constructs: A methodological note on the risks of conceptual misspecification. Accounting, organizations and society, 32(7), 789-820. https://doi.org/10.1016/j.aos.2006.09.010

Bisbe, J., Kruis, A., & Madini, P. (2019). Coercive, enabling, diagnostic, and interactive control: Untangling the threads of their connections. Journal of accounting literature, 43(1), 124-144. https://doi.org/10.1016/j.acclit.2019.10.001

Blumentritt, T. (2006-11-01). Integrating strategic management and budgeting. *The Journal of business strategy, 27*(6), 73-79. https://doi.org/10.1108/02756660610710382

Bouwens, J., & Abernethy, M. A. (2000). The consequences of customization on management accounting system design. Accounting, organizations and society, 25(3), 221-241. https://doi.org/10.1016/S0361-3682(99)00043-4

Branicki, L., Brammer, S., Linnenluecke, M., & Houghton, D. (2023-07-29). Accounting for resilience: The role of the accounting professions in promoting resilience. Accounting and business research, 53(5), 508-536. https://doi.org/10.1080/00014788.2023.2219148

Braun, V., & Clarke, V. (2021-03-04). To saturate or not to saturate? Questioning data saturation as a useful concept for thematic analysis and sample-size rationales. Qualitative research in sport, exercise and health, 13(2), 201-216. https://doi.org/10.1080/2159676X.2019.1704846

Brown, A., & Danaher, P. A. (2019). CHE Principles: Facilitating authentic and dialogical semi-structured interviews in educational research. *International journal of research & method in education, 42*(1), 76-90. https://doi.org/10.1080/1743727X.2017.1379987

Bukh, P. N., Ringgaard, A., & Sandalgaard, N. (2025). Moving beyond Beyond Budgeting: A Case Study of the Dynamic Interrelationships between Budgets and Forecasts. *The European accounting review, 34*(3), 1221-1247. https://doi.org/10.1080/09638180.2024.2362681

Bundy, J., Pfarrer, M. D., Short, C. E., & Coombs, W. T. (2017-07-01). Crises and Crisis Management: Integration, Interpretation, and Research Development. Journal of management, 43(6), 1661-1692. https://doi.org/10.1177/0149206316680030

Burney, L. L., Radtke, R. R., & Widener, S. K. (2025). Navigating Coercive Control in Organizations: A Study on Employee Responses and Outcomes. *Behavioral research in accounting, 37*(2), 27-51. https://doi.org/10.2308/BRIA-2023-042

Campello, M., Graham, J. R., & Harvey, C. R. (2010-09-01). The real effects of financial constraints: Evidence from a financial crisis. Journal of financial economics, 97(3), 470-487. https://doi.org/10.1016/j.jfineco.2010.02.009

Carmeli, A., & Schaubroeck, J. (2008-04-01). Organisational Crisis-Preparedness: The Importance of Learning from Failures. Long range planning, 41(2), 177-196. https://doi.org/10.1016/j.lrp.2008.01.001

Carr, M., & Beck, M. (2023). Core and periphery dynamics of budget evaluation during crisis: The evolution of an impromptu solution. *Journal of management control, 34*(4), 411-434. https://doi.org/10.1007/s00187-023-00362-1

Carter, M. E., & Speklé, R. F. (2024). Management Control During and After a Crisis: Taking Stock and Looking Ahead. *Journal of management accounting research, 36*(3), 67-71. https://doi.org/10.2308/JMAR-2024-057

Chen, S., & Dodd, J. L. (1997-10-01). Economic Value Added (EVA™): An Empirical Examination Of A New Corporate Performance Measure. Journal of managerial issues, 9(3), 318-333. https://www.proquest.com/docview/194164544?parentSessionId=58JVNuk1%2B9qFlTs%2BcnLnxfLgOVNe%2FJ%2F5ym4oMccMcjA%3D&accountid=14797&sourcetype=Scholarly%20Journals

Chenhall, R. H., & Moers, F. (2015). The role of innovation in the evolution of management accounting and its integration into management control. *Accounting, organizations and society, 47*, 1-13. https://doi.org/10.1016/j.aos.2015.10.002

Chenhall, R. H. (2003-02-01). Management control systems design within its organizational context: Findings from contingency-based research and directions for the future. Accounting, organizations and society, 28(2), 127-168. https://doi.org/10.1016/S0361-3682(01)00027-7

Chong, K. M., & Mahama, H. (2014). The impact of interactive and diagnostic uses of budgets on team effectiveness. Management accounting research, 25(3), 206-222. https://doi.org/10.1016/j.mar.2013.10.008

Cole, R. (2024-11). Inter-Rater Reliability Methods in Qualitative Case Study Research. Sociological methods & research, 53(4), 1944-1975. https://doi.org/10.1177/00491241231156971

COLLINS, F., HOLZMANN, O., & MENDOZA, R. (1997-10-01). STRATEGY, BUDGETING, AND CRISIS IN LATIN AMERICA. *Accounting, organizations and society, 22*(7), 669-689. https://doi.org/10.1016/S0361-3682(96)00050-5

Connected Papers. (2023). Find and explore academic papers. https://www.connectedpapers.com/about#how-does-it-work

Connor, J. O. (1981-09). The meaning of crisis. International journal of urban and regional research, 5(3), 301-329. https://doi.org/10.1111/j.1468-2427.1981.tb00556.x

Dávila, A., Derchi, G., Oyon, D., & Schnegg, M. (2024). External complexity and the design of management control systems: A case study. *Management accounting research, 63*, 100875. https://doi.org/10.1016/j.mar.2023.100875

Davila, A., Foster, G., & Li, M. (2009). Reasons for management control systems adoption: Insights from product development systems choice by early-stage entrepreneurial companies. Accounting, organizations and society, 34(3), 322-347. https://doi.org/10.1016/j.aos.2008.08.002

