Cogent Business & Management

ISSN: (Print) (Online) Journal homepage: www.tandfonline.com/journals/oabm20

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To cite this article: Paulo Morais Francisco (2024) A survey of corporate finance practices in micro-enterprises: an exploratory analysis conditional on firm and manager characteristics, Cogent Business & Management, 11:1, 2429791, DOI: 10.1080/23311975.2024.2429791

To link to this article: https://doi.org/10.1080/23311975.2024.2429791

Published online: 21 Nov 2024.

COGENT BUSINESS & MANAGEMENT
2024, VOL. 11, NO. 1, 2429791
https://doi.org/10.1080/23311975.2024.2429791

ENTREPRENEURSHIP & INNOVATION | RESEARCH ARTICLE

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A survey of corporate finance practices in micro-enterprises: an exploratory analysis conditional on firm and manager characteristics

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ABSTRACT

This study outlines the findings from a survey of 208 micro-enterprises (MEs) in Portugal, focusing on their corporate finance practices, including working capital management (WCM), financing and investment decisions, the adoption of accounting information systems (AIS) and the use of financial data. Both an unconditional exploratory study and a study conditional on the characteristics of the ME and its manager are conducted. The unconditional results reveal direct CEO involvement in cash management and accounts receivable in MEs. While these companies use AIS for financial reporting, the use of financial ratios is uncommon. Additionally, these MEs do not frequently calculate the cost of capital and primarily rely on the payback rule as an investment decision criterion. With respect to the conditional analysis, the results indicate that factors such as size and managers' education, especially in finance, significantly influence the sophistication of corporate finance functions. Moreover, management diversity emerges as a key driver across various financial functions, and family businesses demonstrate heightened concern for these financial aspects. The study concludes by recommending the promotion of financial education for ME managers to enhance their financial management practices. Particularly, it advocates for targeted financial literacy policies and training and the adoption of advanced financial tools to support the growth and sustainability of MEs.

ARTICLE HISTORY
Received 25 June 2024
Revised 7 November 2024
Accepted 9 November 2024

KEYWORDS
Micro-enterprises; corporate finance; investment analysis; financial analysis; accounting systems

SUBJECTS
Finance; Business; Management and Accounting; Corporate Finance; Accounting; Entrepreneurship and Small Business Management

JEL CLASSIFICATION
G31; G32; M21; M41

1. Introduction

Corporate finance principles are crucial for businesses of all sizes, from large corporations to micro-enterprises (MEs). These principles encompass managing a business's financial operations, including budgeting, financial planning, capital investments, financing strategies, and risk management (Brealey et al., 2022). Despite the differences in scale and complexity, the fundamental tenets of financial management are universally applicable. In MEs, this might translate into managing more modest budgets, optimising cash flow, and making prudent financial decisions with limited resources. However, MEs face unique challenges, such as cost constraints that hinder access to professional financial advice, critical for navigating their small-scale financials effectively.

In Portugal, MEs constitute a significant majority of non-financial companies and play a vital role in the entrepreneurial landscape (Pordata, 2019). Despite their critical importance, MEs confront substantial challenges, including lower survival rates, attributed to the underdeveloped financial market and prevalent suboptimal management practices (Banco de Portugal, 2011; Farinha & Félix, 2015, Francisco, 2023). These obstacles not only limit their growth potential but also restrict access to essential funding and resources, impacting their competitiveness in domestic and international markets (Serrasqueiro et al., 2021). Given these conditions, the Portuguese MEs sector, characterized by higher market challenges and constrained financial market access (Alves et al., 2016; Francisco, 2023), presents a compelling case for investigating effective financial management strategies to bolster survival and growth.

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Although financial management principles are theoretically applicable to all businesses, MEs often struggle to implement these principles due to their small size, limited resources, low financial literacy and a lack of individuals skilled in financial management. Consequently, MEs frequently encounter challenges in managing their finances effectively, negatively impacting their performance and sustainability. While previous studies (e.g. Anand, 2002; Brounen et al., 2004; Graham & Harvey, 2001) have examined the financial roles of firms in general, there is a notable gap in research specifically addressing the financial management practices of MEs. Given that firm size significantly influences financial management practices (López & Hiebl, 2015), this study aims to fill this gap by providing a comprehensive understanding of financial practices within this specific business category.

This article contributes to the literature on financial management in MEs in several ways. First, it addresses the gap between financial theory and practice by surveying financial managers in MEs to evaluate how well academic theories correspond to their real-world decision-making processes. Second, it enhances our understanding of financial operations by identifying the specific challenges that managers in MEs face within their unique corporate context. Third, it offers new insights into decision-making in environments with limited financial market development and prevalent financial illiteracy, providing a fresh perspective on the execution of financial management tasks under these conditions.

The survey unveils compelling insights into financial management within MEs. Notably, CEOs frequently engage in cash management and prioritise accounts receivable. Despite the utilisation of accounting information systems (AIS) for financial reporting, the adoption of financial ratios for decision-making remains limited. Moreover, the practice of evaluating the cost of capital is rare, with a preference for the payback rule in investment decisions.

Further analysis reveals that firm size, as measured by asset value, and the financial education of managers significantly enhance the sophistication of corporate finance functions. Firms led by financially educated managers are more likely to conduct investment evaluations and assess the cost of equity and debt. Additionally, in family businesses, management diversity plays a crucial role in financial operations. Access to external finance is notably easier for service sector MEs, whereas younger firms tend to rely on the CEO's personal experience for making investment decisions. The survey also identifies distinct financial management practices influenced by factors such as sales, leverage, profitability, tangibility, international exposure and workforce size.

The survey also underscores the crucial role of financial education in enhancing corporate finance functions within MEs, linking managerial finance knowledge directly to operational sophistication. It highlights the need for targeted financial literacy policies and training, especially given the infrequent use of financial ratios and reliance on the payback rule. The findings suggest diverse leadership, notably in family businesses, significantly affects financial decisions. Collectively, these insights call for a comprehensive strategy to improve financial decision-making in MEs.

The remainder of the article is organised as follows: In the next section, we make a brief review of the literature on MEs and financial management. Following that, we present the methodology in the subsequent section. The results are analysed in Section 4, and in Section 5, we present the conclusions and highlight the main limitations of the article.

2. Literature review

2.1. Micro-enterprises and financial management

MEs inherently face the 'liability of smallness', a concept that highlights the growth and competitiveness constraints smaller firms encounter due to their size (Fonseca et al., 2022). Aldrich and Auster (1986) identify the root of this liability in the scarcity of financial resources, support and managerial expertise. Small firms struggle with limited market control, cash flow instability, and difficulties accessing credit markets, compounded by information asymmetries, agency problems and elevated transaction costs (Ang, 1991; Becker-Blease et al., 2010; Berger & Udell, 2006; Gupta et al., 2014; Teittinen et al., 2013; Yang & Chen, 2009). Particularly in Portugal, MEs exhibit lower asset bases and smaller workforces than larger firms, intensifying their financial and human resource challenges (Banco de Portugal, 2020). These factors underline the critical need to examine how MEs manage their financial functions amidst such constraints.

Financial management, crucial for the effective control and planning of business funds, plays a pivotal role in small firms, particularly MEs, by adeptly managing their scarce resources. Its primary goal is to maximise the business owner's financial wealth, which hinges on optimising the amount, timing, and risk associated with cash flows (Brealey et al., 2022; McMahon & Stanger, 1995; Meredith & Mantel, 2015). In the context of MEs, where financial resources are notably limited, the principles of financial management become essential for sustaining operations and facilitating growth, underscoring the importance of strategic investment, financing decisions and managing operational cash flow with precision.

Despite its importance, there exists a notable gap in the literature regarding the adaptation of modern corporate finance theory to the unique context of MEs. These entities face distinctive challenges such as financial and human resource limitations, difficulties accessing credit markets and issues with information asymmetry, distinguishing their financial management needs from those of larger firms (Abdulsaleh & Worthington, 2013; Aldrich & Auster, 1986; Ang, 1991; Berger & Udell, 2006). Such constraints underscore the critical role of financial management in preventing business failure and ensuring MEs' survival and growth (Hall & Young, 1991; Patel & Guedes, 2022).

Research into financial management practices has facilitated the identification of key activities crucial for MEs, including financial planning and analysis, the implementation of AIS, management accounting practices, financing decisions and capital budgeting (Armstrong, 2006; Kieu, 2001; McMahon et al., 1993). These categories are especially relevant to MEs as they navigate their specific operational challenges, suggesting a tailored approach to financial management that aligns with their limited resource environment and strategic objectives.

2.2. Working capital management

Working capital management (WCM) is essential for ensuring an optimal balance among accounts receivables, inventory and accounts payable. This balance is particularly crucial for MEs, where the impact on profitability and risk is profound due to their heavy reliance on short-term funds and narrower financial buffers (Richards & Laughlin, 1980; Smith, 1980; Vijayakumaran, 2019). WCM influences not only financial equilibrium but also directly affects profitability and is closely related to capital structure decisions, with MEs often leveraging short-term payables for financing (Deloof, 2003).

Regarding cash holdings, theories such as the Pecking Order Theory and the Trade-off Theory provide insights into firms' financing preferences and the strategic management of liquidity. The Pecking Order Theory suggests firms prioritise internal funds to maintain higher cash reserves and minimise external dependency (Myers & Majluf, 1984), whereas the Trade-off Theory advocates for an optimal liquidity level, weighing the costs against the benefits of cash holdings (Kraus & Litzenberger, 1973; Scott, 1977). These perspectives underscore the complexities of WCM in MEs, where inefficient management could result in short-term financial pressures despite potentially favourable long-term outcomes (Richards & Laughlin, 1980). Thus, exploring WCM practices in MEs is vital for understanding how these entities manage their limited financial resources against the backdrop of these theoretical frameworks.

2.3. Investment decisions

Capital budgeting, or fixed asset management, is pivotal in assessing a firm's capital investment opportunities to maximise value, involving long-term fund commitments crucial for enhancing a firm's strategic market position (Al-Mutairi et al., 2018; Fabozzi & Peterson, 2009). This process is especially critical for MEs, where information asymmetry can lead to suboptimal investment choices, impacting financial success (Ang, 1991). The evaluation and selection of investment projects require adept decision-making, with MEs often adopting varied appraisal techniques. Although the Payback Period is popular for its simplicity, some ME decision-makers also rely on intuitive judgments, leveraging their experiences and understanding of the business environment (Danielson & Scott, 2006; Ekanem & Smallbone, 2007; Harjoto & Paglia, 2012). Despite the appeal of intuition in certain contexts, empirical studies suggest CFOs in smaller firms frequently utilise more formal methods like the internal rate of return (IRR) and net present value (NPV) alongside the Payback Period, balancing traditional financial metrics with practical considerations (Graham & Harvey, 2001).

