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Management accounting change in merger and acquisitions: a multiple-case study

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Abstract

Purpose – Despite the literature highlighting the relevance of mergers and acquisitions (M&As) as strategic options for organizations' evolution, such events maintain a high failure rate. All stages of M&As generate considerable stress on management accounting systems (MASs) and related actors. This study aims to investigate management accounting change (MAC) throughout M&As to expand knowledge on the technical side of these changes. A deeper understanding of these changes and their relationship to the implementing agents could illuminate the causes of M&A success and failure.

Design/methodology/approach – The study uses an in-depth, qualitative case study analysis of two companies that completed an M&A. The MAC process was investigated based on Sulaiman and Mitchell's (2005) typology. The authors collected information from internal documents, interviews, external reports and public information.

Findings – The findings indicate that MAC in M&As represents a comprehensive change that goes beyond the modifications outlined in Sulaiman and Mitchell's (2005) original framework; the post-deal integration period can be broken down into early and full sub-phases; and the success of the MAC process rests on the different roles played by various change agents.

Originality/value – To the best of the authors' knowledge, this study is among the first to apply and deepen a MAC framework focused on technical changes to MASs in the context of M&As. To date, the literature on M&A has mainly focused on behavioral or organizational changes while neglecting the technical dimension. In addition, by considering all the stakeholders of MASs, this study's analyses expose the role of change agents who are not generally considered in the accounting literature.

Keywords Mergers and acquisitions, Management accounting systems, Management accounting change

Paper type Research paper

1. Introduction

Mergers and acquisitions (M&As) are operations that allow companies to pursue strategies (increase market share, reduce costs, acquire patents, etc.) that would otherwise require years of investments (Birkinshaw *et al*, 2000). They are a frequent occurrence despite their

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considerable failure rate (Joshi *et al.*, 2018), which ranges between 50% and 70% (Cartwright and Schoenberg, 2006; Ruess and Voelpel, 2012; Rottig, 2017).

This disparity has galvanized a vast M&A literature seeking to understand the reasons for such failures, which seem to largely stem from poor integration of the involved entities after the M&A deal (e.g. Steigenberger, 2017; Brueller *et al.*, 2018). Such integration is indeed crucial for maximizing performance (Trichterborn *et al.*, 2015) and realizing the intended value of an M&A (Rajeev and Jyoti, 2011; Bauer and Matzler, 2014). Despite this awareness among scholars, integration in M&As remains problematic (Cartwright and Schoenberg, 2006). While there have been many studies on integration difficulties (Granlund, 2003; Rajeev and Jyoti, 2011), there have been fewer investigations into successful cases of post-deal integration. This suggests a need for further research (Lauser, 2010; Rottig, 2017).

Scholars suggest that management accounting systems (MASs) may facilitate integration in M&As and play a performance-enhancing role in achieving the integration objectives (Granlund, 2003; Beusch, 2007; Razi and Garrick, 2019). In particular, MASs have to adapt and change themselves to act as effective facilitators in M&As (Granlund, 2003). For example, MASs have to be flexible to respond to top management's needs (Naranjo-Gil and Hartmann, 2007), translate corporate priorities into business line decisions (Guerreiro *et al.*, 2006) and manage compliance with accountability principles (Taipaleenmäki and Ikäheimo, 2013). However, research has not deeply explored how firms adapt their MASs in response to an M&A (Dossi *et al.*, 2017; Razi and Garrick, 2019; Väisänen *et al.*, 2020), particularly from a technical viewpoint (Granlund, 2003).

Addressing this research gap could prove important from a twofold perspective. First, it could illuminate our current limited understanding of the reasons behind successful post-deal integration. Indeed, the ability to harmonize distinct controls into a coherent, group-wide MAS can increase the likelihood of integration success by alleviating the post-deal control problems that typically emerge due to larger size or changed competitive situation (Granlund, 2003). On the contrary, delays in implementing group-wide control systems may have serious consequences, leading to enhanced uncertainty, goal ambiguity and other dysfunctional effects (Jones, 1985b). Second, addressing the aforementioned gap could expand and deepen previous findings on management accounting change (MAC), which occurs with the introduction and implementation of new management accounting techniques or with changes in the way managers use management accounting information generated by existing systems (Alsharari *et al.*, 2015). Accordingly, we contribute to this research stream by exploring MAC in a particularly complex setting as M&As. Indeed, the conditions of rapid change and uncertainty that often accompany M&As bring remarkable challenges to both designers and users of MASs (Jones, 1985a). Disrupting events such as M&As can also be very problematic, generating cultural clashes and power struggles (Jones, 1986). For example, M&As usually represent a radical change for the involved organizations, which need to establish new routines, learn new patterns of communication, integrate new members, negotiate errors, accurately assess operational synergies and so forth. In such conditions, handling the MAC process in a convenient and timely manner may become extremely difficult – especially since there is typically little time allotted to properly adapting and integrating the MASs of the involved organizations (Granlund, 2003).

Against that background, the current study seeks to illuminate the facilitating and performance-enhancing role of MASs during M&As events. Specifically, we focus on two areas that have remained largely unexplored:

(1) the technical side of MAC; and

(2) the range of individual change agents who collectively shape the MAC process.

Indeed, post-deal integration is typically characterized by a complex network of impactful relationships among a variety of agents that act based on the information produced by MASs and ultimately affect M&A success (Razi and Garrick, 2019). Accordingly, our study addresses the following research questions:

RQ1. How do the MASs of the involved organizations change during an M&A from a technical viewpoint?

RQ2. How is this MAC process handled and, specifically, who are the main change agents that shape it and what roles do they play throughout the MAC process?

To answer these questions, we conducted a case study analysis of two companies that underwent an M&A and successfully completed the post-deal integration. More specifically, we adopted the MAC framework of Sulaiman and Mitchell (2005) and Chanegrih (2008) to explore the technical evolution of MASs in response to the first question. Our analysis allowed us both to refine the MAC framework – by reorganizing the types of change as suggested within the original model – and extend it by identifying a new type of change. To answer the second question, we analyzed the different roles of the main change agents collectively shaping the MAC process. In this respect, we considered the three agents traditionally discussed within the management accounting literature – namely, controllers, accounting information systems (AISs) specialists and business unit managers – while also enriching the literature with a fourth critical agent: the integration team (IT).

The remainder of this paper covers the following. Section 2 first reviews the extant management accounting research on M&As, then summarizes the literature on the MAC process and the related change agents; Section 3 describes the qualitative methodology used for the case studies; Section 4 first provides an introduction to the two M&A events investigated and then presents and discusses the empirical results for each research question; finally, Section 5 highlights the study's contributions and limitations, as well as the opportunities for future research.