Davila, A., Foster, G., & Oyon, D. (2009). Accounting and Control, Entrepreneurship and Innovation: Venturing into New Research Opportunities. The European accounting review, 18(2), 281-311. https://doi.org/10.1080/09638180902731455

Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of business research, 133*, 285-296. https://doi.org/10.1016/j.jbusres.2021.04.070

Döringer, S. (2021-05-04). 'The problem-centred expert interview'. Combining qualitative interviewing approaches for investigating implicit expert knowledge. International journal of social research methodology, 24(3), 265-278. https://doi.org/10.1080/13645579.2020.1766777

Drisko, J. W. (2025-01). Transferability and Generalization in Qualitative Research. Research on social work practice, 35(1), 102-110. https://doi.org/10.1177/10497315241256560

Dubois, A., & Gadde, L. (2002). Systematic combining: An abductive approach to case research. *Journal of business research, 55*(7), 553-560. https://doi.org/10.1016/S0148-2963(00)00195-8

Eichholz, J., Hoffmann, N., & Schwering, A. (2024). The role of risk management orientation and the planning function of budgeting in enhancing organizational resilience and its effect on competitive advantages during times of crises. Journal of management control, 35(1), 17-58. https://doi.org/10.1007/s00187-024-00371-8

Englund, H., & Gerdin, J. (2015). Developing Enabling Performance Measurement Systems: On the Interplay Between Numbers and Operational Knowledge. *The European accounting review, 24*(2), 277-303. https://doi.org/10.1080/09638180.2014.918517

Erhart, R., Mahlendorf, M. D., Reimer, M., & Schäffer, U. (2017). Theorizing and testing bidirectional effects: The relationship between strategy formation and involvement of controllers. Accounting, organizations and society, 61, 36-52. https://doi.org/10.1016/j.aos.2017.07.004

Fife, S. T., & Gossner, J. D. (2024-03-01). Deductive Qualitative Analysis: Evaluating, Expanding, and Refining Theory. International journal of qualitative methods, 23, . https://doi.org/10.1177/16094069241244856

Fischer, E., & Guzel, G. T. (2022-01). The case for qualitative research. Journal of consumer psychology, 33(1), 259-272. https://doi.org/10.1002/jcpy.1300

Flemming, K., & Noyes, J. (2021). Qualitative Evidence Synthesis: Where Are We at? International journal of qualitative methods, 20, . https://doi.org/10.1177/1609406921993276

Fourné, S. P., Guessow, D., Margolin, M., & Schäffer, U. (2023-09). Controllers and strategic decision-making: The role of cognitive flexibility in controller-manager collaboration. Management accounting research, 60, 100840. https://doi.org/10.1016/j.mar.2023.100840

Golafshani, N. (2003). Understanding reliability and validity in qualitative research. The qualitative report, 8(4), 597-607. https://www.brown.uk.com/teaching/HEST5001/golafshani.pdf

Goretzki, L., Lukka, K., & Messner, M. (2018-09-19). Controllers' use of informational tactics. Accounting and business research, 48(6), 700-726. https://doi.org/10.1080/00014788.2017.1407627

Greenhoot, A. F., & Dowsett, C. J. (2012-01-01). Secondary Data Analysis: An Important Tool for Addressing Developmental Questions. Journal of cognition and development, 13(1), 2-18. https://doi.org/10.1080/15248372.2012.646613

Guenther, T. W., & Heinicke, A. (2019). Relationships among types of use, levels of sophistication, and organizational outcomes of performance measurement systems: The crucial role of design choices. Management accounting research, 42, 1-25. https://doi.org/10.1016/j.mar.2018.07.002

Hadid, W., & Al-Sayed, M. (2021-03). Management accountants and strategic management accounting: The role of organizational culture and information systems. Management accounting research, 50, 100725. https://doi.org/10.1016/j.mar.2020.100725

Hällgren, M., & Buchanan, D. A. (2024). Leadership in a continuous crisis. *Journal of contingencies and crisis management, 32*(4), -n/a. https://doi.org/10.1111/1468-5973.12628

Hamilton, A. B., & Finley, E. P. (2020-01). Reprint of: Qualitative methods in implementation research: An introduction. Psychiatry research, 283, 112629. https://doi.org/10.1016/j.psychres.2019.112629

Hansen, S. C., & Stede, W. A. V. d. (2004-12). Multiple facets of budgeting: An exploratory analysis. *Management accounting research, 15*(4), 415-439. https://doi.org/10.1016/j.mar.2004.08.001

Hartmann, F. G. H., & Maas, V. S. (2010-01-01). Why Business Unit Controllers Create Budget Slack: Involvement in Management, Social Pressure, and Machiavellianism. Behavioral research in accounting, 22(2), 27-49. https://doi.org/10.2308/bria.2010.22.2.27

Harvey, C., Kelly, A., Morris, H. and M. Rowlinson (2010), Academic Journal Quality Guide, Version 4, London: The Association of Business Schools. https://www.researchgate.net/publication/237297157_Academic_Journal_Quality_Guide

Heberle, J. M., Bedford, D. S., Chapman, C. S., & Sivabalan, P. (2025). Developing enabling cost information during the COVID-19 crisis. *Accounting forum, 49*(3), 697-723. https://doi.org/10.1080/01559982.2024.2326954

Heinicke, A., Guenther, T. W., & Widener, S. K. (2016). An examination of the relationship between the extent of a flexible culture and the levers of control system: The key role of beliefs control. Management accounting research, 33, 25-41. https://doi.org/10.1016/j.mar.2016.03.005

Hennink, M., & Kaiser, B. N. (2022-01). Sample sizes for saturation in qualitative research: A systematic review of empirical tests. Social science & medicine (1982), 292, 114523. https://doi.org/10.1016/j.socscimed.2021.114523

Henri, J. (2006). Management control systems and strategy: A resource-based perspective. Accounting, organizations and society, 31(6), 529-558. https://doi.org/10.1016/j.aos.2005.07.001