2.4. Financing decisions

The availability of financial resources plays a critical role in the development, sustainable growth and profitability of small firms, particularly MEs, which often grapple with capital base limitations that influence their financing decisions distinctively from larger corporations (Beck et al., 2008; Cassar & Holmes, 2003). While Modigliani and Miller (1963) argued that a firm's value is independent of its capital structure, the financial growth cycle paradigm proposed by Berger and Udell (1998) illustrates how MEs' financial needs and resources evolve, initially depending on internal funds due to informational opacity and gradually opening up to external financing as their business matures. This dynamic aligns with Myers' pecking order theory, which suggests a preference for internal over external financing, contrasting with the trade-off theory's ideal debt level balance. Empirical evidence often supports the pecking order theory, reflecting MEs' financing behaviour (Alves et al., 2015; Matias & Serrasqueiro, 2017; Sánchez-Vidal & Martín-Ugedo, 2005), underscoring the theory's relevance in explaining the financing strategies of MEs amidst their unique challenges.

2.5. Accounting information systems

An AIS, a critical subsystem of the broader information system, plays a vital role in collecting, processing and reporting financial information to aid decision-making (Gelinas et al., 2010). It is essential for effective organisational decision-making and control, with computer-based systems enhancing automation and reporting efficiency (Hall, 2011; Romney & Steinbart, 2012). Technological advancements have not only expanded AIS capabilities from operational to strategic roles but have also significantly impacted firm performance, profitability and efficiency (Ismail & King, 2005; Naranjo-Gil, 2004). For MEs, which often contend with limited financial awareness and resources, AIS provides a robust tool for adapting to environmental changes by offering organised information, reliable forecasts and improved communication (Grande et al., 2011; Marriot & Marriot, 2000). The integration of AIS can thus directly address the distinct challenges MEs face, significantly reducing their vulnerability to uncertainties and enhancing their operational agility.

2.6. Financial reporting and analysis

To ensure consistency, reliability and transparency in financial reporting, firms are required to adhere to accounting standardisation systems, such as the International Financial Reporting Standards (IFRSs). MEs, characterised by their specific criteria, benefit from lighter disclosure requirements, reflecting their limited size and revenues. For example, in Portugal, MEs follow the simplified accounting normalisation for MEs, which tailors' measurement criteria to their scale. Despite these minimal obligations, reliance solely on bookkeeping is insufficient for informed managerial decisions. Financial analysis, through financial ratios, becomes essential for evaluating performance, highlighting achievements and weaknesses, and setting strategic directions (Brealey et al., 2022). However, research indicates a significant underutilisation of financial reports for decision-making in MEs, often viewed primarily for legal and fiscal compliance (Dang et al., 2006; Marcos et al., 2001). Despite 81% of small firms producing financial reports, only 11% effectively incorporate this data into their strategic planning (Zada et al., 2021). This gap suggests a need for MEs to adopt more comprehensive reporting practices, potentially enhancing their engagement with financial analysis and leveraging it for value creation and strategic guidance. Addressing this underutilisation could involve education on the strategic value of financial information and developing tailored analytical tools that align with MEs' specific needs.

2.7. Firm specific characteristics and financial management practices

This section reviews the literature on how size, leverage, profitability, sector, family business status, employee count, asset tangibility, export status, company age, manager's educational background in finance and women's presence in management roles affect financial management practices.

2.8. Size

Firm size is a significant determinant of financial management practices. Larger firms generally have more resources and access to sophisticated financial tools and techniques. They tend to engage in more complex financial planning and analysis (Graham & Harvey, 2001). Larger firms are also more likely to perform detailed cash flow forecasts, engage in formal capital budgeting processes, and use advanced financial metrics like net present value (NPV) and internal rate of return (IRR) for investment decisions (López & Hiebl, 2015).

2.9. Leverage

Leverage, measured by the debt-to-equity ratio, influences a firm's financial decisions and risk management practices. High leverage often requires firms to adopt stringent financial controls to ensure they can meet their debt obligations. This includes meticulous cash management and careful monitoring of financial ratios. Firms with high leverage are more likely to engage in cost-cutting measures and optimise their working capital to maintain liquidity (Myers & Majluf, 1984).

2.10. Profitability

Profitability metrics such as return on equity (ROE) and return on assets (ROA) are closely linked to financial management practices. More profitable firms have more internal funds available, reducing their reliance on external financing. This financial flexibility allows them to invest in advanced financial management systems and practices (Deloof, 2003). High profitability often correlates with better financial planning, investment in high-yield projects, and efficient capital allocation (Chen, 2004).

2.11. Sector

The industry or sector in which a firm operates can significantly influence its financial management practices. For instance, manufacturing firms might focus more on inventory management and cost of goods sold, whereas service firms might prioritise cash flow management and receivables (Smith, 1980). Sector-specific regulations and market conditions also play a role in shaping financial strategies and risk management practices (Becker-Blease et al., 2010).

2.12. Family business status

Family-owned businesses often exhibit unique financial management practices compared to non-family firms. They may prioritise long-term stability over short-term gains, leading to more conservative financial strategies. Family firms might also have different approaches to financing, preferring internal funding and avoiding high leverage to maintain family control (Anderson & Reeb, 2003). Additionally, the involvement of family members in management can influence investment decisions and risk-taking behaviours (Gallo et al., 2004).

2.13. Employee count

The number of employees in a firm can impact its financial management practices. Smaller firms with fewer employees may lack specialised financial expertise, leading to simpler financial management practices. Conversely, larger firms with more employees often have dedicated finance departments that engage in more sophisticated financial planning, analysis, and control (McMahon et al., 1993). Employee count can also affect payroll management and human resource-related financial planning (De Kok et al., 2006).

2.14. Asset tangibility

Asset tangibility refers to the proportion of a firm's assets that are physical and tangible, such as machinery and buildings. Firms with high asset tangibility often have more collateral to secure loans, which can influence their financing decisions. These firms may also focus more on managing and maintaining their tangible assets, affecting capital expenditure and depreciation management (Titman & Wessels, 1988). High tangibility can lead to more stable cash flows, allowing for better financial planning and investment strategies (Almeida & Campello, 2007).

2.15. Export status

Firms engaged in exporting face unique financial management challenges, such as foreign exchange risk and differing international regulations. Exporting firms need to implement robust risk management practices, including hedging strategies and diversification of currency exposure (Shapiro, 2006). Additionally, these firms may require more sophisticated financial planning to manage international transactions and credit risk associated with foreign customers (Cavusgil et al., 2014).

2.16. Company age

The age of a firm can influence its financial management practices. Younger firms may focus more on growth and reinvestment of profits, leading to aggressive financial strategies. In contrast, older firms might prioritise stability and efficiency, adopting more conservative financial practices (Ilaboya & Ohiokha, 2016). Firm age can also affect access to financing, with older firms typically having better credit histories and relationships with financial institutions (Berger & Udell, 1998).

2.17. Manager's educational background in finance

The educational background of a firm's managers, particularly in finance, plays a crucial role in shaping financial management practices. Managers with finance education are more likely to implement advanced financial techniques and tools, engage in detailed financial analysis and make informed investment decisions (Brounen et al., 2004). Their knowledge can enhance the firm's overall financial literacy, leading to better financial planning and risk management (Ismail & King, 2005).

2.18. Women's presence in management roles

The presence of women in management roles has been associated with different financial management practices. Studies suggest that gender diversity in management can lead to more cautious and risk-averse financial strategies, potentially enhancing financial stability (Palvia et al., 2015). Women managers may also bring diverse perspectives to financial decision-making, contributing to more balanced and comprehensive financial planning and analysis (Terjesen et al., 2016).

Within this theoretical framework, this research seeks to determine whether financial management practices vary among MEs in Portugal and to identify which specific characteristics influence these practices. The hypothesis posits that MEs in Portugal have unique financial management practices that are shaped by particular attributes of the firms, such as their size, industry and age. This study aims to explore these differences and understand how these characteristics impact the way MEs manage their finances.

3. Methodology

In this study, we adopted an 'exploratory study' approach similar to the methodologies employed by Graham and Harvey (2001), Anand (2002) and Brounen et al. (2004). The primary goal of our research is to investigate and explore the distinct aspects of financial practices among MEs in Portugal. Given

the relatively underexplored nature of this subject, we chose an exploratory design to gain comprehensive insights into the financial management practices, including WCM, financing and investment decisions, as well as the adoption of AIS and the use of financial data. In this approach, we aim to provide a descriptive overview of the most and least relevant aspects of financial management practices in these smaller companies. Our intention is to highlight key areas of focus and identify common practices among MEs. Additionally, considering the hypothesis that specific characteristics of these companies may influence their application of financial management techniques, we conduct a conditional exploratory analysis. This analysis examines how various attributes, such as company size, industry and age, affect their financial management practices, offering deeper insights into the unique challenges and strategies of MEs.

To achieve this, we developed a structured questionnaire targeting managers within these enterprises. The questionnaire was inspired on the survey of Graham and Harvey (2001) and Brounen et al. (2004) and adapted to address the specific nature of Portuguese MEs. It sought insights into five critical aspects of financial management: WCM, financing decisions, investing decisions, AIS and financial reporting and analysis. We assessed the frequency of engagement in practices related to these dimensions on a five-point scale, ranging from 1 ('never') to 5 ('very frequently').

Specifically, the questionnaire inquired on:

- WCM, assessing how firms manage cash, receivables and inventory through 16 questions across three subtopics: cash management, accounts receivables management and inventory management.
- Financing decisions, exploring activities such as analysing the cost of equity and debt and comparing credit proposals.
- Investing decisions, evaluating the application of quantitative techniques for capital project evaluation and budgeting processes.
- AIS practices, examining the frequency of AIS utilisation for producing and analysing financial information and its role in decision-making.
- Financial reporting and analysis, focusing on the preparation of financial statements, budget comparisons, ratio analysis and KPI definition.

In this study, we asked ME managers about how they performed their corporate finance tasks, focusing on the frequency of specific financial management activities. Each specific question is described and analysed in detail in the following results section. The survey did not involve any collection of sensitive personal data, nor did it include questions that could raise significant ethical concerns. The participants in this study were not from vulnerable groups, such as children, young people, individuals with learning disabilities or cognitive impairments or individuals in dependent or unequal relationships. The study's target population consisted exclusively of ME managers, and the questions pertained solely to their professional behaviours in a purely observational manner, which was non-invasive and non-interactive. We did not collect any personal data that could place the participants at risk of harm, stigma or prosecution. The nature of the information gathered, such as details about financial management tasks, is often publicly available through annual reports. Moreover, the study adhered to generally accepted ethical standards, including obtaining prior informed consent from all participants and ensuring the confidentiality of the information provided. All data collected were anonymised and kept confidential, being used solely for academic purposes, and not repurposed after the study's completion. Given that the research involved non-sensitive data and was conducted in a manner ensuring complete anonymity, it was determined that seeking approval from an ethics committee was not necessary. The ethical integrity of the study was maintained throughout, ensuring that all procedures followed were in line with established ethical guidelines.