2. Literature review

2.1 Understanding the role of management accounting systems in mergers and acquisitions

The M&A process is a frequent object of study in the managerial literature (Bauer and Matzler, 2014). Scholars have noted that, along the three stages of an M&A process (pre-deal, deal and post-deal), the integration (i.e. the managerial actions taken to combine two previously separated companies into a new organization) is a particularly critical and delicate issue affecting the M&A performance (Cording *et al.*, 2008). Such integration culminates in the post-deal phase, when two companies become one and the resulting organization strives to settle into new routines and realize the intended value of the agreement. However, the success of post-deal integration often hinges on decisions made at earlier stages: such as when a company identifies an acquisition target and defines the strategic goals and valuation range of the M&A (pre-deal phase), as well as when the two companies undergo due diligence to define the final price, the first version of the integration plan and all the legal details of the operation (the deal phase) (Steigenberger, 2017).

Given its relevance and complexity, post-deal integration has attracted notable scholarly attention (for a literature review, see, e.g. Graebner *et al.*, 2017). In this regard, the literature has identified two different perspectives of integration:

- a short integration of 100 days that mitigates post-deal drift by resolving uncertainty that could distract employees from their job responsibilities (Graebner *et al.*, 2017), based on the General Electric approach (Ashkenas *et al.*, 1998; Angwin, 2004);
- a several-year integration that extends over the long run to deeply exploit any potential synergies across the involved organizations (Graebner *et al.*, 2017).

Accordingly, the two perspectives of integration feature different levels of integration depth (i.e. the degree of change in functional areas of the two organizations, such as accounting systems) and integration speed (i.e. the length of time needed to integrate the two organizations' resources). Bauer and Matzler (2014) empirically confirmed the general intuition that greater integration depth generally entails slower integration speed.

The literature recognizes that MASs play both a facilitating and a performance-enhancing role during the post-deal integration phase (Granlund, 2003; Razi and Garrick, 2019) because the integration of the systems that will provide financial and non-financial information is pivotal to a smoother and deeper integration of the two entities and their management processes. In a foundational study on the topic, Jones (1985b, p. 179) argued that MASs "form an integral part of an organization's structure and processes to effect control. Their importance stems from the ability to facilitate organizational integration, to motivate, to assist decision-making and to provide measurements of performance through enabling characteristics such as the delegation of authority, communication of objectives, participation and informational feedback."

Following the seminal work by Jones (1985a, 1985b, 1986, 1992), various other authors have investigated the socio-technical relations between MASs and post-deal integration. For example, Roberts (1990) examined the accounting and strategic issues during the M&A process, providing critical evidence of individual domination during the integration phase, and of power games that resulted in new organizational rules, norms and values. Later, Granlund (2003) focused on the management accounting integration process using institutional theory (Burns and Scapens, 2000) and Giddens (1979) meta-theory, seeking to provide an explanation for the problems and consequences that a lack of a common MAS could cause in the integration process. He observed that the implementation of a MAS in the target company was significantly impacted by the time-consuming process of integration with the acquirer. Other factors that influenced the implementation were the unshared goals and cultural differences between the acquired and acquiring companies, power relations and dominant groups' interests. Granlund (2003) concluded that the post-deal structure of a MAS reflects efforts to integrate the management practices of both companies. Focusing on the human and organizational aspects of integration, Beusch (2007) argued that the board of directors needs to treat integration as a top priority if it wants to increase the odds of success. To that end, top management needs to improve commitment by allowing staff to participate in strategic discussions. In the same vein, Moilanen (2016) explored how softer issues (e.g. emotions) function in the alignment of a MAS following an M&A. In particular, the author compared the sensemaking of employees and managers in both firms (acquirer and acquired). The contradiction between rational and emotional frames may cause alignment difficulties; after all, the introduction of a new MAS does not automatically provide an unambiguous frame for sensemaking. Dossi *et al.* (2017) emphasized the relevance of the institutional level and the role of the headquarters (i.e. parenting styles) in shaping the local MAS within a group of companies. Razi and Garrick's (2019) socio-technical analysis demonstrated the performative powers and effects of a MAS. The authors envisioned the post-acquisition integration as a process of co-production involving employers and systems. In one of the most recent articles on MASs and M&As, Väisänen *et al.* (2020) suggested that

regular meetings between the acquirer and acquired can build positive relationships and mutual trust, thereby facilitating more enabling perceptions of the new MAS.

Despite the aforementioned research on the integration process, there are few studies on how MASs change across the entire M&A process, particularly from a technical viewpoint. However, it is precisely the technical changes that determine the infrastructure that shapes the post-deal collection, analysis and dissemination of management accounting information. That information will, in turn, drive the effectiveness of managerial decisions and actions taken to manage post-deal integration (Granlund, 2003; Aboagye-Darko *et al.*, 2023).

2.2 Management accounting change framework

To explore the technical changes of MASs in the context of M&As, we build on the literature on MAC. Scholars have applied various theories to interpret and explain MAC (Busco *et al.*, 2007), among which contingency theory (e.g. Hoque and Hopper, 1997; Maina Waweru *et al.*, 2004) and institutional theory (e.g. Granlund, 2003) stand out. While the former has been used to investigate the fit between contingency variables (e.g. economic constraints, technological advancement, size and type of organizations) and the resulting MAC, the latter has been adopted to analyze the significance of the different forms that MAC can take – with an emphasis on coercive, mimetic and normative isomorphism. However, the adoption of these theoretical approaches to the MAC phenomenon has not deeply analyzed it from a technical viewpoint. Indeed, such studies typically focus on a pre-coded, theoretically derived set of concepts. Adopting a technical approach to the study of MAC allows instead more freedom to explain the reasons for changes. More specifically, this approach allows us to deepen the different changes in MASs that emerge after an event of discontinuity and the agents and processes leading to these changes. In line with such observations, Sulaiman and Mitchell (2005) explored the forms that MAC can take from a technical viewpoint by developing a framework rooted in Burns and Scapens's (2000) work. Specifically, Sulaiman and Mitchell's (2005) MAC model, as subsequently refined by Chanegrih (2008), defined six types of changes:

(1) *Addition*: Introducing new accounting techniques that extend the existing MAS.

(2) *Replacement*: Introducing new techniques that substitute for a part of or the whole MAS.

(3) *Information representation changes*: Variations in how produced data are presented to audiences.

(4) *Information frequency changes*: Variations in the number of times the output is provided to the users.

(5) *Operational modification*: Variations in the operations of management accounting techniques.

(6) *Reduction*: The removal of a management accounting technique without replacement.

Sulaiman and Mitchell's (2005) model has become a reference point for studying MAC from a technical perspective (Ribeiro and Scapens, 2006; Hopper and Bui, 2016) and been applied in a few empirical papers on the topic (McLaren *et al.*, 2016; Dossi *et al.*, 2017). However, few studies have explored MAC in the context of M&As (Granlund, 2003; Dossi *et al.*, 2017; Razi and Garrick, 2019), even though the literature makes clear that M&As are a revolutionary moment in organizational life that merits deeper analysis. Indeed, after such a significant discontinuity inside the organization, the MAS needs to change to adapt itself to a

new phase of the company. In addition, the MAS allows the firm to generate and circulate information to facilitate decision-making, functions that are crucial during post-deal integration (Granlund, 2003).