Henttu-Aho, T., Järvinen, J. T., & Lassila, E. M. (2023). Constructing the accurate forecast: An actor-network theory approach. *Meditari accountancy research, 31*(7), 116-132. https://doi.org/10.1108/MEDAR-03-2022-1613

Henttu-Aho, T. (2018). The role of rolling forecasting in budgetary control systems: Reactive and proactive types of planning. Journal of Management Control, 29(3–4), 327–360. https://doi.org/10.1007/s00187-018-00273-6

Hermann, C. F. (1963). Some consequences of crisis which limit the viability of organizations. Administrative science quarterly, 8(1), 61-82. https://research-ebsco-com.proxy.uwasa.fi/c/slwlh3/viewer/pdf/g35fb76sg5?route=details

Hiebl, M. R. W. (2023). Sample Selection in Systematic Literature Reviews of Management Research. *Organizational research methods, 26*(2), 229-261. https://doi.org/10.1177/1094428120986851

Hofmann, S., Wald, A., & Gleich, R. (2012). Determinants and effects of the diagnostic and interactive use of control systems: An empirical analysis on the use of budgets. Journal of management control, 23(3), 153-182. https://doi.org/10.1007/s00187-012-0156-9

Hofstede, G. (1978). The Poverty of Management Control Philosophy. The Academy of Management review, 3(3), 450-461. https://doi.org/10.2307/257536

Humphreys, L., Lewis, N. A., Sender, K., & Won, A. S. (2021-10-01). Integrating Qualitative Methods and Open Science: Five Principles for More Trustworthy Research. Journal of communication, 71(5), 855-874. https://doi.org/10.1093/joc/jqab026

Husband, G. (2020). Ethical Data Collection and Recognizing the Impact of Semi-Structured Interviews on Research Respondents. *Education sciences, 10*(8), 206. https://doi.org/10.3390/educsci10080206

Ittner, C. D., & Larcker, D. F. (1997-04-01). Quality strategy, strategic control systems, and organizational performance. Accounting, organizations and society, 22(3), 293-314. https://doi.org/10.1016/S0361-3682(96)00035-9

Ivey, G. (2023-01-02). Interpreting hidden meaning in qualitative research interview data: Opportunities and challenges. Qualitative research in psychology, 20(1), 21-51. https://doi.org/10.1080/14780887.2022.2067509

Jackson, S. B., Salzsieder, L., & Schaefer, T. J. (2025). Do Managers Pursue Their Budget Goals Using Revenues or Expenses? *The Accounting review, 100*(3), 251-276. https://doi.org/10.2308/TAR-2023-0341

Janke, R., Mahlendorf, M. D., & Weber, J. (2014). An exploratory study of the reciprocal relationship between interactive use of management control systems and perception of negative external crisis effects. Management accounting research, 25(4), 251-270. https://doi.org/10.1016/j.mar.2014.01.001

Jarrar, N. S., & Smith, M. (2014). Innovation in entrepreneurial organisations: A platform for contemporary management change and a value creator. *The British accounting review, 46*(1), 60-76. https://doi.org/10.1016/j.bar.2013.07.001

Järvenpää, M., Hoque, Z., Mättö, T., & Rautiainen, A. (2023-09). Controllers' role in managerial sensemaking and information trust building in a business intelligence environment. International journal of accounting information systems, 50, 100627. https://doi.org/10.1016/j.accinf.2023.100627

Khan, T. H., & MacEachen, E. (2022-04-05). An Alternative Method of Interviewing: Critical Reflections on Videoconference Interviews for Qualitative Data Collection. International journal of qualitative methods, 21, . https://doi.org/10.1177/16094069221090063

Khoa, B. T., Hung, B. P., & Hejsalem-Brahmi, M. (2023). Qualitative research in social sciences: Data collection, data analysis and report writing. *International journal of public sector performance management, 12*(1-2), 187-209. https://doi.org/10.1504/IJPSPM.2023.132247

Kleminski, R., Kazienko, P., & Kajdanowicz, T. (2022). Analysis of direct citation, co-citation and bibliographic coupling in scientific topic identification. Journal of information science, 48(3), 349-373. https://doi.org/10.1177/0165551520962775

Koller, I., Levenson, M. R., & Glück, J. (2017-02-21). What Do You Think You Are Measuring? A Mixed-Methods Procedure for Assessing the Content Validity of Test Items and Theory-Based Scaling. Frontiers in psychology, 8, 126. https://doi.org/10.3389/fpsyg.2017.00126

Korhonen, T., Selos, E., Laine, T., & Suomala, P. (2021-03-01). Exploring the programmability of management accounting work for increasing automation: An interventionist case study. Accounting, auditing & accountability journal, 34(2), 253-280. https://doi.org/10.1108/AAAJ-12-2016-2809

Kruis, A. M., Speklé, R. F., & Widener, S. K. (2016). The Levers of Control Framework: An exploratory analysis of balance. Management accounting research, 32, 27-44. https://doi.org/10.1016/j.mar.2015.12.002

Kumar, S., Lim, W. M., Sureka, R., Jabbour, C. J. C., & Bamel, U. (2024-08-01). Balanced scorecard: Trends, developments, and future directions. *Review of managerial science, 18*(8), 2397-2439. https://doi.org/10.1007/s11846-023-00700-6

Kyriazis, D., & Anastassis, C. (2007-01). The Validity of the Economic Value Added Approach: An Empirical Application. European financial management : the journal of the European Financial Management Association, 13(1), 71-100. https://doi.org/10.1111/j.1468-036X.2006.00286.x

Lalonde, C. (2011-04). Managing crises through organisational development: A conceptual framework. Disasters, 35(2), 443-464. https://doi.org/10.1111/j.1467-7717.2010.01223.x

Langfield-Smith, K. (1997). Management control systems and strategy: A critical review. Accounting, organizations and society, 22(2), 207-232. https://doi.org/10.1016/S0361-3682(95)00040-2