Additionally, the survey was distributed to participants using the Qualtrics web survey platform. Before beginning the questionnaire, respondents were asked to read and accept the terms, specifically that the data collected would be anonymous and confidential, used exclusively for academic purposes, and not for any other purpose after the study's completion. This process ensured that written consent was obtained and that participants were aware of the confidentiality and anonymity of their responses, thereby minimising any ethical concerns.

The survey was conducted online *via* email using Qualtrics, chosen for its ease of distribution, cost-effectiveness and suitability for remote contact – a significant advantage during the COVID-19 pandemic. Despite potential risks of low response rates due to email communication (Hoonakker & Carayon, 2009), we targeted Portuguese MEs defined as companies with 10 or fewer employees (Pordata, 2019). To ensure the clarity of the questionnaire before its final distribution, we conducted preliminary testing with management professionals. We distributed the questionnaire to all Portuguese MEs that met the criteria of having 10 or fewer employees and an email address listed in the Informa D&B database. A total of 3194 emails were sent, followed by three reminders to non-respondents. This database represents just a fraction of the entire population of Portuguese MEs, which is estimated to be around 1.2 million (Pordata, 2019). While the database covers a significant portion of these MEs, it only includes email addresses for 3194 companies, which served as the basis for our study.

We received 212 completed questionnaires between 6 December and 25 December 2021, but excluded 4 due to incomplete data, resulting in 208 usable responses – a 6.5% response rate. Additional company information was gathered from the IES (Informação Empresarial Simplificada) form *via* the INFORMA D&B database. The Cronbach's alpha coefficients of the several questions ranges between 0.86 and 0.9, suggesting that the questions have good internal consistency within each set of questions (DeVellis, 1991).

4. Results

Analysing the survey results, we can see that the respondent profile was predominantly male (61.5%), aged between 41 and 60 years (60.6%), with a high level of education (75.4% holding undergraduate degrees or higher) and a background in finance (77.4%). CEOs provided half of the responses, with the remainder coming from other company officers. Most respondents (55.3%) had been with their firm for over 10 years. The surveyed MEs averaged 25 years in operation (median of 20 years), with most (59.0%) employing up to 2 people. Family-owned businesses represented 11.1% of the sample, which covered 35 different sectors.

The literature highlights key company and manager characteristics as crucial to performance and financial management practices, including size, leverage, profitability (ROE and ROA), sector, family business status, employee count, asset tangibility, export status, company age, manager's educational background in finance and women's presence in management roles (e.g., Brounen et al., 2004; Graham & Harvey, 2001). Our analysis will categorise survey responses based on these characteristics to assess their impact on financial management practices among Portuguese MEs. Following Graham and Harvey (2001), we will conduct both unconditional and conditional analyses. For example, to examine how size influences financial management practices, we will use the median values of assets and sales to compare responses from larger and smaller MEs. Specifically, with a sample of 208 MEs, we will split the data in half: the 104 MEs with the lowest asset values will be categorised as smaller MEs, while the 104 with the highest asset values will be classified as larger MEs. A similar approach is applied to sales, dividing the sample into two groups based on sales values-the first 104 with lower sales values and the remaining 104 with higher sales values. This balanced division into smaller and larger MEs, by both assets and sales, will enable a detailed investigation into the effects of size on the financial practices of Portuguese MEs. Tables 1 and 2 present these characteristics in detail, offering descriptive statistics and a correlation matrix. All statistical analyses were performed using Stata version 16 software (StataCorp, College Station, TX).

Summary statistics for the firm-specific characteristics, covering financial years 2019 to 2022, reveal that the average sales value amounted to €543,805, while the mean book value of assets stood at €10,600,000 (median of around €1 million). The average debt-to-total assets ratio was 0.570, indicating relatively high financial leverage for the considered firms. Additionally, the mean ROE was 0.013, and the mean ROA was −0.012, both relatively low—typical for MEs with fewer than 10 employees, where lower values for size and profitability are common. Descriptive statistics for categorical variables show that 85.1% of the firms are in the services sector, and 11.1% are family-managed. The average number of employees was 3.47, and the average tangible assets ratio was 0.249. Furthermore, 28.8% of the firms engaged in international trade, and the average firm age was 19.3 years. Concerning managerial characteristics, 65.4% of respondents possessed more than 3 years of university education, and 77.4% had a

Table 1. Description and summary statistics of the control variables.

	Variable	Description and source	N	Mean	S.D	p25	p50	p75
(1)	Sales	Average sales value in euros during financial years 2019–2022. Source: E-informa D&B.	208	543 805	904 858	69 036	228 636	682 584
(2)	Assets	Average book value of assets in euros during financial years 2019–2022. Source: E-informa D&B.	208	10 600 000	47 700 000	422 726	1 007 369	4 076 152
(3)	Leverage	Average debt-to-total-assets ratio during financial years 2019–2022. Source: E-informa D&B.	208	0.570	0.737	0.207	0.493	0.778
(4)	ROE	Average ratio of net income to book value of equity during financial years 2019–2022. Source: E-informa D&B.	208	0.013	0.464	−0.048	0.027	0.121
(5)	ROA	Average ratio of EBTIDA to book value of assets during financial years 2019–2022. Source: E-informa D&B.	208	−0.012	0.291	−0.016	0.018	0.068
(6)	Services sector	Dummy variable that takes the value of 1 if the firm belongs to the services sector and 0 otherwise.	208	0.851	0.357	1.000	1.000	1.000
(7)	Family	Dummy variable that equals the value of 1 if the firm is family-managed and 0 otherwise.	208	0.111	0.314	0.000	0.000	0.000
(8)	Employees	Average number of employees during financial years 2019–2022. Source: E-informa D&B.	208	3.470	3.285	1.000	2.375	5.750
(9)	Tangibility	Average ratio of tangible assets to total assets during financial years 2019–2022. Source: E-informa D&B.	208	0.249	0.320	0.003	0.061	0.442
(10)	International	A dummy variable that takes the value of 1 if the firm exports to foreign countries and 0 otherwise. Source: E-informa D&B.	208	0.288	0.454	0.000	0.000	1.000
(11)	Firm age	The number of years since the firm's incorporation. Source: E-informa D&B.	208	19.361	14.948	9.000	15.000	24.000
(12)	Manager education	A dummy variable that takes the value of 1 if the respondent has more than three years of university education 0 otherwise. Survey responses.	208	0.654	0.477	0.000	1.000	1.000
(13)	Finance education	Dummy variable that equals 1 if the respondent has finance education, and 0 otherwise. Source: survey responses.	208	0.774	0.419	1.000	1.000	1.000
(14)	Women in management	Number of women in the firm's management team. Source: E-informa D&B.	208	0.543	0.760	0.000	0.000	1.000

Table 2. Pairwise correlation matrix of the control variables.

	Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1)	Sales	1.000	–	–	–	–	–	–	–	–	–	–	–	–	–
(2)	Assets	0.044	1.000	–	–	–	–	–	–	–	–	–	–	–	–
(3)	Leverage	0.007	−0.096	1.000			–	–	–	–	–	–	–	–	–
(4)	ROE	0.235*	0.025	0.042	1.000	–	–	–	–	–	–	–	–	–	–
(5)	ROA	0.126	0.050	−0.567*	0.177*	1.000	–	–	–	–	–	–	–	–	–
(6)	Services sector	−0.115	0.070	−0.006	−0.036	0.051	1.000	–	–	–	–	–	–	–	–
(7)	Family	−0.047	−0.008	−0.022	−0.122	−0.035	0.105	1.000		–	–	–	–	–	–
(8)	Employees	0.259*	−0.047	0.145*	0.014	−0.101	−0.232*	−0.053	1.000	–	–	–	–	–	–
(9)	Tangibility	−0.123	−0.101	−0.068	−0.048	0.009	0.107	0.043	−0.112	1.000			–	–	–
(10)	International	0.125	−0.010	0.115	0.019	−0.169*	−0.240*	−0.123	0.257*	−0.134	1.000		–	–	–
(11)	Firm age	0.025	0.032	−0.172*	0.028	0.123	−0.116	0.276*	0.120	0.085	−0.129	1.000	–	–	–
(12)	Manager education	0.125	0.107	0.041	0.074	−0.019	−0.021	−0.001	0.058	−0.014	0.040	0.079	1.000	–	–
(13)	Finance education	0.030	0.103	0.004	−0.039	−0.012	0.064	0.007	−0.039	−0.103	−0.113	0.052	0.284*	1.000	
(14)	Women in management	0.006	0.1761*	−0.074	−0.056	0.026	0.033	0.313*	0.012	−0.008	−0.176*	0.200*	0.028	−0.022	1.000

*Represent correlation coefficients significant at the 5% level.

finance education. Finally, the average representation of women in management roles was 54.3%, a relatively high figure (Terjesen et al., 2016).

Turning our attention to significant pairwise correlations (Table 2), noteworthy associations emerge among the examined variables. The positive correlation of 0.235 between ROE and Sales suggests that companies with higher sales tend to exhibit better returns on equity. Sales also display a positive correlation of 0.259 with employees, implying that firms with larger workforces experience higher sales figures. On the other hand, a substantial negative correlation of -0.567 is observed between ROA and Leverage, indicating that companies with higher leverage tend to have lower returns on assets. Additionally, the positive correlation of 0.276 between Family and Firm age suggests a relationship between family-owned businesses and the age of the firm. The positive correlation of 0.313 between Women in management and Family indicates a positive connection between gender diversity in leadership and family-owned businesses. Furthermore, the positive correlation of 0.257 between International and Employees indicates a connection between a firm's international presence and its employee count. Lastly, the positive correlation of 0.284 between Finance education and Manager education in general underscores a relationship between financial education and the educational background of managers within companies.

In the next subsection, we perform the unconditional exploratory analysis on the survey responses. We also perform univariate analyses on the survey responses conditional on each separate firm characteristic and discuss the results.

4.1. Unconditional survey results on financial management practices

In this section, the unconditional results of the survey on financial management practices are presented. Figures 1–3 display the outcomes concerning how financial managers carry out their WCM functions, specifically addressing cash management, trade accounts management and inventory management. Figure 4 illustrates how MEs perform financing decisions. Figure 5 covers investing decisions, Figure 6 details how these firms use AIS and Figure 7 outlines how they perform financial analysis activities.