Based on such observations, and following calls for further empirical research applying this model (Granlund, 2003; Razi and Garrick, 2019), we adopt Sulaiman and Mitchell's (2005) framework to analyze the MAC process in the context of M&As from a technical perspective, also considering the agents involved and their respective roles. Indeed, previous studies suggest that MAC processes are characterized by inherent contradictions, resistances and conflicts among the organizational members who are mobilized throughout the change process (Alsharari *et al.*, 2015).

2.3 Management accounting change agents

To date, the literature on MAC in M&As has identified three main change agents: controllers [1], AIS specialists and managers. In this study, we extend the discussion to encompass a fourth agent: the IT, which has been studied in the strategic management literature on M&As, but has been surprisingly neglected within the accounting literature.

In organizational contexts marked by instability (such as an M&A), the role of the controller is even more important than usual. Indeed, the need to make changes by incorporating internal and external input and the priority of standardizing procedures and data for timely reporting become priorities in periods of discontinuity (Lukka, 2007). As such, the controller is a crucial change agent who serves as an enabler (Bassani *et al.*, 2021), facilitator (Granlund, 2003) and translator of strategy and performance enhancement for M&A goals (Razi and Garrick, 2019).

AISs are crucial for enabling the creation, management and processing of financial and non-financial information. Broadly speaking, these systems include all the tools and processes for collecting and interpreting controlling data, such as basic spreadsheets (used at the operational level) and budgeting and reporting systems (adopted at the managerial level). Previous studies suggest that AISs may positively impact post-deal integration (Chang *et al.*, 2014; Vieru and Rivard, 2015); thus, we explored the role played by the AIS specialists who refine those systems (Grabski *et al.*, 2011) throughout the MAC process during M&As.

In addition to the previous roles involved in the delivery of management accounting information, managers who use the information produced by MASs are also relevant change agents who shape the MAC process. Indeed, as managers use accounting information to make sense of their own decisions and actions and those of other organizational members, MASs are enacted and thereby reproduced, in their day-by-day use by the managers (Burns and Scapens, 2000).

Finally, the IT encompasses those people who will implement the integration once the deal stage concludes. The top management team will appoint the members of this team and empower them to achieve the core objectives of the M&A operation (Graebner *et al.*, 2017; Steigenberger, 2017). Thus, the IT usually comprises people trusted by the CEO, along with some managers of the business areas and staff functions who can facilitate a smooth integration. Depending on the type of organization, the IT may eventually broaden to include other staff members or outside consultants. This team may have a strong impact on post-deal integration processes. Indeed, the IT offers a strategic vision of the overall M&A operation (Larsson *et al.*, 2001; Ellis *et al.*, 2009), which may, in turn, influence the identification and exploitation of technical and procedural synergies regarding accounting flows (Steigenberger, 2017). Given the IT's important role in realizing the intended value of the M&A, we wanted to evaluate the roles and responsibilities attributed to this team (Steigenberger, 2017). Specifically, we argue that understanding the IT's composition,

iterations, impact and related processes can enrich our current understanding of MAC across M&A events.

3. Research methodology

We used a multiple-case study because it allowed us to derive more robust evidence for our research questions by analyzing the similarities and differences between cases (Eisenhardt and Graebner, 2007). Case studies are especially useful when researchers want to grasp theoretical patterns and interpret data through a theoretical lens (Yin, 1994). Moreover, sourcing data from multiple sites can produce stronger, more reliable evidence (Baxter and Jack, 2008), especially when the cases are expected to overlap or diverge for predictable reasons (Yin, 1994).

Accordingly, our research setting includes two different organizations (Alpha Hospital and Beta Company), which completed an M&A process in recent years. Alpha Hospital is a university hospital that acquired a second hospital to expand and reorganize the provision of local services. Beta Company is an Italian firm that acquired a company in the USA to expand its geographical market with a local production site.

We chose these two cases, based on a theoretical sampling approach (Heath and Cowley, 2004), because they embody a similar and successful integration process despite their marked differences. Indeed, the two organizations operate in two different organizational and legal contexts (i.e. public nonprofit versus private for-profit) and industries (i.e. Health care versus manufacturing). In both cases, the M&A operation took place in a particularly complex setting, but this complexity had different origins. In the case of Alpha Hospital, the operation involved two professional organizations, which possibly exacerbated the typical tensions of M&As because of the coexistence of multiple disciplinary and work cultures (e.g. clinical versus administrative). In the case of Beta Company, the operation proved particularly challenging because of being a cross-border M&A involving companies belonging to different national cultures. What unites these very different cases is their similar, step-by-step approach to integrating the acquired organization. The integration process – which involved the companies' controllers, AIS specialists, managers and ITs – led to positive results in both cases.

Our case selection was also influenced by practical considerations, such as the availability of knowledgeable respondents and access to relevant data. Access to key participants and data sources significantly enhances the depth and validity of qualitative research (Creswell and Poth, 2016). In both our cases, we conducted the study 3–5 years after the respective deal. At the time of our fieldwork activity, both parties considered concluding all post-deal integration processes; moreover, the controllers and a relevant part of the people involved in the integration processes still worked in the studied organizations. As such, in both cases, we were able to collect data shortly after the integration period and interview individuals who had experienced the entire process. This ensures the retention of "organizational memory" (Assmann and Czaplicka, 1995, p. 6; Lukka and Vinnari, 2017) and provides rich, firsthand insights that enhance the validity and generalizability of the findings.

We triangulated three types of data for this study:

(1) internal reports, such as budgets, reports and procedures;

(2) interviews and informal conversations with the managers involved in the process (controllers, AIS specialists, managers and members of the ITs);

(3) external reports (e.g. financial statements) and public information (e.g. press releases).

We conducted thematic interviews that followed the research protocol reported in Appendix 1 (Yin, 1994). We also conducted several additional open interviews to explore points of particular interest that emerged. To reach theoretical saturation, we completed 10 interviews for each organization (for a total of 20), which is consistent with norms in accounting research (Dai *et al.*, 2019). Appendix 2 Table A1 features a summary table of the interviews. All the interviews were remotely conducted, recorded and transcribed by one author; the coding analysis was done with the NVivo software.

4. Findings and discussion

In this section, we first provide a general introduction of the two M&A events investigated, highlighting their different contextual elements as well as their similarity. We then present and discuss our findings related to each research question in turn.