Libby, T., & Lindsay, R. M. (2010-03-01). Beyond budgeting or budgeting reconsidered? A survey of North-American budgeting practice. Management accounting research, 21(1), 56-75. https://doi.org/10.1016/j.mar.2009.10.003

Lochmiller, C. (2021). Conducting Thematic Analysis with Qualitative Data. Qualitative report, 26(6), 2029-2044. https://doi.org/10.46743/2160-3715/2021.5008

Lopez-Valeiras, E., Gonzalez-Sanchez, M. B., & Gomez-Conde, J. (2016). The effects of the interactive use of management control systems on process and organizational innovation. Review of managerial science, 10(3), 487-510. https://doi.org/10.1007/s11846-015-0165-9

Madsen, D. Ø., & Stenheim, T. (2015). The Balanced Scorecard: A Review of Five Research Areas. North American Business Press. https://biopen.bi.no/bi-xmlui/handle/11250/296373

Makkonen, H., Pohjola, M., Olkkonen, R., & Koponen, A. (2014). Dynamic capabilities and firm performance in a financial crisis. *Journal of business research, 67*(1), 2707-2719. https://doi.org/10.1016/j.jbusres.2013.03.020

Malmi, T., & Brown, D. A. (2008). Management control systems as a package—Opportunities, challenges and research directions. *Management accounting research, 19*(4), 287-300. https://doi.org/10.1016/j.mar.2008.09.003

Marginson, D., McAulay, L., Roush, M., & van Zijl, T. (2014). Examining a positive psychological role for performance measures. Management accounting research, 25(1), 63-75. https://doi.org/10.1016/j.mar.2013.10.002

Marsen, S. (2020-04-01). Navigating Crisis: The Role of Communication in Organizational Crisis. International journal of business communication (Thousand Oaks, Calif.), 57(2), 163-175. https://doi.org/10.1177/2329488419882981

Martyn, P., Sweeney, B., & Curtis, E. (2016). Strategy and control: 25 years of empirical use of Simons' Levers of Control framework. Journal of accounting & organizational change, 12(3), 281-324. https://doi.org/10.1108/JAOC-03-2015-0027

Maxwell, J. A. (2021-02-01). Why Qualitative Methods Are Necessary for Generalization. Qualitative psychology (Washington, D.C.), 8(1), 111-118. https://doi.org/10.1037/qup0000173

McLaren, J., Appleyard, T., & Mitchell, F. (2016-09-01). The rise and fall of management accounting systems: A case study investigation of EVA. The British accounting review, 48(3), 341-358. https://doi.org/10.1016/j.bar.2016.02.001

Moores, K., & Yuen, S. (2001-05-01). Management accounting systems and organizational configuration: A life-cycle perspective. Accounting, organizations and society, 26(4), 351-389. https://doi.org/10.1016/S0361-3682(00)00040-4

Moret, M., Reuzel, R., van der Wilt, G. J., & Grin, J. (2007-02). Validity and Reliability of Qualitative Data Analysis: Interobserver Agreement in Reconstructing Interpretative Frames. Field methods, 19(1), 24-39. https://doi.org/10.1177/1525822X06295630

Morgan, H. (2022-10-01). Understanding Thematic Analysis and the Debates Involving Its Use. Qualitative report, 27(10), 2077-2090. https://doi.org/10.46743/2160-3715/2022.5912

Morse, J. M. (2015-09-01). Critical Analysis of Strategies for Determining Rigor in Qualitative Inquiry. Qualitative health research, 25(9), 1212-1222. https://doi.org/10.1177/1049732315588501

Mucci, D. M., Frezatti, F., & Bido, D. d. S. (2021). Enabling design characteristics and budget usefulness. *RAUSP management journal, 56*(1), 38-54. https://doi.org/10.1108/RAUSP-04-2019-0058

Müller-Stewens, B., Widener, S. K., Möller, K., & Steinmann, J. (2020). The role of diagnostic and interactive control uses in innovation. Accounting, organizations and society, 80, 101078. https://doi.org/10.1016/j.aos.2019.101078

Mundy, J. (2010). Creating dynamic tensions through a balanced use of management control systems. Accounting, organizations and society, 35(5), 499-523. https://doi.org/10.1016/j.aos.2009.10.005

Namazi, M., & Rezaei, G. (2024-04-02). Modelling the role of strategic planning, strategic management accounting information system, and psychological factors on the budgetary slack. Accounting forum, ahead-of-print(ahead-of-print), 1-28. https://doi.org/10.1080/01559982.2022.2163040

Naranjo-Gil, D., & Hartmann, F. (2006). How Top Management Teams Use Management Accounting Systems to Implement Strategy. Journal of management accounting research, 18(1), 21-53. https://doi.org/10.2308/jmar.2006.18.1.21

Naranjo-Gil, D., & Hartmann, F. (2007). Management accounting systems, top management team heterogeneity and strategic change. Accounting, organizations and society, 32(7), 735-756. https://doi.org/10.1016/j.aos.2006.08.003

Oesterreich, T. D., Teuteberg, F., Bensberg, F., & Buscher, G. (2019). The controlling profession in the digital age: Understanding the impact of digitisation on the controller's job roles, skills and competences. *International journal of accounting information systems, 35*, 100432. https://doi.org/10.1016/j.accinf.2019.100432

Osiyevskyy, O., Shirokova, G., & Ritala, P. (2020). Exploration and exploitation in crisis environment: Implications for level and variability of firm performance. *Journal of business research, 114*, 227-239. https://doi.org/10.1016/j.jbusres.2020.04.015

Otley, D. (1999). Performance management: A framework for management control systems research. Management accounting research, 10(4), 363-382. https://doi.org/10.1006/mare.1999.0115

Ouchi, W. G. (1980). Markets, Bureaucracies, and Clans. Administrative science quarterly, 25(1), 129-141. https://doi.org/10.2307/2392231

O'Grady, W., & Akroyd, C. (2016-01-01). The MCS package in a non-budgeting organisation: A case study of Mainfreight. Qualitative research in accounting and management, 13(1), 2-30. https://doi.org/10.1108/QRAM-09-2014-0056