4.1.1. Working capital management practices

Figure 1(A) presents the survey results on the frequency of various cash management activities within companies, with respondents' ratings on a scale of 0 (never) to 5 (very frequently). Notably, the CEO's engagement in cash management activities is rated high at 4.09, indicating significant involvement. Additionally, activities such as cross-referencing accounting records with cash records (average rating 3.96) and preparing cash balance forecasts (average rating 3.98) demonstrate a relatively high frequency. On the other hand, investing excess cash receives a lower average rating of 2.67, indicating a less frequent occurrence.

Figure 1(B) shows the percentage distribution of respondents' perspectives regarding the primary drivers of cash management activities. Notably, 56.3% attribute these decisions primarily to the CEO's personal experience, while 33.7% refer to theoretical knowledge, such as academic books and business school. These findings emphasise the predominant role of personal experience in shaping decisions related to cash management.

Regarding trade accounts management (Figure 2), the survey results unveil a noteworthy finding: the analysis of the accounts receivable value attains a high score of 4.19. This indicates that MEs managers exhibit meticulous care in handling customer credit. Although selling on credit is less frequent (with an average score of 3.29), managers closely monitor the value of accounts receivable.

The survey results for inventory management activities (Figure 3(A)) exhibit significantly lower scores compared to the preceding questions. Compliance with delivery schedules and deadlines receives a score of 3.74, indicating a relatively high emphasis on meeting timely delivery commitments. Similarly, the practice of planning orders to obtain quantity discounts is rated moderately high at 3.25, reflecting attention to cost efficiency through bulk purchasing. Conversely, the lowest score of 2.56 pertains to computing storage costs. This suggests that the calculation of storage expenses is less frequently performed or holds a lower priority in inventory management considerations. Inventory management

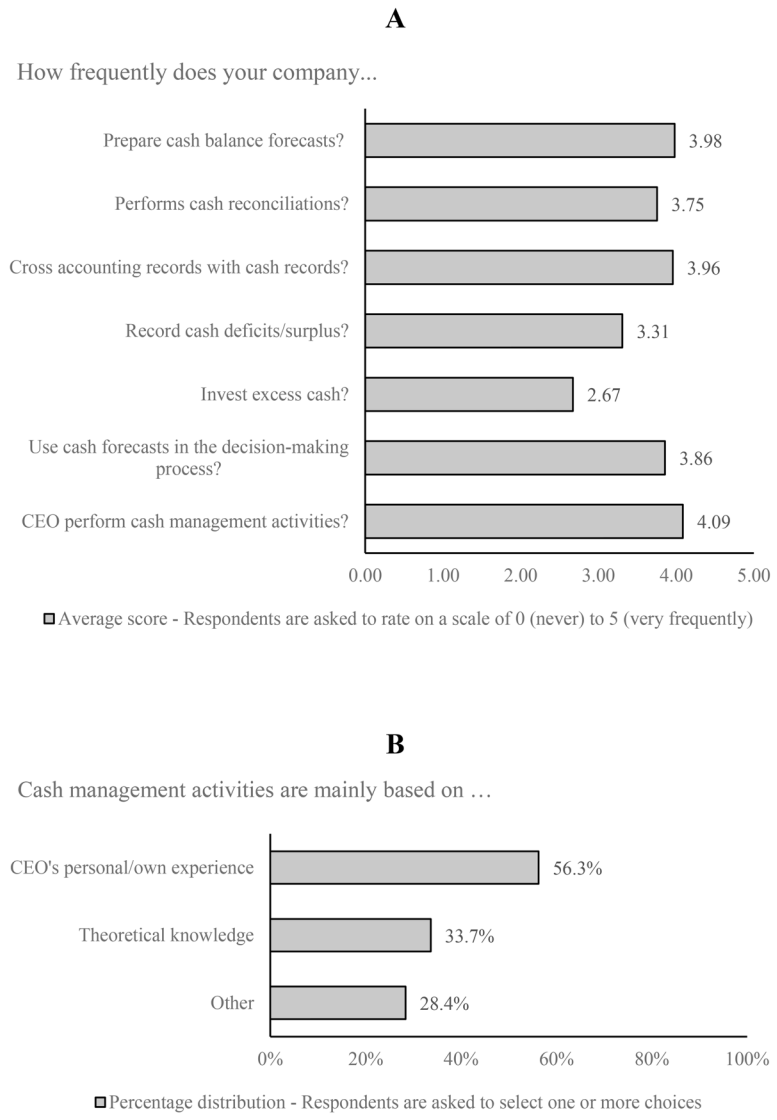

Figure 1. Survey results related to cash management practices.

activities are influenced by various factors, with no specific emphasis on either CEO-experience-based management or theory-based management, as depicted in Figure 3(B).

These initial three figures provide insight into how managers of Portuguese MEs perceive their WCM functions. Overall, it is evident that the primary focus lies in analysing and closely monitoring the accounts receivable account, followed by an examination of cash balances and cross-referencing cash accounting records. Additionally, the management of cash functions appears to be predominantly informed by the CEO's personal experience rather than relying on any theoretical framework.

4.1.2. Financing decisions practices

Turning attention to financing decision practices (Figure 4), the results reveal a very high score for CEO involvement in these decisions (score 4.39). The surveyed managers also emphasise the importance of analysing different loan proposals, earning the highest score (3.62) among all the financing activities questioned. However, the analysis of the cost of capital and the assessment of the impact of debt service on cash flows receive lower scores. Access to external finance does not seem straightforward for these companies, as reflected in the lower score of 3.43.

4.1.3. Investment decision practices

Concerning investment decision practices (Figure 5(A)), surveyed managers indicate a notably high score for CEO involvement in these decisions (score 4.41). The highest score is attributed to the activity of

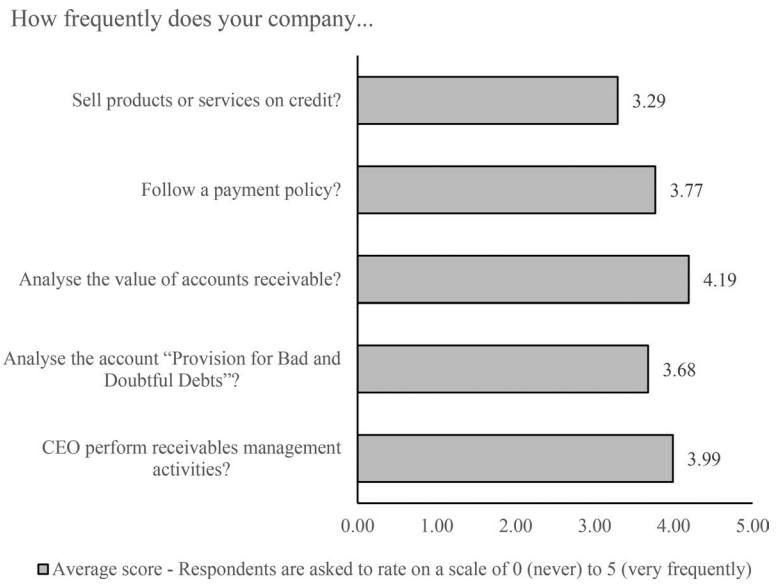

Figure 2. Survey results related to trade accounts management practices.

comparing actual cash flows to forecasted cash flows generated by investments (score 3.87). Subsequently, the duty of conducting investment evaluation studies and utilising cash-flow forecasts as inputs for investment project valuation models follows. These findings suggest that ME managers prioritise the actual cash flow generated by investments over the valuation method or the accuracy of *a priori* forecasted cash flows.

Given this score, it is unsurprising to note that investment decisions are primarily based on the CEO's own experience (Figure 5(B)), as 67.3% of surveyed managers admit to basing their investment decisions on personal experience. Another interesting result is related to the investment valuation technique used by these managers (Figure 5(C)). The majority of the surveyed managers (67.3%) indicate using the payback rule as an investment project valuation tool. In contrast, only 49% use the IRR, and just 47.1% use the NPV rule. These results corroborate the findings of Graham and Harvey (2001), indicating that small firms are more prone to using the payback criterion. Conversely, larger MEs predominantly utilise the IRR and NPV as their investment valuation techniques.

4.1.4. Accounting information systems (AIS) practices

Regarding AIS practices (Figure 6), the results indicate very high scores (4.12 and above) in all three questions. Therefore, we can confidently assert that ME managers frequently use AIS to produce financial reports, analyse them and employ the information in the decision-making process.

4.1.5. Financial statement analysis practices

Finally, in terms of financial statement analysis practices (Figure 7), surveyed managers demonstrate a high level of involvement in the activity of analysing financial statements (score 4.00). The surveyed companies produce financial statements quite frequently (score 3.94), analyse them (score 4.13), and use them in the decision-making process very often (score 3.92). However, the practice of financial ratios analysis, utilisation of key performance indicators (KPIs) and forecasting financial statements is not as frequent.

In summary, the survey highlights the substantial CEO involvement in cash management and meticulous attention to accounts receivable, emphasising hands-on leadership in MEs. The prevalence of personal experience in investment decisions and the widespread use of the payback rule underscore distinct decision-making patterns. While AIS are proficiently employed for financial reporting, the use of financial ratios is relatively infrequent suggesting that financial analysis practices are not based on this technique. In the next subsection, we explore these results conditional on a wide range of MEs specific variables.

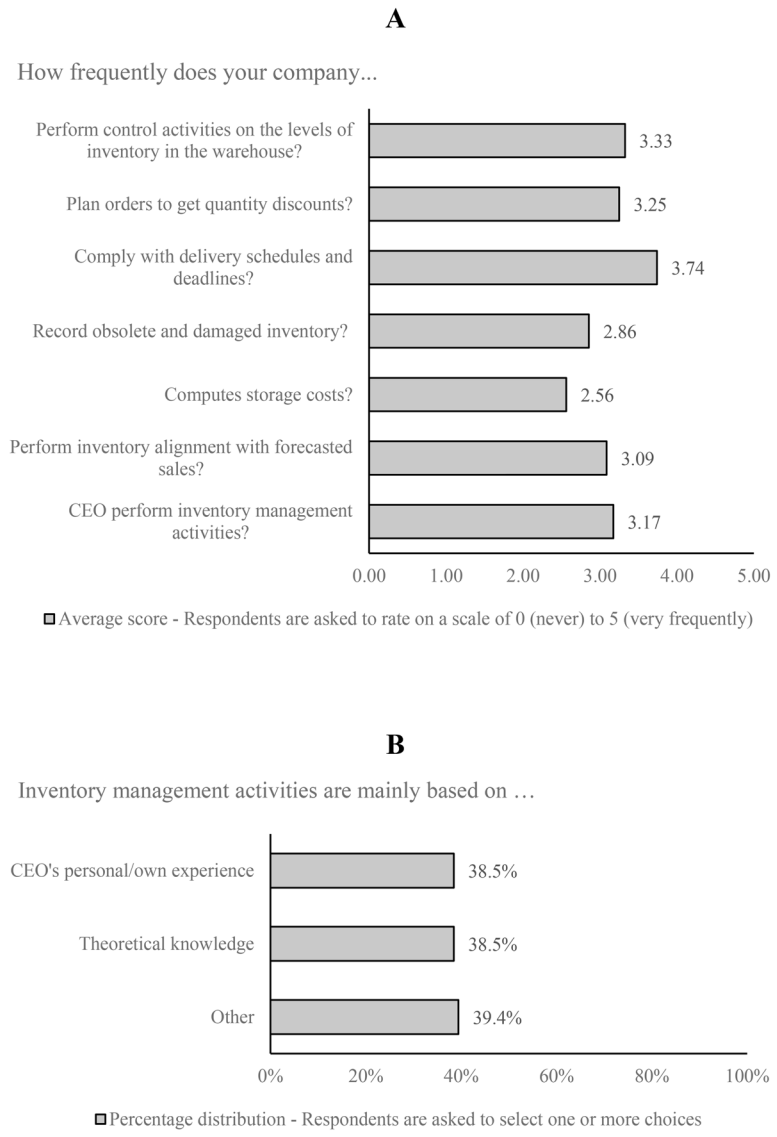

Figure 3. Survey results related to inventory management practices.