4.1 Overview of the two mergers and acquisitions events

Alpha Hospital is a public university hospital located in northern Italy that recently completed its integration following the acquisition of a second hospital facility owned by the Local Health Unit in the same city. According to the rules of the Italian National Health Service, the Health Ministry delegates the organization of healthcare service delivery to Regions. Thus, Alpha Hospital's pursuit of the M&A event was decided by the local Region. The operation had two major aims:

- expanding Alpha's resources in terms of beds, staff and future students;
- streamlining the financial performance and clinical outcomes that differed significantly between the two hospitals.

More specifically, the M&A event was aimed at exploiting synergies and aligning the performance of the involved hospital facilities in terms of spending efficiency and quality of care for citizens' benefit. Even though political considerations inspired the M&A decision, the integration process followed managerial practices that are routine in the private sphere.

Owing to the acquisition, the staff size of Alpha Hospital increased from over 3,000 to over 4,000 employees, while the number of beds almost doubled (from 510 to 1,100). The acquisition entailed significant changes for both Alpha and the acquired hospital. Alpha had to integrate a large hospital, standardize clinical and administrative procedures, eliminate significant redundancies and acclimate the acquired staff (especially doctors and nurses) within a complex and articulated structure. The acquired hospital shifted from being a local provider of both acute and community services to operating as a university hospital facility, combining the provision of acute services with research and educational activities.

> The Region identified the main specific and priority objectives of the integration project, namely the expected results in terms of quality and cost-effectiveness of services and functionality with respect to regional planning […] the Region decided not to draw up a detailed reorganization plan for the two involved organizations, instead it deemed advisable to delegate its drafting to the organizations. (Regional document authorizing the hospitals' unified governance)

Before the M&A event, the constant collaboration between Alpha Hospital's controlling department with its top and middle management led to an effective evolution of the hospital's MAS and AIS. Accordingly, Alpha expanded its controller's team with AIS specialists and instructed them to develop an in-house AIS so it could disengage from external software houses. Through the AIS investments, the controller's team at Alpha could dedicate more time to interacting with clinicians and automating the system. After the deal, four controllers were shifted from the Local Health Unit's controlling department to Alpha Hospital's

controlling department. This resulting department was the only controller team in charge of managing the post-deal integration processes.

The definition and implementation of the MAS integration plan required extensive planning and activity scheduling in order to articulate a clear end point for all involved employees.

> Overall, there were no major changes at the very beginning, the acquired hospital continued working using the same applications. So, the four controllers coming from the Local Health Unit didn't notice changes from the point of view of their own tools. However, after some weeks we introduced our systems, producing new dashboards and analyses. Then, we organized several meetings to introduce such tools to the top management team as well as to both clinical and administrative responsibility centres' managers. We illustrated our new systems and how they work. We listened to them, we also tried to understand and accommodate their needs. Then, little by little, they started to actively search for our support and insights, we gradually created a relationship as controllers and as AIS specialists. (AIS Specialist at Alpha Hospital).

The results at the end of the post-deal integration period were significant, mitigating redundancies and boosting the performance of the acquired hospital facility. Both clinical outcome indicators (e.g. mortality rates) and process indicators (e.g. % of operations within two days for specific time-dependent diseases) improved. Alpha was able to develop multidisciplinary teams thanks to a collaboration between internal teams working in the involved hospital facilities. Finally, spending efficiency increased without having to reduce staff.

The second case, Beta Company, involved an Italian-based multinational company that produces components for electric motors. While the firm maintains its headquarters in Italy, it has gradually expanded its operations by opening and acquiring offices and production plants worldwide. Beta has intensified this expansion since 2010 – now covering North Africa, Asia, Central America, North America and Eastern Europe – for the purpose of increasing production capacity and reducing transport costs. By expanding geographically, the firm can be closer to its historical customers and better positioned to unlock new markets. With over 2,000 employees, over 10 production plants, a turnover of €500m in 2021 and an increase in its revenue for 2022 and 2023, Beta Company is a consolidated firm primed for substantial growth.

In recent years, Beta Company has considered acquiring an important plant in the Southeast USA to gain greater access to the American market. A few years earlier, the firm purchased a plant in Central America that was no longer sufficient for all the orders acquired. By acquiring the new US plant from a struggling competitor, Beta could satisfy a significant portion of its production demand while drastically reducing the costs associated with transport and import charges. Furthermore, as reported in a post-deal press release, this acquisition sought to achieve synergies in the production of electric motors characterized by higher levels of energy efficiency. Leveraging its difficulties with previous acquisitions, Beta initiated a process (e.g. formalizing its IT, strongly involving the controller's team and AIS specialists) that led to a successful integration of the US plant.

> We were increasingly structuring ourselves on managing abroad: passing from managing only Italy to managing many plants around the world in different contexts in a ten-year interval forces you to learn from previous experiences and avoid mistakes. (Head of Controller at Beta Company)

The integration plan outlined a few clear objectives (e.g. aligning the production quality with the Italian standard, increasing the EBITDA). Beta expected that the full integration period would take about three years and thus appointed a relatively small team (consisting of the CEO, CFO, Italian Production Manager, American Production Manager, American

Administrative Manager) to lead the integration. The involvement of the CEO and CFO decreased during the integration period as the process became more technical. The head of administrative offices and controller of the US company was appointed as head of the IT in the US factory. Externally, Beta chose two consulting companies: one for organizational and financial support for the deal and the other, for an ICT consulting firm, for the implementation of informatic changes defined by Beta.

In Beta, the controller and his team played a fundamental role in managing the integration between Italy and the USA: They oversaw information flows, created *ad hoc* reports, supported organizational change and integrated processes and people. In this case, however, the controller team was not responsible for managing the AIS, which was under the responsibilities of the information system team supported by external suppliers. The AIS specialists had a fundamental role in progressively integrating the two MAS so that they were fully integrated and had completely shared communicability. Beta's year-long investments and previous acquisitions had paid off in the form of a flexible AIS that could integrate new data. The time saved in terms of technical integration practices made it possible to absorb the acquired company's best practices, improve cultural integration and more broadly integrate the MAS.

The achieved results met expectations and in some cases exceeded them. The reduction in transportation costs was a key dimension for a successful M&A at the company level. Furthermore, higher-than-expected gains in plant efficiency made it possible to not only develop the factory but also plan other US acquisitions where the personnel of the newly acquired company could have responsibility positions, thus avoiding culture shocks at the added facilities.

4.2 Technical side of management accounting change in mergers and acquisitions

One of the first, overall insights that clearly emerged out of our analyses of the empirical evidence for both cases is that MAC followed an evolutionary, rather than revolutionary, path. This finding confirms previous studies (Burns and Vaivio, 2001) suggesting that an evolutionary approach is particularly suitable for managing complex and long-lasting changes such as MAC in M&As. The top managers of each case purposefully chose this type of approach to minimize resistance to change and unnecessary tensions.