Paraskevas, A. (2006). Crisis management or crisis response system?: A complexity science approach to organizational crises. Management decision, 44(7), 892-907. https://doi.org/10.1108/00251740610680587

Parnell, J. A. (2015-12). Crisis Management and Strategic Orientation in Small and Medium-Sized Enterprises (SMEs) in Peru, Mexico and the United States. Journal of contingencies and crisis management, 23(4), 221-233. https://doi.org/10.1111/1468-5973.12060

Passas, I. (2024). Bibliometric Analysis: The Main Steps. *Encyclopedia (Basel, Switzerland), 4*(2), 1014-1025. https://doi.org/10.3390/encyclopedia4020065

Pavlatos, O., & Kostakis, H. (2018). Management accounting innovations in a time of economic crisis. Journal of economic asymmetries, 18, e00106. https://doi.org/10.1016/j.jeca.2018.e00106

Pearson, C. M., & Clair, J. A. (1998-01). Reframing Crisis Management. The Academy of Management review, 23(1), 59-76. https://doi.org/10.5465/amr.1998.192960

Peel, M. J., & Bridge, J. (1998-12-01). How planning and capital budgeting improve SME performance. Long range planning, 31(6), 848-856. https://doi.org/10.1016/S0024-6301(98)80021-6

Peters, J., Langbein, J., & Roberts, G. (2018-02). Generalization in the Tropics – Development Policy, Randomized Controlled Trials, and External Validity. The World Bank research observer, 33(1), 34-64. https://doi.org/10.1093/wbro/lkx005

Phan, T., Baird, K., Bhuyan, M., & Tung, A. (2023). The associations between management control systems, organisational capabilities and performance. *Journal of management control, 34*(4), 435-462. https://doi.org/10.1007/s00187-024-00365-6

Pilcher, N., & Cortazzi, M. (2024-06). 'Qualitative' and 'quantitative' methods and approaches across subject fields: Implications for research values, assumptions, and practices. Quality & quantity, 58(3), 2357-2387. https://doi.org/10.1007/s11135-023-01734-4

Pratt, M. G., Sonenshein, S., & Feldman, M. S. (2022-04-01). Moving Beyond Templates: A Bricolage Approach to Conducting Trustworthy Qualitative Research. Organizational research methods, 25(2), 211-238. https://doi.org/10.1177/1094428120927466

Probst, G., & Raisch, S. (2005-02-01). Organizational crisis: The logic of failure. The Academy of Management executive (1993), 19(1), 90-105. https://doi.org/10.5465/ame.2005.15841958

Rautiainen, A., Scapens, R. W., Järvenpää, M., Auvinen, T., & Sajasalo, P. (2024). Towards fluid role identity of management accountants: A case study of a Finnish bank. *The British accounting review, 56*(4), 101341. https://doi.org/10.1016/j.bar.2024.101341

Revellino, S., & Mouritsen, J. (2009). The Multiplicity of Controls and the Making of Innovation. The European accounting review, 18(2), 341-369. https://doi.org/10.1080/09638180802681529

Robalo, R. C., & Moreira, J. A. (2020-12-01). The influence of power strategies in AIS implementation processes. International journal of accounting information systems, 39, 100487. https://doi.org/10.1016/j.accinf.2020.100487

Robert, B., & Lajtha, C. (2002-12). A New Approach to Crisis Management. Journal of contingencies and crisis management, 10(4), 181-191. https://doi.org/10.1111/1468-5973.00195

Roffia, P., & Dabić, M. (2024). The role of management control and integrated information systems for the resilience of SMEs. *Review of managerial science, 18*(5), 1353-1375. https://doi.org/10.1007/s11846-023-00657-6

Rosa, L. K., Decourt, R. F., & Vancin, D. F. (2023-11-01). Resilient performance faced with a period of economic crisis: Integrated model of conceptions and research strategy/Desempenho resiliente ante periodo de crise economica: Modelo integrado de concepcoes e estrategia de pesquisa. Revista de administração Mackenzie, 24(6), . https://doi.org/10.1590/1678-6971/eRAMD230001.en

Sabol, A., & Sverer, F. (2017-03-01). A review of the economic value added literature and application. UTMS journal of economics, 8(1), 19-27. https://www.proquest.com/docview/1881677396/fulltextPDF/E6A1A49559B0404FPQ/1?accountid=14797&sourcetype=Scholarly%20Journals

Sarvary, M. (1999). Knowledge Management and Competition in the Consulting Industry. California management review, 41(2), 95-107. https://doi.org/10.2307/41165988

Smith, E. (2008-09-01). PITFALLS AND PROMISES: THE USE OF SECONDARY DATA ANALYSIS IN EDUCATIONAL RESEARCH. British journal of educational studies, 56(3), 323-339. https://doi.org/10.1111/j.1467-8527.2008.00405.x

Snoeijers, E. M., & Poels, K. (2018-03). Factors that influence organisational crisis perception from an internal stakeholder's point of view. Public relations review, 44(1), 65-74. https://doi.org/10.1016/j.pubrev.2017.12.003

Speklé, R. F., van Elten, H. J., & Widener, S. K. (2017). Creativity and Control: A Paradox—Evidence from the Levers of Control Framework. Behavioral research in accounting, 29(2), 73-96. https://doi.org/10.2308/bria-51759

Sponem, S., & Lambert, C. (2016). Exploring differences in budget characteristics, roles and satisfaction: A configurational approach. Management accounting research, 30, 47-61. https://doi.org/10.1016/j.mar.2015.11.003

Staller, K. M. (2021-07). Big enough? Sampling in qualitative inquiry. Qualitative social work : QSW : research and practice, 20(4), 897-904. https://doi.org/10.1177/14733250211024516

Strauß, E., & Zecher, C. (2013-02). Management control systems: A review. Journal of management control, 23(4), 233-268. https://doi.org/10.1007/s00187-012-0158-7