4.2. Survey results on financial management practices: conditional on firm and manager characteristics

4.2.1. Working capital management practices

Table 3 presents survey responses related to cash management practices, examining various company characteristics such as sales, assets, leverage, ROE, ROA, services sector affiliation, family firm status, employees, tangibility, international activity, firm age, respondent education, finance education and women in management. The t-test results indicate significant differences in means across different characteristic groups, providing insights into how these factors may impact cash management practices. Several significant results stand out. First, companies with high sales (mean: 3.933) perform cash reconciliations more frequently than those with low sales (mean: 3.577), showing a significant difference (t-stat: −2.085, *p* value: 0.038). Also, companies with higher values of assets exhibit a significant difference in cross-referencing accounting records with cash records. Companies with high leverage invest excess cash more frequently. With respect to CEO involvement in Cash Management, ME with higher ROA exhibit higher CEO involvement than those firms with low ROA, with a significant difference. Family firms are more likely to record cash deficits/surplus. An intriguing finding indicates that MEs with a limited workforce invest excess cash more frequently than firms with a higher number of employees (t-stat: 2.462, *p* value: 0.019). Perhaps, managers in MEs with fewer employees may exhibit greater financial agility,

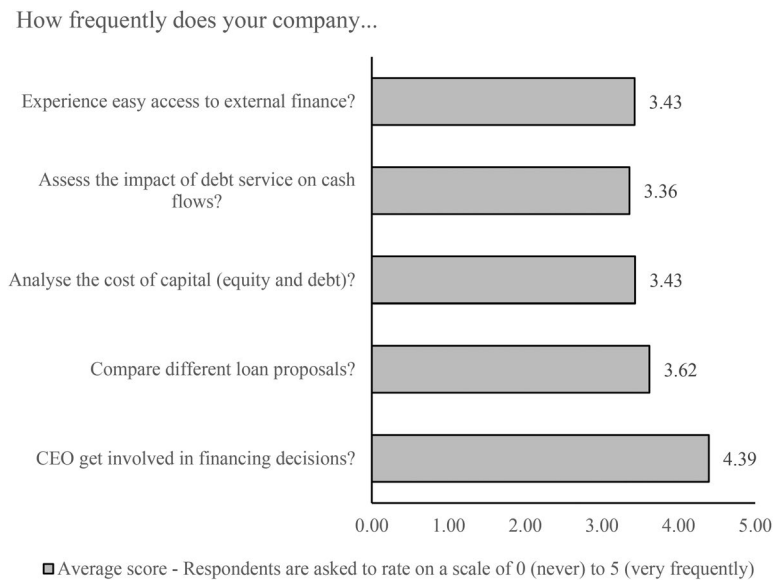

Figure 4. Survey results related to financing practices.

allowing them to invest excess cash more frequently, without concern for the next payroll. This tendency could reflect a higher risk appetite and an increased frequency of deploying surplus funds. Also, MEs with higher values of tangibility more frequently rely on the CEO's personal experience to perform cash management activities compared to those with low values of tangible assets. Another noteworthy result stems from respondent education, where lower education is associated with higher scores in cash reconciliations activities (t-stat: 1.730, *p* value: 0.085) and cash management activities more based on the CEO's personal experience (t-stat: 1.917, *p* value: 0.057). This suggests that less-educated managers rely less on theory to manage their cash activities and perform cash reconciliations more frequently. One reason might be the lack of trust these less-educated managers have in banking and accounting records, and since they are less educated, they can only rely on their own personal knowledge rather than textbook knowledge. Another noteworthy result is that the activity of forecasting cash balances is much more frequent in MEs where managers have a finance education (t-stat: −1.727, *p* value: 0.086). The results suggest that this activity is something that business schools teach managers as an important feature of cash management. Finally, MEs where there are women in management are more concerned with registering cash deficits/surplus (t-stat: −1.889, *p* value: 0.060) and use cash forecasts in the decision-making process (t-stat: −1.952, *p* value: 0.052).

Among the trade accounts management practices (Table 4), significant differences based on sales levels were observed. MEs with high sales follow a payment policy more frequently than those with low sales (t-stat: −2.026, *p* value: 0.044). Additionally, the analysis reveals that companies with high sales engage in more frequent evaluations of accounts receivable compared to their low sales counterparts (t-stat: −2.208, *p* value: 0.028). MEs with higher asset values tend to sell products or services on credit more frequently than those with lower asset values. Notably, when it comes to the CEO's involvement in receivables management activities, ME with low assets exhibit a significant difference, with more frequent CEO involvement compared to those with higher assets. MEs with higher ROE and ROA are also more likely to sell products or services on credit, follow a payment policy and analyse the value of accounts receivable. International MEs are also more likely to sell products or services on credit and analyse the value of accounts receivable. An interesting result arises from the age characteristic, where younger firms are more inclined to perform analyses of the account 'Provision for Bad and Doubtful Debts'. Additionally, firms where the manager has a higher level of education, possesses finance education, and have women in management are more likely to sell products or services on credit (refer to Table 4 for significant mean differences).

Turning to inventory management practices (Table 5), the results indicate that MEs with higher assets are more likely to engage in frequent control activities on inventory levels in the warehouse (t-stat:

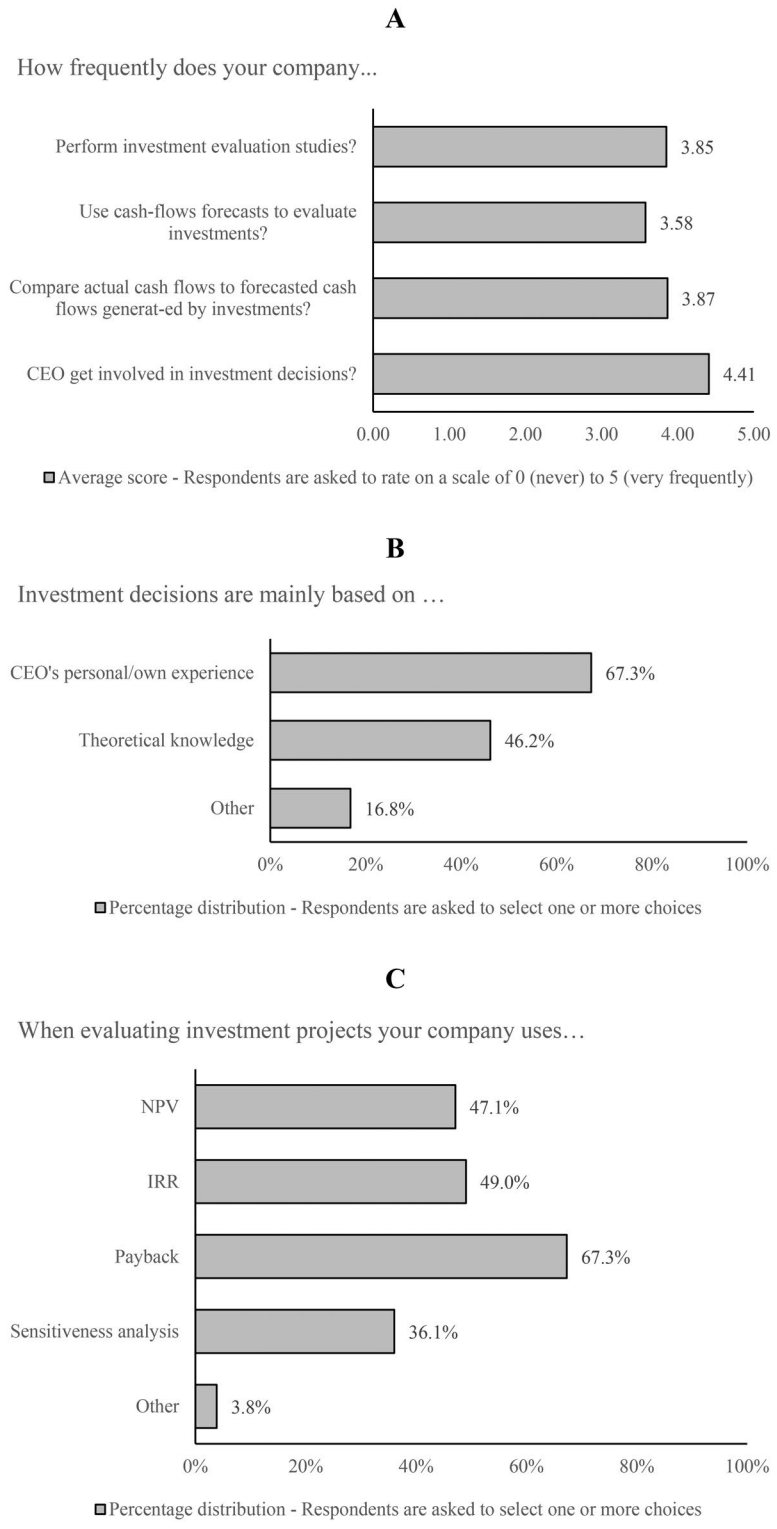

Figure 5. Survey results related to investing practices.