> You can't think of going to the U.S. and changing the way they have been working for years overnight. If you do that, you're pulling against everyone, employees and workers. (Head of Controller at Beta Company)

Passing to considering the technical dimension of MAC, our analysis of these two organizational contexts confirmed the overall relevance of the model originally proposed by Sulaiman and Mitchell (2005) and subsequently integrated by Chanegrih (2008). However, our empirical evidence also suggests some adjustments that can lead to a clearer and more complete framework (see Table 1). In particular, we argue that the six types of change should be re-organized into three general categories, some of which in turn also include sub-categories of change not previously identified within the original model. The three general categories are introduction, modification and reduction. Our cases reveal sub-categories for introduction and modification but not for reduction.

As shown in Table 1, we re-conceptualized the first two dimensions suggested by Sulaiman and Mitchell (2005) – i.e. addition and replacement – as sub-categories of a more general change category that we labeled *Introduction of new techniques*. Indeed, when introducing new management accounting tools or techniques, firms can add parts that extend their existing MAS or introduce elements to replace previous components.

Table 1. A refined model of technical MAC

Original model of Sulaiman and Mitchell (2005) and Chanegrih (2008)	Refined model
1. Addition	1. Introduction of new techniques
2. Replacement	a. Addition
3. Information representation changes	b. Replacement
4. Information frequency changes	2. Modification of existing techniques
5. Operational modification	a. Content changes
6. Reduction	b. Representation changes
	c. Frequency changes
	d. Operational modifications
	3. Reduction of existing techniques

Source: Left part: courtesy of Sulaiman and Mitchell (2005) and Chanegrih (2008); right part: authors' own creation

In the case of Alpha Hospital, examples of addition included the introduction of pricing techniques and the development of new benchmarking tools, which were stimulated by the availability of more service-related data. In the past, Alpha used DRG-tariffs [2], which were externally imposed by the Region, solely to evaluate the cost-effectiveness of its medical procedures. After the integration, Alpha's controllers began supporting the Region's tariff calculations by providing preparatory analyses. Furthermore, as reported in the performance report published in the first post-deal year, Alpha introduced a systematic internal benchmarking on a range of key performance indicators achieved by the two hospital facilities. Such benchmarking covered 17 indicators, including clinical outcomes measures (e.g. 30-day mortality for ischemic stroke), measures of waiting time (i.e. number of days waiting for surgeries of tibia and fibula fracture), measures of clinical appropriateness (e.g. % of laparoscopic cholecystectomies in day surgery), measures of activity volume (e.g. number of accesses to emergency department) and economic indicators (e.g. % of pharmaceutical expenditure for certain DRG points).

> We introduced several accounting tools and techniques. For instance, now we also perform analysis to support regional pricing activities, and we have extended our range of activities especially in clinical related indicators. (General Controller at Alpha Hospital)

Meanwhile, a replacement in both companies was represented by the move from single-base to multiple-base full costing. Indeed, the comparison with the acquired companies revealed some bases that were not used inside the acquirers' cost-accounting systems, and these bases were included in the allocation criteria. As a result, the system could offer more accurate accounting information and the people in the acquired organization saw their work recognized.

> We have implemented activity-based costing in all the factories, it was necessary to change and update an overly simplified costing method which was producing inaccurate reports. (Industrial Controller at Beta Company)

Considering the third, fourth and fifth change dimensions suggested by the original model (see Table 1, first column), we suggest re-organizing all of them as sub-categories of a more general change category that we labeled *Modification of existing techniques.* Our analyses also revealed an additional sub-category of modification – i.e. content changes – that is conceptually different from the other modifications; thus, we added it to our refined model as a distinctive sub-category. Indeed, changing the contents of tools and techniques (e.g. reports) is a widespread change that goes beyond representation, frequency, or operational changes. As AISs evolve and integrate with corporate databases, new content can be added to existing management accounting tools to expose new dimensions of organizational performance. In the case of Alpha, top management relied on various reports pre-deal that mainly featured financial indicators. Post-deal, however, the reports were expanded to include a range of clinical data; this content change aimed to satisfy middle managers (i.e. department heads) who asked for more relevant data to identify possible improvement actions regarding their responsibility centers.

> We used to provide departmental information and corporate information that were mainly used by the top management team, but after the act (ndr. the formal acquisition of the other hospital) we realised that also the department heads wanted to understand how their responsibility centres were performing. Since their information needs are mainly focussed on clinical indicators, we provided them simple information that answered their curiosity. (General Controller at Alpha Hospital)

This enrichment of the MAS post-deal led to a significant improvement in performance (Razi and Garrick, 2019):

> The increase in accuracy and the implementation of multiple databases led to the generation of new reports and new analyses. This has enabled the creation of synergies from the integrated use of data. The use of data has encouraged the emergence of cross-departmental teams, improving collaboration and efficiency within the organization. (General Controller at Alpha Hospital)

> The evolution of the MAS included a more detailed industrial component. The investment in tracking technologies enabled us to have real-time monitoring of stock values and to obtain increasingly precise timing. These improvements led to significant operational advances, optimizing resource management and enhancing the overall efficiency of the organization. (Head of Controller at Beta Company)

In terms of representation changes, both cases exhibited a progressive improvement in data visualization. In Beta's case, the post-deal integration activities stimulated a more active involvement of employees working with business unit managers. Accordingly, the monitoring system was equipped with more detailed data visualization that addressed employees' specific needs. These data were mainly developed by elaborating on available reports, thus offering a more analytical representation of information that existed before the M&A. Alpha instituted similar changes, its AIS investment strategy facilitating the visualization of relevant data for the professionals involved in the post-deal integration activities.

Our study also confirmed frequency changes. In both cases, the closure of the deal was followed by controllers providing weekly reports on the progress of the MAS integration. About three months after the deals, that constant monitoring was perceived as no longer necessary and thus scaled back to routine levels (bi-weekly or monthly, depending on the report). This was justified by the evolution of the information needs along the MAC.

Finally, both cases demonstrated several operational modifications. As the acquirer typically sets the operational procedures of the post-deal MAS, most operational modifications affect data exchanges from the acquired company to the acquirer. In the Alpha case, for example, the acquired hospital facility had a highly decentralized system (set by the Local Health Unit) before the deal. After the deal, the acquired facility had to transition to the acquirer's centralized and standardized system. As a result, data were stored in an integrated data warehouse instead of using multiple data sets, while reports became more automated.