Su, S., Baird, K., & Schoch, H. (2015). The moderating effect of organisational life cycle stages on the association between the interactive and diagnostic approaches to using controls with organisational performance. Management accounting research, 26, 40-53. https://doi.org/10.1016/j.mar.2014.09.001

Su, S., Baird, K., & Schoch, H. (2017). Management control systems: The role of interactive and diagnostic approaches to using controls from an organizational life cycle perspective. Journal of accounting & organizational change, 13(1), 2-24. https://doi.org/10.1108/JAOC-03-2015-0032

Taquette, S. R., & Borges da Matta Souza, L. M. (2022-02-12). Ethical Dilemmas in Qualitative Research: A Critical Literature Review. International journal of qualitative methods, 21, . https://doi.org/10.1177/16094069221078731

Tawse, A., & Tabesh, P. (2023-01). Thirty years with the balanced scorecard: What we have learned. Business horizons, 66(1), 123-132. https://doi.org/10.1016/j.bushor.2022.03.005

ten Rouwelaar, H., Schaepkens, F., & Widener, S. K. (2021-06-01). Skills, Influence, and Effectiveness of Management Accountants. Journal of management accounting research, 33(2), 211-235. https://doi.org/10.2308/jmar-18-048

Tessier, S., & Otley, D. (2012). A conceptual development of Simons' Levers of Control framework. Management accounting research, 23(3), 171-185. https://doi.org/10.1016/j.mar.2012.04.003

Thephdclub (2024). Saunders' Research Onion. https://thephdclub.com/blog/f/saunders%E2%80%99-research-onion?blogcategory=Research+Methodology

Thomas, T. F. (2016). Motivating revisions of management accounting systems: An examination of organizational goals and accounting feedback. *Accounting, organizations and society, 53*, 1-16. https://doi.org/10.1016/j.aos.2016.07.001

Thunberg, S., & Arnell, L. (2022-11-02). Pioneering the use of technologies in qualitative research - A research review of the use of digital interviews. International journal of social research methodology, 25(6), 757-768. https://doi.org/10.1080/13645579.2021.1935565

Tillema, S., Trapp, R., & Veen-Dirks, P. (2022-09-01). Business Partnering in Risk Management: A Resilience Perspective on Management Accountants' Responses to a Role Change. Contemporary accounting research, 39(3), 2058-2089. https://doi.org/10.1111/1911-3846.12774

Truant, E., Crocco, E., Culasso, F., & Alshibani, S. M. (2025). Fifty years of management control systems research: A bibliometric review of the literature and research agenda. *International journal of productivity and performance management, 74*(2), 491-519. https://doi.org/10.1108/IJPPM-07-2023-0334

Tuomela, T. (2005). The interplay of different levers of control: A case study of introducing a new performance measurement system. Management accounting research, 16(3), 293-320. https://doi.org/10.1016/j.mar.2005.06.003

Tuval-Mashiach, R. (2021-10-01). Is Replication Relevant for Qualitative Research? Qualitative psychology (Washington, D.C.), 8(3), 365-377. https://doi.org/10.1037/qup0000217

Vaivio, J., Järvenpää, M., & Rautiainen, A. (2023-05-27). Accounting in Identity Regulation: Producing the Appropriate Worker. The European accounting review, 32(3), 693-716. https://doi.org/10.1080/09638180.2021.1997780

Van der Stede, W. A. (2011). Management Accounting Research in the Wake of the Crisis: Some Reflections. The European accounting review, 20(4), 605-623. https://doi.org/10.1080/09638180.2011.627678

Wang, J. (2008-06-01). Developing Organizational Learning Capacity in Crisis Management. Advances in developing human resources, 10(3), 425-445. https://doi.org/10.1177/1523422308316464

Weber, J. (2011-09). The development of controller tasks: Explaining the nature of controllership and its changes. Journal of Management Control, 22(1), 25-46. https://doi.org/10.1007/s00187-011-0123-x

Widener, S. K. (2007). An empirical analysis of the levers of control framework. Accounting, organizations and society, 32(7), 757-788. https://doi.org/10.1016/j.aos.2007.01.001

Wolf, T., Kuttner, M., Feldbauer-Durstmüller, B., & Mitter, C. (2020-10-18). What we know about management accountants' changing identities and roles – a systematic literature review. Journal of accounting & organizational change, 16(3), 311-347. https://doi.org/10.1108/JAOC-02-2019-0025

Wu, Y. L., Shao, B., Newman, A., & Schwarz, G. (2021-12). Crisis leadership: A review and future research agenda. The Leadership quarterly, 32(6), 101518. https://doi.org/10.1016/j.leaqua.2021.101518

Ylinen, M., & Gullkvist, B. (2014). The effects of organic and mechanistic control in exploratory and exploitative innovations. Management accounting research, 25(1), 93-112. https://doi.org/10.1016/j.mar.2013.05.001

Ylinen, M., Järvenpää, M., & Ranta, M. (2024). The Digital Shift in Budgeting During Times of Crisis. https://ssrn.com/abstract=5047134

Yun, J. (2022). Generalization of bibliographic coupling and co-citation using the node split network. Journal of informetrics, 16(2), 101291. https://doi.org/10.1016/j.joi.2022.101291

Zeller, T. L., & Metzger, L. M. (2013). Good Bye Traditional Budgeting, Hello Rolling Forecast: Has The Time Come? *American journal of business education, 6*(3), 299-310. https://doi.org/10.19030/ajbe.v6i3.7810

Zupic, I., & Cater, T. (2015). Bibliometric methods in management and organization. Organizational Research Methods, 18(3), 429–472. https://doi.org/10.1177/1094428114562629

Appendix A. Interview Questions

This section consists of the interview questions which were sent and reviewed by the participants before the interview sessions. The questions were formulated both in Finnish and English and the interviews were conducted in Finnish.