−1.890, *p* value: 0.060), while more leveraged MEs compute storage costs more frequently (t-stat: −2.359, *p* value: 0.019). Moreover, firms with higher ROE and those outside the services sector are more prone to planning orders to obtain quantity discounts. Non-service firms are also more inclined to comply with delivery schedules and record obsolete and damaged inventory. This outcome is as expected, given that services firms typically do not manage inventory as frequently. Consistent with this pattern, high tangible assets firms, which are often non-services firms, tend to engage in control activities on inventory levels

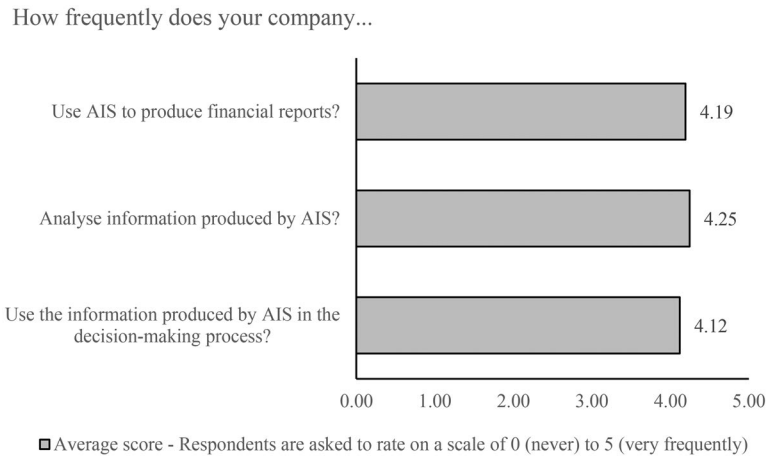

Figure 6. Survey results related to accounting information systems (AIS) practices.

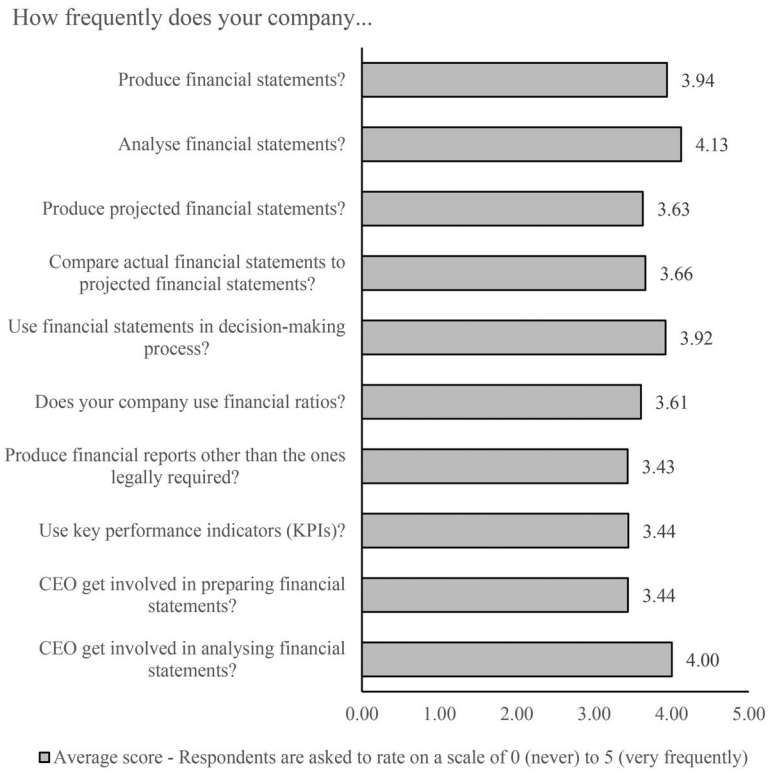

Figure 7. Survey results related to financial statement analysis practices.

in the warehouse more frequently. An intriguing finding is that firms with lower levels of human capital more often consider the storage costs of inventory. This suggests that firms with low levels of human capital are more attentive to inventory management tasks, recognising the potential significant impact of these activities on overall firm performance. Additionally, the results reveal that high tangible assets MEs more frequently rely on the CEO's own experience for inventory management activities. Finally, firms with women in management tend to align inventories with forecasted sales more frequently.

4.2.2. Financing decisions practices

The survey results regarding MEs' financing decision practices (Table 6) are quite striking. MEs with larger book values of assets experience much easier access to external finance, assess the impact of debt service on cash flows more frequently, analyse the cost of capital (equity and debt) more frequently and

Table 3. Survey responses to questions related to cash management practices.

	Sales		Assets		Leverage		ROE		ROA		Services sector		Family firm	
	Low	High	Low	High	Low	High	Low	High	Low	High	No	Yes	No	Yes
Question	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)
How frequently does your company prepare cash balance forecasts?	3.904	4.058 *−0.950* (0.343)	3.875	4.087 −1.309 (0.192)	3.875	4.087 −1.309 (0.192)	3.885	4.077 −1.189 (0.236)	3.942	4.019 −0.474 (0.636)	3.935	3.989 −0.234 (0.815)	3.941	4.304 −1.413 (0.159)
How frequently does your company performs cash reconciliations?	**3.577**	**3.933**** ***−2.085*** **(0.038)**	3.644	3.865 −1.288 (0.199)	3.750	3.760 −0.056 (0.956)	3.798	3.712 0.502 (0.616)	3.769	3.740 0.167 (0.867)	3.806	3.746 0.251 (0.802)	3.708	4.130 −1.545 (0.124)
How frequently does your company cross accounting records with cash records?	3.942	3.971 *−0.181* (0.857)	**3.788**	**4.125**** **−2.133** **(0.034)**	4.067	3.846 1.393 (0.165)	3.942	3.971 −0.181 (0.857)	3.913	4.000 −0.543 (0.588)	3.839	3.977 −0.620 (0.536)	3.919	4.261 −1.350 (0.178)
How frequently does your company register cash deficits/surplus?	3.327	3.288 *0.210* (0.834)	3.288	3.327 −0.210 (0.834)	3.163	3.452 −1.587 (0.114)	3.308	3.308 0 (1)	3.375	3.240 0.737 (0.462)	3.226	3.322 −0.375 (0.708)	**3.254**	**3.739*** **−1.675** **(0.095)**
How frequently does your company invest excess cash?	2.760	2.587 *0.954* (0.341)	2.635	2.712 −0.423 (0.672)	**2.462**	**2.885**** **−2.359** **(0.019)**	2.587	2.760 −0.954 (0.341)	2.702	2.644 0.318 (0.751)	2.742	2.661 0.317 (0.751)	2.643	2.913 −0.933 (0.352)
How frequently does your company use cash forecasts in the decision-making process?	3.788	3.923 *−0.814* (0.416)	3.760	3.952 −1.165 (0.245)	3.769	3.942 −1.048 (0.296)	3.721	3.990 −1.637 (0.103)	3.779	3.933 −0.931 (0.353)	3.677	3.887 −0.903 (0.367)	3.822	4.130 −1.174 (0.242)
How frequently does the CEO perform cash management activities?	4.038	4.135 *−0.593* (0.554)	4.067	4.106 −0.237 (0.813)	4.212	3.962 1.549 (0.123)	4.019	4.154 −0.830 (0.407)	**3.952**	**4.221*** **−1.669** **(0.097)**	4.194	4.068 0.552 (0.582)	4.070	4.217 −0.569 (0.570)
Are cash management activities mainly based on the CEO's own experience?	0.577	0.548 *0.417* (0.677)	0.587	0.538 0.696 (0.487)	0.548	0.577 −0.417 (0.677)	0.587	0.538 0.696 (0.487)	0.558	0.567 −0.139 (0.890)	0.581	0.559 0.220 (0.826)	0.557	0.609 −0.472 (0.638)
Are cash management activities mainly based on theoretical knowledge?	0.288	0.385 *−1.468* (0.144)	0.317	0.356 −0.585 (0.559)	0.327	0.346 −0.292 (0.770)	0.346	0.327 0.292 (0.770)	0.337	0.337 0.000 (1.000)	0.290	0.345 −0.588 (0.557)	0.346	0.261 0.812 (0.418)

This table presents the average survey results for several individual characteristic groups of companies, along with the respective t-test results indicating differences between the means. Respondents are asked to rate on a scale of 0 (never) to 5 (very frequently), except for 'yes' or 'no' questions. The analysed characteristics include the following ('low' and 'high' are determined in relation to the median value): 'Sales low-high', comparing companies with low sales to those with high sales; 'Assets low-high', comparing companies with low asset value to those with high asset value; 'Leverage low-high', comparing companies with low leverage to those with high leverage; 'ROE low-high', comparing companies with low ROE to those with high ROE; 'ROA low-high', comparing companies with low return on assets (ROA) to those with high ROA; 'Services sector no-yes', comparing companies in the services sector to those in other sectors; 'Family firm no-yes', comparing family firms to non-family firms; 'Employees low-high', comparing companies with low number of employees to those with high number of employees; 'Tangibility low-high', comparing companies with low asset tangibility to those with high asset tangibility; 'International activity no-yes', comparing companies without international activity to those with international activity; 'Age young-old', comparing young companies to older companies; 'Respondent education'; comparing respondents with lower levels of education to those with higher levels of education; 'Finance education no-yes'; comparing the respondents without any finance education to those with finance education; 'Women in management no-yes', comparing companies with women in management to those companies without women in management. We report the t-statistic in italic and the *p* value between brackets. ***, **, * denotes a significant difference at the 1%, 5%, and 10% level, respectively. Coefficients with a statistically significant difference at the 10% level or below are presented in bold.

Table 3. (*Continued*) – Survey responses to questions related to cash management practices.