> We started the integration from our data collection system, on which all our reporting is based. Using a metaphor: we added an electrical socket where you can add a plug. In short, it was a matter of creating the data infrastructure for the data exchange and then moving on to the actual integration with the changes to the reporting systems. (Data Specialist at Alpha Hospital)

Moving to the last category of change – i.e. *Reduction of existing techniques* – our study did not find evidence of reduction in either case. This finding aligns with the previous literature, which suggests that this category of change is theoretically predicted, but not empirically observed (Sulaiman and Mitchell, 2005; Chanegrih, 2008). That said, our study notably offers a possible explanation: in both cases, even though the acquirers had ideas for eliminating reports and analyses from the acquired companies that were no longer useful, they seemed to abstain from mitigating possible tensions with the acquired companies. Although these reports are not a priority in supporting decisions and actions during post-deal, they are maintained to satisfy routine habits and thus limit possible resistance from the controllers of the acquired companies with regard to implementing the aforementioned technical changes. All in all, this choice represents a compromising account, i.e. the operation of an accounting practice that facilitates organizational actors to re-align priorities and integrate perspectives in a complex context of change (Chenhall *et al.*, 2013).

> Unfortunately, from my experience you'll never be able to remove reports or analysis, which is absurd: you do not use the data, but you still produce it. (Head of Controller at Beta Company)

Our case analysis also clarified how the investigated technical changes are implemented over time. In addition to exposing the MACs' long duration and evolutionary nature, both cases highlighted two distinct phases that echo the literature's description of two alternative models: the so-called "100-day integration" model (Ashkenas *et al.*, 1998; Angwin, 2004) and a 3- to 5-year integration period (Graebner *et al.*, 2017). However, the literature traditionally depicts these models as mutually exclusive, whereas our cases showed both models occurring in sequence. Thus, our findings on MAC point to an original, "hybrid" integration model that has not been previously described. In both cases, an initial period of approximately 2–3 months (which we name "early integration") was followed by a 3- to 5-year period of "full integration."

> To mitigate post-deal risks, we immediately collected rough-cut data addressed to the top management team for a few months. We improved management control, and finance in general, by bringing them up to group standards over a longer period of time, at least a couple of years. (AIS Specialist at Beta Company)

During the early integration period, the main purpose of the integration activities is to connect the two MASs to provide an initial set of reports for top management. The full integration needs more time, as the two organizations synchronize and the socio-technical problems of integration start to emerge. The characteristics of these sub-phases align with previous studies on the length and depth of post-deal integration (Bauer and Matzler, 2014). Indeed, while the early integration is faster but shallower, the full integration is slower but deeper.

Table 2. MAC during integration phases

	Early integration	Full integration
1 Addition	No	Yes
2 Replacement	No	Yes
3 Content changes	Yes	Yes
4 Representation changes	Yes	Yes
5 Frequency changes	Yes	No
6 Operational modifications	No	Yes
7 Reduction of existing techniques	No	No

Source: Authors' own creation

Distinguishing these two different sub-phases can further enrich our understanding of MAC from the technical viewpoint. Indeed, our findings illustrate that the two periods entail different types of change, as shown in Table 2. During the early integration, changes are not deep because both MASs are involved in superficial integration. Specifically, interventions are focused on altering the reports in terms of content (indeed, including data from the acquired organization involves changing the content of the reported information), representation (the reports are transitory and therefore are presented in a rather simple form) and frequency (that is increased to a weekly basis). Such gradual changes are well suited to the early integration period, which is a time of great tension and potential conflicts. In both cases, top management appeared to be aware of this dynamic, which is why the initial changes were relatively minimal and functional, focused on creating a common basis for communication between the organizations. While this led to an initial doubling of the MAS to facilitate basic data exchanges, the high frequency of reports prompted the control departments to begin synchronizing with each other.

> Overall, there were no major changes at the beginning, the acquired hospital continued working using its previous tools. So, the controller team of the acquired didn't notice changes from the point of view of their own tools. After some weeks we introduced our systems, producing the dashboards and the new analyses. (AIS Specialist at Alpha Hospital)

In the full integration period, the deepening connection of the two MASs prompted a substantial evolution. The acquired companies received new tools and techniques, some old tools were updated and replaced and the reports evolved to a stable and more elaborated representation with new contents. The operational procedures were revised to become more efficient and less time-consuming. Reports were published less frequently on a bi-weekly or monthly basis. Importantly, no reductions occurred during this phase to avoid tensions.

> We were very pleased with the result, not only because we were able to extend our management model to the new organization, but also because we were able to involve them by adopting some of their best practices. (General Controller at Alpha Hospital)

In both cases, the MAC was profound at the end of the full integration period. Counter to what one might intuitively expect, the post-deal MAS was not simply the acquirer company's MAS superimposed on the acquired company's one. Such an imposition would likely have created an organizational shock that would have destabilized the core part of the business (health care or manufacturing). On the contrary, our evidence suggests that the MAS

changed and adapted completely, albeit gradually. The firms made integration smoother by distributing the changes over time and delaying the deepest modifications, such as replacement, to a later stage once trust had been established. In line with the literature arguing for a participative approach in MAC (Busco and Scapens, 2011), our findings suggest that helping employees understand the value of new analyses creates a favorable working environment.

4.3 Management accounting change process in mergers and acquisitions and the roles of change agents

After having discussed MAC from the technical viewpoint, we now turn to examining MAC from the processual viewpoint, namely, by analyzing the roles played by the main change agents shaping the process. These change agents begin shaping MAC before the M&A deal is completed and then continue planning and implementing MAC over the whole post-deal integration period.

> Figuring out how to integrate the systems and what the most appropriate structure was required us to go through a period of preliminary analysis. The great work done in this pre-deal phase allowed us to start immediately from the first after-deal day with the initial basic integrations, and then refine the preliminary analysis as we proceeded with the integration activities. (General Controller at Alpha Hospital)

Correspondingly, we analyzed change agents' roles in these three different phases: pre-deal, early integration and full integration.

Before signing M&A deals, the firms conducted an overall analysis and evaluation of the acquisition. As regards the MAS, the controller and AIS specialists acquired all information that allowed them to understand the MAS structure in its various components (e.g. budgeting, reporting, ERP structure, data structure). During this pre-deal phase, the acquiring company's controller focused on two main areas:

(1) evaluating the M&A's economic-financial impacts; and

(2) discerning the extant structure of the acquired company's MAS to devise an integration strategy.

In this phase, the controller received documents about the acquired company's formal structure and processes, as well as data exports for analysis, but no direct access to its AIS.

> It was clear from the structure and the accuracy of the data how the MAS had been designed. The first contact with the first files already says a lot, much more than the procedures, which were very lean and not too detailed. (Head of Controller at Beta Company)

The controller consulted AIS specialists to jointly design a first draft of the MAS integration strategy in terms of instruments (e.g. ERP model), possible data exchanges (e.g. in batch or API) and data structure. At this preliminary step, the MAS had not yet undergone any changes; it was instead being deeply analyzed to plan subsequent changes and their timeline. The only change agents involved at this stage were the controller and AIS specialists.

In the pre-deal phase, the considerable emphasis placed on finding synergies between the two organizations meant less attention on the technical impact simulations related to integrating the MASs. However, performing more thorough analyses in the pre-deal phase would have reduced the workload required by early integration activities.