Notification: The framework developed during the course of this study was changed for higher clarity. The old name utilized in the interview, was CFEC (Controller Framework for Endangering Conditions), whereas the the later version became CFOC (Controller Framework for Organisational Crises). This decision established a more observable link towards the literature review.

1. Please share about your professional background and work experience, including any potential relations to positions such as a management accountant, Financial Controller, Chief Financial Officer, or in an equivalent position in a limited company in the past or currently?

Työskenteletkö tällä hetkellä, tai oletko joskus työskennellyt johdon laskentatoimen asiantuntijana, controllerina, talouspäällikkönä, tai vastaavassa tehtävässä osakeyhtiössä?

2. What is your level of experience in the controller role?

Kuinka paljon kokemusta sinulla on controllerin tehtävistä?

A. 0-2 years / vuotta

B. 2-5 years / vuotta

C. Over 5 years / vuotta

3. Do you, or have you worked in Finland or abroad?

Työskenteletkö, tai oletko työskennellyt Suomessa vai ulkomailla?

4. What is the general size of the limited company you currently work in?

Kuinka suuressa yhtiössä työskentelet?

A. 1-50 People / Henkilöä

B. 50-100 People / Henkilöä

C. 100-200 People / Henkilöä

D. Over 200 People / Henkilöä

5. As a Controller in your organisation, have you experienced environmental or inter-organisational events that necessitated the reconfiguration of financial processes?

Toimiessasi controllerina organisaatiossasi, oletko kokenut tilanteita, jotka loivat painetta taloudelliseen uudelleenjärjestelyyn?

6. In your opinion, how important or not is the role of accounting system technology, as used by the controller, in the process of securing operational stability? Why do you think so?

Minkälainen asema laskentatoimen järjestelmäteknologialla (controllerin työvälineenä) on operatiivisen tasapainon saavuttamisessa?

7. In your view, how important or not are non-financial metrics (operational knowledge) in the daily work of a controller? Why do you think so?

Kuinka tärkeä rooli ei-numeerisella operatiivisella tiedolla on controllerin / laskentatoimen asiantuntijan päivittäisessä työssä?

8. Which of the budget forms are the most critical in the crisis navigation process? Why do you think so?

Mitkä budjettimuodot ovat keskeisimpiä kriisin navigoinnissa? Miksi?

9. Based on your experience, what are the primary actions that controller should take when the crisis events occurs for the first time?

Mitä ovat ne keskeiset toimet, joita controllerin tulisi tehdä kun kriisitilanne realisoituu ensimmäistä kertaa?

10. What is a feasible course of action once the crisis event has been identified?

Mitkä päätökset ovat tärkeimpiä kun kriisitilanne on tunnistettu?

11. How important or not is budget interactivity when the controller takes part in organisational restructuring processes? Are there any important issues in these processes that the controller should be considering?

Kuinka tärkeää on interaktiivinen budjetointi kun controlleri ottaa osaa organisaation uudelleenjärjestelyyn? Mihin asioihin controllerin tulisi keskittyä?

12. What are the core and expendable (financial) activities in the organisational reconfiguration effort that controller should take to make organizational work better?

Mitkä ovat ensisijaisia ja poistettavia kulueriä organisaation uudelleenjärjestelyvaiheessa, joita controlleri voisi tarkastella kun tavoitteena on organisaatiotyön parantaminen?

13. Based on your experience, should the controller focus on coercive budgeting in the organisational recovery phase or not?

Tulisiko controllerin keskittyä pakottaviin budjetteihin yrityksen palautumisvaiheessa?

14. In the crisis recovery phase, how could controllers validate the new organisational path?

Miten yrityksen uusi suunta voidaan vahvistaa controllerin työssä kriisin palautumisvaiheessa?

15. After the crisis event is over, what core activities should the controller pursue to support the organization?

Kriisivaiheen jälkeen, Mihin ydinaktiviteetteihin tulisi keskittyä controllerin työssä yrityksen tukemiseksi?

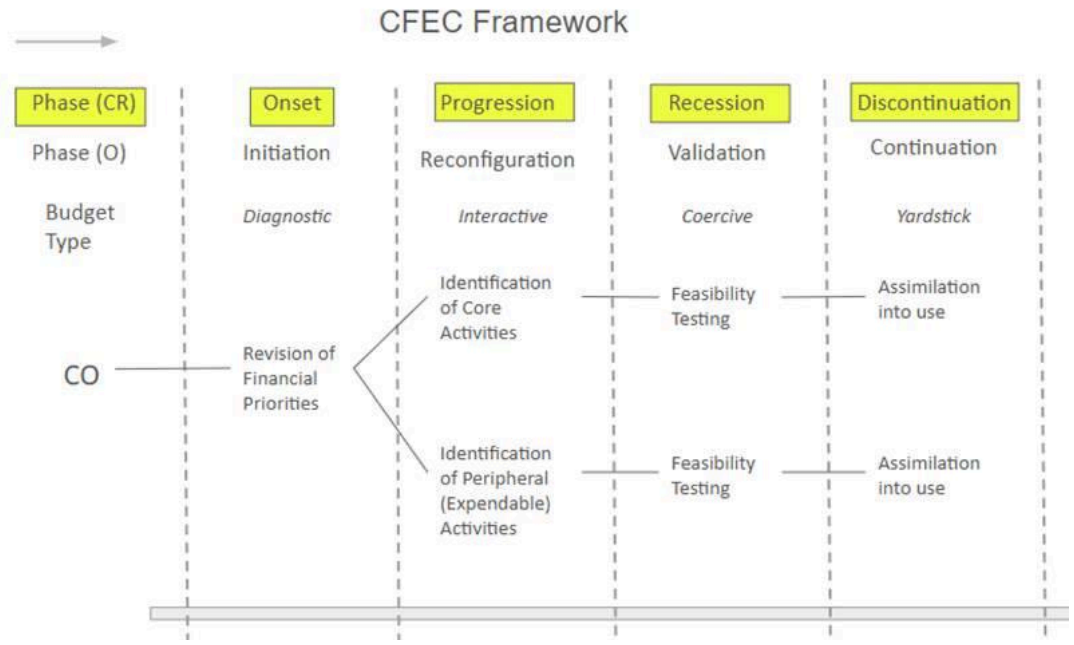
16. In your opinion, are long-term budgets suitable for the immediate aftermath of the crisis event where organisational stability exists? Why do you think so?