	Employees		Tangibility		International activity		Firm age		Respondent education		Finance education		Women in management	
	Low	High	Low	High	Low	High	Low	High	Low	High	No	Yes	No	Yes
Question	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)
How frequently does your company prepare cash balance forecasts?	3.875	4.087 *−1.309* (0.192)	4.048	3.913 *0.831* (0.407)	3.926	4.117 *−1.070* (0.286)	4.000	3.960 *0.244* (0.807)	4.028	3.956 *0.422* (0.674)	**3.723**	**4.056*** ***−1.727*** **(0.086)**	3.877	4.128 *−1.532* (0.127)
How frequently does your company performs cash reconciliations?	3.635	3.875 *−1.401* (0.163)	3.731	3.779 *−0.279* (0.781)	3.723	3.833 *−0.580* (0.562)	3.682	3.832 *−0.868* (0.386)	**3.958**	**3.647*** ***1.730*** **(0.085)**	3.574	3.807 *−1.134* (0.258)	3.746	3.767 *−0.123* (0.902)
How frequently does your company cross accounting records with cash records?	3.933	3.981 *−0.301* (0.763)	3.885	4.029 *−0.906* (0.366)	3.973	3.917 *0.320* (0.749)	3.935	3.980 *−0.286* (0.775)	4.028	3.919 *0.649* (0.517)	3.745	4.019 *−1.444* (0.150)	3.926	4.000 *−0.456* (0.649)
How frequently does your company register cash deficits/surplus?	3.327	3.288 *0.210* (0.834)	3.260	3.356 *−0.526* (0.599)	3.351	3.200 *0.751* (0.454)	3.374	3.238 *0.745* (0.457)	3.458	3.228 *1.203* (0.230)	3.213	3.335 *−0.561* (0.575)	**3.164**	**3.512*** ***−1.889*** **(0.060)**
How frequently does your company invest excess cash?	**2.885**	**2.462**** ***2.359*** **(0.019)**	2.625	2.721 *−0.529* (0.597)	2.676	2.667 *0.045* (0.964)	2.701	2.644 *0.316* (0.753)	2.861	2.574 *1.514* (0.132)	2.638	2.683 *−0.207* (0.836)	2.582	2.802 *−1.198* (0.232)
How frequently does your company use cash forecasts in the decision-making process?	3.817	3.894 *−0.465* (0.643)	3.885	3.827 *0.349* (0.728)	3.851	3.867 *−0.084* (0.933)	3.888	3.822 *0.399* (0.690)	3.917	3.824 *0.536* (0.593)	3.723	3.894 *−0.865* (0.388)	**3.721**	**4.047*** ***−1.952*** **(0.052)**
How frequently does the CEO perform cash management activities?	4.038	4.135 *−0.593* (0.554)	4.010	4.163 *−0.950* (0.343)	4.088	4.083 *0.025* (0.980)	4.187	3.980 *1.278* (0.203)	4.236	4.007 *1.346* (0.180)	4.128	4.075 *0.274* (0.785)	4.066	4.116 *−0.308* (0.759)
Are cash management activities mainly based on the CEO's own experience?	0.606	0.519 *1.257* (0.210)	**0.490**	**0.635**** ***−2.109*** **(0.036)**	0.554	0.583 *−0.384* (0.701)	0.607	0.515 *1.345* (0.180)	**0.653**	**0.515*** ***1.917*** **(0.057)**	0.574	0.559 *0.187* (0.852)	0.557	0.570 *−0.177* (0.860)
Are cash management activities mainly based on theoretical knowledge?	0.317	0.356 *−0.585* (0.559)	0.327	0.346 *−0.292* (0.770)	0.345	0.317 *0.384* (0.701)	0.374	0.297 *1.170* (0.243)	0.361	0.324 *0.543* (0.587)	0.277	0.354 *−0.986* (0.325)	0.320	0.360 −0.611 (0.542)

See notes in Table 3.

Table 4. Survey responses to questions related to trade accounts management practices.

	Sales		Assets		Leverage		ROE		ROA		Services sector		Family Firm	
	Low	High	Low	High	Low	High	Low	High	Low	High	No	Yes	No	Yes
Question	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)
How frequently does your company sell products or services on credit?	3.356	3.231 *0.580* (0.563)	**3.096**	**3.490** ***−1.841*** **(0.067)**	3.337	3.250 *0.401* (0.689)	**3.048**	**3.538**** ***−2.301*** **(0.022)**	**3.077**	**3.510**** ***−2.024*** **(0.044)**	3.097	3.328 *−0.763* (0.446)	3.281	3.391 *−0.320* (0.749)
How frequently does your company follow a payment policy?	**3.596**	**3.942**** ***−2.026*** **(0.044)**	3.635	3.904 *−1.570* (0.118)	3.673	3.865 *−1.118* (0.265)	**3.596**	**3.942**** ***−2.026*** **(0.044)**	3.663	3.875 *−1.230* (0.220)	3.742	3.774 *−0.132* (0.895)	3.746	3.957 *−0.767* (0.444)
How frequently does your company analyse the value of accounts receivable?	**4.029**	**4.356**** ***−2.208*** **(0.028)**	4.135	4.250 *−0.771* (0.441)	4.115	4.269 *−1.030* (0.304)	**4.048**	**4.337*** ***−1.944*** **(0.053)**	**4.010**	**4.375**** ***−2.476*** **(0.014)**	4.323	4.169 *0.729* (0.467)	4.184	4.261 *−0.323* (0.747)
How frequently does your company analyse the account "Provision for Bad and Doubtful Debts"?	3.625	3.731 *−0.581* (0.562)	3.692	3.663 *0.158* (0.874)	3.529	3.827 *−1.647* (0.101)	3.558	3.798 *−1.325* (0.187)	3.587	3.769 *−1.005* (0.316)	3.839	3.650 *0.740* (0.460)	3.665	3.783 *−0.406* (0.685)
How frequently does the CEO perform receivables management activities?	3.962	4.019 *−0.351* (0.726)	**4.154**	**3.827**** ***2.006*** **(0.046)**	3.856	4.125 *−1.647* (0.101)	3.981	4.000 *−0.117* (0.907)	3.913	4.067 *−0.937* (0.350)	4.000	3.989 *0.049* (0.961)	4.000	3.913 *0.332* (0.741)

See notes in Table 3.

Table 4. (*Continued*) – Survey responses to questions related to trade accounts management practices.

	Employees		Tangibility		International activity		Firm age		Respondent education		Finance education		Women in management	
	Low	High	Low	High	Low	High	Low	High	Low	High	No	Yes	No	Yes
Question	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* va lue)	Mean	Mean *t-stat* (*p* value)
How frequently does your company sell products or services on credit?	3.346	3.240 *0.490* (0.624)	3.375	3.212 *0.758* (0.449)	**3.149**	**3.650**** ***−2.128*** **(0.035)**	3.327	3.257 *0.323* (0.747)	**2.792**	**3.559***** ***−3.480*** **(0.001)**	**2.809**	**3.435**** ***−2.462*** **(0.015)**	**3.475**	**3.035**** **2.030** **(0.044)**
How frequently does your company follow a payment policy?	3.760	3.779 *−0.111* (0.911)	3.740	3.798 *−0.334* (0.738)	3.689	3.967 *−1.465* (0.145)	3.822	3.713 *0.635* (0.526)	3.694	3.809 *−0.631* (0.529)	3.553	3.832 *−1.359* (0.176)	3.721	3.837 −0.662 (0.509)
How frequently does your company analyse the value of accounts receivable?	4.163	4.221 *−0.385* (0.700)	4.221	4.163 *0.385* (0.700)	**4.061**	**4.517***** ***−2.810*** **(0.005)**	4.308	4.069 *1.606* (0.110)	4.139	4.221 *−0.519* (0.604)	4.170	4.199 *−0.159* (0.873)	4.180	4.209 −0.191 (0.849)
How frequently does your company analyse the account "Provision for Bad and Doubtful Debts"?	3.644	3.712 *−0.370* (0.712)	3.663	3.692 *−0.158* (0.874)	3.615	3.833 *−1.090* (0.277)	**3.841**	**3.505*** ***1.860*** **(0.064)**	3.486	3.779 *−1.541* (0.125)	3.532	3.720 *−0.868* (0.387)	3.656	3.709 −0.290 (0.772)
How frequently does the CEO perform receivables management activities?	4.038	3.942 *0.585* (0.559)	3.942	4.038 *−0.585* (0.559)	3.959	4.067 *−0.591* (0.555)	4.103	3.871 *1.413* (0.159)	4.111	3.926 *1.071* (0.286)	4.085	3.963 *0.623* (0.534)	3.918	4.093 −1.050 (0.295)

See notes in Table 3.

Table 5. Survey responses to questions related to inventory management practices.

	Sales		Assets		Leverage		ROE		ROA		Services sector		Family firm	
	Low	High	Low	High	Low	High	Low	High	Low	High	No	Yes	No	Yes
Question	Mean	Mean *t-stat* (p-value)	Mean	Mean *t-stat* (p-value)	Mean	Mean *t-stat* (p-value)	Mean	Mean *t-stat* (p-value)	Mean	Mean *t-stat* (p-value)	Mean	Mean *t-stat* (p-value)	Mean	Mean *t-stat* (p-value)
How frequently does your company perform control activities on the levels of inventory in the warehouse?	3.404	3.250 *0.814* (0.417)	3.212	3.442 *−1.224* (0.222)	3.260	3.394 *−0.712* (0.477)	3.298	3.356 *−0.305* (0.761)	3.288	3.365 *−0.407* (0.685)	3.419	3.311 *0.409* (0.683)	3.319	3.391 *−0.240* (0.811)
How frequently does your company plan orders to get quantity discounts?	3.240	3.260 *−0.101* (0.920)	3.154	3.346 *−1.009* (0.314)	3.221	3.279 *−0.302* (0.763)	**3.077**	**3.423*** ***−1.826*** **(0.069)**	3.106	3.394 *−1.518* (0.130)	**3.710**	**3.169**** ***2.034*** **(0.043)**	3.232	3.391 *−0.522* (0.602)
How frequently does your company comply with delivery schedules and deadlines?	3.740	3.740 *0.000* (1.000)	3.673	3.808 *−0.768* (0.443)	3.606	3.875 *−1.543* (0.124)	3.615	3.865 *−1.431* (0.154)	3.635	3.846 *−1.210* (0.228)	**4.129**	**3.672*** ***1.869*** **(0.063)**	3.714	3.957 *−0.870* (0.385)
How frequently does your company record obsolete and damaged inventory?	2.933	2.779 *0.834* (0.405)	**2.683**	**3.029**** ***−1.890*** **(0.060)**	2.817	2.894 *−0.417* (0.677)	2.837	2.875 *−0.208* (0.835)	2.894	2.817 *0.417* (0.677)	**3.226**	**2.791*** ***1.688*** **(0.093)**	2.838	3 *−0.551* (0.582)
How frequently does your company computes storage costs?	2.760	2.587 *0.954* (0.341)	2.635	2.712 *−0.423* (0.672)	**2.462**	**2.885**** ***−2.359*** **(0.019)**	2.587	2.760 *−0.954* (0.341)	2.702	2.644 *0.318* (0.751)	2.742	2.661 *0.317* (0.751)	2.643	2.913 *−0.933* (0.352)
How frequently does your company perform inventory alignment with forecasted sales?	3.135	3.038 *0.476* (0.635)	2.942	3.231 *−1.433* (0.153)	3.019	3.154 *−0.666* (0.506)	2.981	3.192 *−1.048* (0.296)	3.019	3.154 *−0.666* (0.506)	3.323	3.045 *0.979* (0.329)	3.043	3.435 *−1.218* (0.225)
How frequently does the CEO perform inventory management activities?	3.231	3.115 *0.582* (0.561)	3.144	3.202 *−0.291* (0.771)	3.115	3.231 *−0.582* (0.561)	3.183	3.163 *0.097* (0.923)	3.087	3.260 *−0.874* (0.383)	3.452	3.124 *1.179* (0.240)	3.146	3.391 *−0.777* (0.438)
Are inventory management activities mainly based on the CEO's own experience?	0.413	0.356 *0.853* (0.395)	0.394	0.375 *0.284* (0.777)	0.356	0.413 *−0.853* (0.395)	0.413	0.356 *0.853* (0.395)	0.385	0.385 *0.000* (1.000)	0.452	0.373 *0.829* (0.408)	0.389	0.348 *0.383* (0.702)
Are inventory management activities mainly based on theoretical knowledge?	0.375	0.394 *−0.284* (0.777)	0.404	0.365 *0.568* (0.571)	0.385	0.385 *0* (1)	0.365	0.404 *−0.568* (0.571)	0.375	0.394 *−0.284* (0.777)	0.452	0.373 *0.829* (0.408)	0.384	0.391 *−0.070* (0.945)

See notes in Table 3.