> A great deal of emphasis has been placed on pre-deal analyses, with a focus on business impact analyses. However, it would have been equally useful to devote significant resources and time to analysing the accounting system. A balanced approach between business impact assessment and

> an in-depth look at the accounting system could ensure better resource management throughout the whole process. (General Controller at Alpha Hospital)

During early integration, the MAS was under intense pressure due to the constant need for up-to-date data from various agents: in particular, top management, IT and company committees (e.g. the board of directors). Consequently, the MAC process was strongly focused on data and reporting in this phase. In addition, the MAS integration strategy that was drafted in the pre-deal phase continued to be refined.

The controller played a key role in updating and adjusting the reporting system to reflect the newly acquired organization, which required modifying both the content and representation of the data. In addition, organizational stakeholders (e.g. board of directors and auditors) received accounting information very frequently to prevent possible *ad hoc* requests and thus avoid a significant increase in the workload of the controller's team.

> We did not take many breaks after the deal; it is necessary to be both fast and accurate. Fast so that we succeed in entering all the data needed for the reports, and accurate so that we do not lose our credibility. (Industrial controller at Beta Company)

As a result, the controller had to work closely with AIS specialists to manage the data exchange with the acquired organization. Initially, the integration between AISs was based on data exchanged via files, and technical requirements had to be formalized so that they could be implemented (in-house or via external suppliers). The controller then worked to collect data to populate reports that progressively showed more and more information about the acquired organization according to the acquirer's standards. At the same time, AIS specialists were required to integrate the data exchange between AISs.

The AIS specialists analyzed the systems to determine whether to handle technical modifications of the MAS internally or through external consultants. Very detailed decisions were made at this stage, such as deciding which individual fields would be passed into the company data sets. This level of detail required access to the AIS, which was impossible during the preliminary analyses in the pre-deal phase. The time-consuming programming activity needed to implement such decisions would be carried out during full integration.

The constant demand for additional *ad hoc* reporting and analysis became part of the relationship between the controller and IT. The IT played a crucial role in corporate integration (Steigenberger, 2017) and consequently had a major impact on the MAS structure under development. This was because IT had to facilitate the integration process by translating the strategy behind the M&A into concrete organizational repercussions that would allow the two organizations to become one. In other words, during early integration, IT was gathering information that would allow it to guide the decision-making process underlying full integration.

> Integrating our company into a larger and more complex company was challenging. Beta's reporting is deep and articulate, and at the beginning I had to track all the pieces of information that were already present and those that were missing to meet internal standards. (Integration Team – US Controller at Beta Company)

The change agents discussed thus far (i.e. the controller, AIS specialists and IT) served as the collectors and analyzers of data, but the individual business units ultimately produced that information. Indeed, the various business units and staff units played a crucial role in providing all the data, financial and otherwise, that underlined the other agents' analyses. Therefore, during the early integration phase, business unit managers were asked to provide both data and information on how such data were structured within the individual company data sets. In this preparatory phase, a constant dialogue between the controller, heads of responsibility centers and the business units emerged as a central factor in developing the MAS.

Full integration was characterized by the long duration and depth of organizational change. This is the phase in which the change agents actually integrated the two, previously distinct MASs into one single MAS. The MAC was thus deep, with modifications ranging from basic setup (e.g. the addition of calculation bases) to data presentation. It was therefore necessary to make all the appropriate changes at the operational level to ensure the efficiency of the AIS and the timeliness of the reporting.

Specifically, controllers had the final responsibility for implementing the changes defined and shared with top management. As such, they were constantly involved in validating and coordinating the various MAS changes, both at the technical and organizational levels, and they also played an important role in suggesting continuous improvements to such changes. Furthermore, as argued by Jordao *et al.* (2014), our findings confirm that controllers played a key role in shaping the post-deal control culture by reviewing processes, systematizing activities and managing information flow and communication. Their continuous cooperation with the IT and business unit managers to co-design the MAC required long-term improvement work throughout the full integration period.

> It was like being an orchestra director, who anyway also has to get his hands dirty and make sure that things really work. The integration project was very large and I spent more time coordinating than doing analyses, it was almost a pleasure to do the analyses when I found the time. (General Controller of Alpha Hospital)

In this phase, AIS specialists implemented all previously prepared plans, revised in line with budgets and timeframes agreed with top management and the IT. More specifically, they contributed to the implementation of the MAS technical changes by detailing the modification of the AIS needed to guarantee the collection and provision of the needed accounting information. The MAS became unique within the companies, apart from some software systems that were kept separate yet interconnected with real-time data exchange. Indeed, the flexibility of the IT solutions allowed the firms to maintain software freedom of choice – an important factor in avoiding the conflicts that could have emerged in the case of software changes imposed by the acquirer.

The IT and business unit managers worked together with the controller to create or adapt reports according to their information needs. On the one hand, the IT was responsible for achieving the M&A objectives within the planned timeframe; to this end, the IT mainly concentrated on M&A-related KPIs. On the other hand, the business unit managers needed to constantly control all the performance dimensions of their units and therefore required an increasingly comprehensive framework of indicators.

> Keeping a constantly high attention level towards the integration goals was challenging. Already after one year the attention started to wane. As IT we tried as much as possible to bring everyone to think as if we were one single hospital on two sites. (Integration Team - Medical side at Alpha Hospital)

Table 3. Roles of the change agents across the different phases of the MAC process

Phases/Agents	Controller	AIS specialists	Integration team	Head of responsibility center/business unit
Pre-deal	Assessor/analyzer	Assessor/analyzer	–	–
Early integration	Integration planner + data bridge	Data integrator	Information requirer	Information provider
Full integration	Change director	Executor	Co-designer	Co-designer

Source: Authors' own creation

In sum, our empirical evidence highlights that the four change agents played different roles in different stages of the MAC process, as summarized in Table 3.

5. Conclusion

M&As are frequent occurrences that mobilize relevant monetary volumes, yet their failure rate remains notably high. Thus, both scholars and practitioners have questioned how to maximize the process of value creation. Post-deal integration remains central to this debate, as it establishes the strategic goals that motivated the M&A in the first place. While scholars argue that MASs may play a facilitating and performance-enhancing role in post-deal integration, there is insufficient research on the topic, particularly on how MASs change from a technical viewpoint. Yet, the MAC process is crucial for understanding company dynamics – and specifically, how practices and relationships can create the necessary context to facilitate post-deal integration. The current study sought to deepen our understanding of the technical dimension of MAC, as well as the roles of the main change agents shaping the MAC process, through a qualitative case study analysis of two companies that successfully completed an M&A.