Ovatko pitkäaikaiset budjetit mielestäsi sopivia kriisin jälkeiseen aikaan, jossa organisaatiolla on jo pysyvyyttä? Miksi?

17. How functional are applied theoretical frameworks in the process of securing operational stability?

Kuinka toimivina pidät sovellettuja teoreettisia toimintamalleja yrityksen operatiivisen tasapainon löytämisessä?

Controller Framework for Endangering Conditions (CFEC/CFOC)



18. In your opinion, how useful is the CFEC Framework?

Kuinka hyödyllisenä näet ehdotetun CFEC- mallin?

19. Is the CFEC Framework a tool that controllers can use to their benefit?

Onko CFEC- mallista hyötyä kontrollereille?

20. What issues could be the largest obstacle when using the CFEC model?

Mitkä ongelmat saattaisivat olla keskeisiä CFEC- mallin käytössä?

21. How would you improve the Framework?

Kuinka kehittäisit toimintamallia?

Appendix B. Article screening for discussion

For the discussion part, this research incorporates a screening process for the articles presented. Materials selected for the support of this thesis follow the quality categories set up by the Chartered Association of Business Schools (2021), which assigns journal articles based on criterion, such as quality, execution, cross-references and impact ratings to a category of 1-5 (1 = modest, 5 = high distinction).

Rating	Meaning of Quality Rating
4*	Journals of Distinction. Within the business and management field including economics, there are a small number of grade 4 journals that are recognised world-wide as exemplars of excellence. As the world leading journals in the field, they would be ranked among the highest in terms of impact factor. The initial paper selection and review process would be rigorous and demanding. Accepted papers would typically not only bring to bear large scale data and/or rigour in theory, but also be extremely finely crafted and provide major advances to their field.
4	All journals rated 4 (whether included in the Journal of Distinction category or not) publish the most original and best-executed research. As top journals in their field, these journals typically have high submission and low acceptance rates. Papers are heavily refereed. These top journals generally have among the highest citation impact factors within their field.
3	3 rated journals publish original and well executed research papers and are highly regarded. These journals typically have good submission rates and are very selective in what they publish. Papers are heavily refereed. These highly regarded journals generally have good to excellent journal metrics relative to others in their field, although at present not all journals in this category carry a citation impact factor.
2	Journals in this category publish original research of an acceptable standard. For these well regarded journals in their field, papers are fully refereed according to accepted standards and conventions. Citation impact factors are somewhat more modest in certain cases. Many excellent practitioner-oriented articles are published in 2-rated journals.
1	These journals, in general, publish research of a recognised, but more modest standard in their field. Papers are in many instances refereed relatively lightly according to accepted conventions. Few journals in this category carry a citation impact factor.

Figure B1. ABS Quality Rating (Chartered Association of Business Schools, 2021, as adapted from Harvey et al., 2010)

ISSN	FIELD	JOURNAL TITLE	PUBLISHER	AJG2021	AJG2018
1558-7967	ACCOUNT	Accounting Review	American Accounting Association	4*	4*
1873-6289	ACCOUNT	Accounting, Organizations and Society	Elsevier	4*	4*
1879-1980	ACCOUNT	Journal of Accounting and Economics	Elsevier	4*	4*
1475-679X	ACCOUNT	Journal of Accounting Research	Wiley-Blackwell	4*	4*
1911-3846	ACCOUNT	Contemporary Accounting Research	Wiley-Blackwell	4	4
1573-7136	ACCOUNT	Review of Accounting Studies	Springer Nature	4	4

Figure B2. ABS Category 4 (Journal Ranking Portal, 2024)

1467-6281	ACCOUNT	Abacus	Wiley-Blackwell	3	3
2159-4260	ACCOUNT	Accounting and Business Research	Taylor & Francis	3	3
1467-6303	ACCOUNT	Accounting Forum	Elsevier	3	3
1558-7975	ACCOUNT	Accounting Horizons	American Accounting Association	3	3
1758-4205	ACCOUNT	Accounting, Auditing and Accountability Journal	Emerald	3	3
1558-7991	ACCOUNT	Auditing	American Accounting Association	3	3
1558-8009	ACCOUNT	Behavioral Research in Accounting	American Accounting Association	3	3
1095-8347	ACCOUNT	British Accounting Review	Elsevier	3	3
0007-1870	ACCOUNT	British Tax Review	Thomson Reuters	3	3
1095-9955	ACCOUNT	Critical Perspectives on Accounting	Elsevier	3	3
1468-4497	ACCOUNT	European Accounting Review	Taylor & Francis	3	3
1468-0408	ACCOUNT	Financial Accountability and Management	Wiley-Blackwell	3	3
1554-0650	ACCOUNT	Foundations and Trends in Accounting	Now Publishers Inc.	3	3
1094-4060	ACCOUNT	International Journal of Accounting	Elsevier	3	3
1873-2070	ACCOUNT	Journal of Accounting and Public Policy	Elsevier	3	3
0737-4607	ACCOUNT	Journal of Accounting Literature	Elsevier	3	3
0148-558X	ACCOUNT	Journal of Accounting, Auditing and Finance	SAGE	3	3
1468-5957	ACCOUNT	Journal of Business Finance and Accounting	Wiley-Blackwell	3	3
1061-9518	ACCOUNT	Journal of International Accounting, Auditing and Taxation	Elsevier	3	3
1558-8017	ACCOUNT	Journal of the American Taxation Association	American Accounting Association	3	3
1096-1224	ACCOUNT	Management Accounting Research	Elsevier	3	3

Figure B3. ABS Category 3 (Journal Ranking Portal, 2024)