In the two cases we analyzed, different change agents (namely, the controller, AIS specialists, business unit managers and the IT) created a complex development context where the respective MAC led to two successful outcomes. The fact that the companies operated in different sectors and under different legal frameworks helps to establish the common factors that enabled a successful MAC process, notwithstanding the notable complexity and possibly heightened tensions characterizing the two investigated cases (i.e. an M&A involving two professional organizations, in the Alpha case and a cross-border acquisition where the acquired company is American and the acquirer is Italian, in the Beta case).

This study makes three theoretical contributions: First, we propose a refined model for MAC from a technical perspective that reorganizes the types of change identified in Sulaiman and Mitchell's (2005) framework and adds a new sub-category of change (i.e. content changes). In so doing, we suggest that MAC in M&As constitutes a widespread change that goes beyond the modifications outlined in the extant literature. Second, we identify two sub-phases for the post-deal integration period – early and full – that capture distinct MAC characteristics (i.e. rapid but superficial changes in early integration, as opposed to slower but deeper changes in full integration). We argue that this gradual, two-phase approach to managing MAC may serve to make integration easier, especially in complex and contested contexts where conflicts and tensions could sharply obstruct (if not totally block) the process itself. Third, we highlight the various roles played by the main change agents shaping the MAC process, including the important role of the IT. The IT has been studied within the strategy literature (Steigenberger, 2017) but has been surprisingly neglected within the management accounting literature. As it is responsible for achieving the core strategic objectives of the M&A, the IT significantly influences the MAC process to ensure that all components of the post-deal MAS align closely with the M&A strategy.

In terms of managerial implications, our results provide nuanced insights related to the complexities and possible obstacles to post-deal integration and related MAC, as well as possible ways to overcome them. More specifically, our results suggest actionable approaches to foster MAC acceptability from both a technical and a processual viewpoint. On the technical side of MAC, our results suggest that firms should avoid the most disruptive changes (such as reductions) and allow some degree of freedom in certain areas (such as software selection) to reduce the acquired company's resistance to MAC. An emphasis on technical compatibility ensures that new solutions are not only effective but also realistically

integrable within the existing context, thereby facilitating a smoother transition. From the processual viewpoint, our findings strongly support the importance of evolutionary and participatory approaches (such as co-design) for mitigating tensions and enhancing the accessibility of the MAC process. Actively involving stakeholders in the decision-making process fosters a sense of ownership and an acceptance of new practices, allowing organizational members to adapt gradually and lowering their resistance. In this respect, it is essential that controllers are involved from the outset of the M&A process to align financial oversight with strategic goals. Firms should also treat the IT as central to achieving M&A objectives, empowering IT professionals to coordinate effectively with controllers, AIS specialists and business unit managers. Thus, executives should carefully select IT professionals, granting them autonomy and clearly communicating the expected synergies of the M&A. Additionally, addressing middle managers' needs should be a priority, as their input is valuable when delineating the post-deal MAS. Overall, defining the integration plan early, appointing IT leaders, conducting thorough preliminary analyses, integrating AISs and establishing a clear data strategy are essential for a smooth transition and successful MAC.

Naturally, this study has limitations. While our choice of two successful cases helped to expose some common threads, we cannot generalize from them. Future studies should adopt a quantitative methodology to validate our refined MAC model. Additionally, both cases were horizontal M&As; thus, there is room to study vertical acquisition cases. Longitudinal case studies or ethnographies could also widen and deepen our knowledge about MAC in M&As. A final weakness of this study involves the potential limitations or biases associated with retrospective data collection, such as reliance on participants' recollection accuracy, which should be considered when interpreting the findings.

Notes

1. In this study, the term "controller" is generically used to indicate both the individual in charge of the management control function and all of his/her eventual collaborators, both within the acquiring and the acquired company.
2. Diagnosis-related groups are a patient classification system that categorizes hospital care into clinically and economically homogeneous groups. Developed by Robert Fetter and colleagues (Fetter *et al.*, 1980), this system is designed to standardize hospital payments based on a combination of diagnoses, treatments and patient characteristics.

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Appendix 1

Research protocol

(1) Presentation of the research

(2) Authorization for the recording of the interview and use for scientific purposes

(3) Presentation of the interviewed (background, organizational position)

(4) General reflection on the M&A from the interviewed point of view

(5) Role and activities of management accounting systems unit during M&A

- Activities in pre-M&A, during the M&A, post-M&A
- Did the MAS change during the M&A?
- If yes, how and why has it changed?

(6) Management accounting systems during M&A

- How did the MAS change during the M&A with reference to the different parts of the systems?
- Using the following categories, do you have an example of MAS changes? (provide examples of tools and techniques to facilitate the interview)

  i. addition

  ii. replacement

  iii. information representation

  iv. information frequency

  v. operational modification

  vi reduction

(7) Relation between internal actors and MAS during M&A during different phases (pre, during, post)

- The IT
- business units
- information systems/AISs

(8) How did the internal needs and requirements affect MAS?

(9) Describe facts and moments when the MAS and controller were facilitating or complicating the integration of the two companies.

(10) Describe the relationship between the acquired and acquired; did MAS play a role in this relationship?

(11) How does the controller manage the integration between the MAS units?

- Did the controller impose the acquirer's MAS or consider the acquired MAS (both tools and practices)?
- Were the acquired best practices imported into the post-M&A MAS?
- What were the strengths and weaknesses of the two MASs?

(12) Could you describe the most important tensions and resistance to integration during the M&A?
- And inside the controller units?

(13) If you could restart the M&A, according to the perspective of the controller, what actions would you like to take to improve the integration?

(14) Could you describe the best part of the integration and the best results from MAS point of view?

(15) Final part:
- Ask for data, procedures, documents cited during the interview
- In case of a follow-up, choose the date
- Ask for new people to interview

Appendix 2

Table A1. Interviews – summary table

	Company	Date	Role	Minutes
1	Alpha	18/01/2021	General controller	30
2	Alpha	15/02/2021	General controller	32
3	Alpha	15/03/2021	General controller	32
4	Alpha	12/04/2021	General controller	35
5	Alpha	10/05/2021	AIS specialist	32
6	Alpha	07/06/2021	Data specialist	31
7	Alpha	05/07/2021	General controller	40
8	Alpha	06/09/2021	Integration Team – Medical side	45
9	Alpha	04/10/2021	General controller	40
10	Alpha	03/11/2021	AIS specialist	40
11	Beta	07/04/2021	Industrial controller	32
12	Beta	28/04/2021	Industrial controller	33
13	Beta	19/05/2021	Head of controller	32
14	Beta	09/06/2021	Head of controller	35
15	Beta	30/06/2021	Head of controller	35
16	Beta	21/07/2021	AIS specialist	35
17	Beta	01/09/2021	AIS specialist	38
18	Beta	22/09/2021	Financial controller	32
19	Beta	13/10/2021	Industrial controller	36
20	Beta	21/04/2022	Integration team – US controller	32

Source: Authors' own creation

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