Table 5. (*Continued*) – Survey responses to questions related to inventory management practices.

	Employees		Tangibility		International activity		Firm age		Respondent education		Finance education		Women in management	
	Low	High	Low	High	Low	High	Low	High	Low	High	No	Yes	No	Yes
Question	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)
How frequently does your company perform control activities on the levels of inventory in the warehouse?	3.356	3.298 *0.305* (0.761)	**3.154**	**3.500*** ***−1.844*** **(0.067)**	3.385	3.183 *0.968* (0.334)	3.355	3.297 *0.307* (0.759)	3.472	3.250 *1.120* (0.264)	3.340	3.323 *0.077* (0.939)	3.295	3.372 −0.401 (0.689)
How frequently does your company plan orders to get quantity discounts?	3.260	3.240 *0.101* (0.920)	3.173	3.327 *−0.807* (0.421)	3.236	3.283 *−0.222* (0.824)	3.159	3.347 *−0.984* (0.326)	3.181	3.287 *−0.529* (0.597)	3.149	3.280 *−0.572* (0.568)	3.328	3.140 0.973 (0.332)
How frequently does your company comply with delivery schedules and deadlines?	3.788	3.692 *0.548* (0.584)	3.663	3.817 *−0.878* (0.381)	3.669	3.917 *−1.284* (0.201)	3.710	3.772 *−0.353* (0.724)	3.667	3.779 *−0.612* (0.541)	3.915	3.689 *1.077* (0.283)	3.770	3.698 0.409 (0.683)
How frequently does your company record obsolete and damaged inventory?	2.971	2.740 *1.254* (0.211)	2.750	2.962 *−1.149* (0.252)	2.838	2.900 *−0.305* (0.761)	2.869	2.842 *0.149* (0.882)	2.833	2.868 *−0.177* (0.860)	2.872	2.851 *0.097* (0.923)	2.746	3.012 −1.423 (0.156)
How frequently does your company computes storage costs?	**2.885**	**2.462**** ***2.359*** **(0.019)**	2.625	2.721 *−0.529* (0.597)	2.676	2.667 *0.045* (0.964)	2.701	2.644 *0.316* (0.753)	2.861	2.574 *1.514* (0.132)	2.638	2.683 *−0.207* (0.836)	2.582	2.802 −1.198 (0.232)
How frequently does your company perform inventory alignment with forecasted sales?	3.163	3.010 *0.762* (0.447)	3.067	3.106 *−0.190* (0.849)	3.101	3.050 *0.230* (0.818)	3.140	3.030 *0.546* (0.585)	2.944	3.162 *−1.025* (0.307)	3.021	3.106 *−0.349* (0.728)	**2.934**	**3.302*** **−1.805** **(0.073)**
How frequently does the CEO perform inventory management activities?	3.163	3.183 *−0.097* (0.923)	3.106	3.240 *−0.679* (0.498)	3.209	3.083 *0.576* (0.565)	3.084	3.267 *−0.925* (0.356)	3.222	3.147 *0.361* (0.719)	3.404	3.106 *1.264* (0.208)	3.098	3.279 −0.899 (0.370)
Are inventory management activities mainly based on the CEO's own experience?	0.394	0.375 *0.284* (0.777)	**0.308**	**0.462**** ***−2.298*** **(0.023)**	0.385	0.383 *0.024* (0.981)	0.402	0.366 *0.524* (0.601)	0.389	0.382 *0.092* (0.927)	0.426	0.373 *0.653* (0.515)	0.369	0.407 −0.554 (0.580)
Are inventory management activities mainly based on theoretical knowledge?	0.365	0.404 *−0.568* (0.571)	0.365	0.404 *−0.568* (0.571)	0.358	0.450 *−1.233* (0.219)	0.402	0.366 *0.524* (0.601)	0.361	0.397 *−0.505* (0.614)	0.319	0.404 *−1.046* (0.297)	0.377	0.395 −0.266 (0.791)

See notes in Table 3.

Table 6. Survey responses to questions related to financing practices.

	Sales		Assets		Leverage		ROE		ROA		Services sector		Family firm	
	Low	High	Low	High	Low	High	Low	High	Low	High	No	Yes	No	Yes
Question	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)
How frequently does your company experience easy access to external finance?	3.404	3.452 *−0.299* (0.765)	**3.269**	**3.587**** ***−1.992*** **(0.048)**	3.423	3.433 *−0.060* (0.952)	3.298	3.558 *−1.625* (0.106)	3.308	3.548 *−1.503* (0.134)	**2.968**	**3.508**** ***−2.429*** **(0.016)**	**3.346**	**4.087***** ***−2.951*** **(0.004)**
How often does your company assess the impact of debt service on cash flows?	3.337	3.385 *−0.279* (0.780)	**3.125**	**3.596***** ***−2.786*** **(0.006)**	3.346	3.375 *−0.167* (0.867)	3.317	3.404 *−0.503* (0.616)	3.385	3.337 *0.279* (0.780)	**3.000**	**3.424*** ***−1.765*** **(0.079)**	**3.292**	**3.913**** ***−2.290*** **(0.023)**
How frequently does your company analyse the cost of capital (equity and debt)?	3.442	3.423 *0.111* (0.911)	**3.202**	**3.663***** ***−2.722*** **(0.007)**	3.394	3.471 *−0.446* (0.656)	3.433	3.433 *0.000* (1.000)	3.404	3.462 *−0.334* (0.738)	3.129	3.486 *−1.481* (0.140)	**3.378**	**3.870*** ***−1.799*** **(0.073)**
How frequently does your company compare different loan proposals?	3.635	3.606 *0.160* (0.873)	**3.452**	**3.788**** ***−1.886*** **(0.061)**	3.567	3.673 *−0.588* (0.557)	3.577	3.663 *−0.481* (0.631)	3.587	3.654 *−0.374* (0.709)	**2.903**	**3.746***** ***−3.428*** **(0.001)**	**3.562**	**4.087*** ***−1.844*** **(0.067)**
How frequently does the CEO get involved in financing decisions?	4.404	4.385 *0.137* (0.891)	4.394	4.394 *0.000* (1.000)	4.308	4.481 *−1.242* (0.216)	4.413	4.375 *0.275* (0.784)	4.356	4.433 *−0.550* (0.583)	4.161	4.435 *−1.400* (0.163)	4.357	4.696 *−1.528* (0.128)

See notes in Table 3.

Table 6. (*Continued*) – Survey responses to questions related to financing practices.

	Employees		Tangibility		International activity		Firm age		Respondent education		Finance education		Women in management	
	Low	High	Low	High	Low	High	Low	High	Low	High	No	Yes	No	Yes
Question	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)
How frequently does your company experience easy access to external finance?	3.529	3.327 *1.261* (0.209)	3.500	3.356 *0.899* (0.370)	3.507	3.233 *1.550* (0.123)	3.393	3.465 *−0.453* (0.651)	**3.194**	**3.551**** ***−2.136*** **(0.034)**	**2.979**	**3.559***** ***−3.088*** **(0.002)**	3.344	3.547 −1.244 (0.215)
How often does your company assess the impact of debt service on cash flows?	3.481	3.240 *1.402* (0.162)	3.423	3.298 *0.726* (0.468)	3.419	3.217 *1.067* (0.287)	3.318	3.406 *−0.512* (0.609)	**3.028**	**3.537***** ***−2.867*** **(0.005)**	**2.957**	**3.478**** ***−2.569*** **(0.011)**	**3.197**	**3.593**** **−2.294** **(0.023)**
How frequently does your company analyse the cost of capital (equity and debt)?	3.567	3.298 *1.569* (0.118)	3.462	3.404 *0.334* (0.738)	3.419	3.467 *−0.251* (0.802)	3.374	3.495 *−0.703* (0.483)	3.347	3.478 *−0.722* (0.471)	**3.106**	**3.528**** ***−2.064*** **(0.040)**	**3.197**	**3.767***** **−3.344** **(0.001)**
How frequently does your company compare different loan proposals?	3.721	3.519 *1.125* (0.262)	3.654	3.587 *0.374* (0.709)	3.642	3.567 *0.379* (0.705)	3.720	3.515 *1.141* (0.255)	**3.389**	**3.743*** ***−1.886*** **(0.061)**	**3.085**	**3.776***** ***−3.296*** **(0.001)**	**3.492**	**3.802*** **−1.711** **(0.089)**
How frequently does the CEO get involved in financing decisions?	4.433	4.356 *0.550* (0.583)	4.308	4.481 *−1.242* (0.216)	4.399	4.383 *0.099* (0.921)	4.458	4.327 *0.939* (0.349)	4.250	4.471 *−1.508* (0.133)	4.255	4.435 *−1.076* (0.283)	4.328	4.488 −1.133 (0.258)

See notes in Table 3.

compare different loan proposals more often than MEs with a lower book value of assets. These results are in line with those of Graham and Harvey (2001), where size plays a key role in how CFOs perform their corporate finance functions. The table results also show that these financing activities are not just more frequent in larger firms but also in the services sector and in family MEs (see the corresponding columns of Table 6 for mean differences and t-statistics). Even more striking are the results conditional on the respondent's education. MEs where the manager has higher levels of education, and specific education in financial management subjects, are much more likely to experience easy access to external finance (t-stat: −2.136, *p* value: 0.034; and t-stat: −3.088, *p* value: 0.002, respectively). This might mean that more informed managers may have easy access to external finance, as banks and other financiers see them as more financially reliable or simply that these more educated managers are more realistic about their real conditions on access to external capital and respective cost. The results also show that these more educated managers analyse the impact of debt service on cash flows more often and compare different loan proposals more frequently (refer to Table 6 for significant mean differences). In the same vein, the survey results show that MEs managers with a finance education analyse the cost of equity and debt more often. These results indicate that managers with higher levels of education, especially in finance, tend to exhibit specific financial management practices. This could be because education equips them with tools and knowledge that shape their decision-making approaches. Additionally, these activities seem to be more frequent in MEs where there is at least one woman in management (see the last column of Table 6). Women in management may bring unique considerations to financial decision-making in these smaller companies. Understanding the specific context and motivations behind these patterns would require further research that goes beyond the scope of this exploratory analysis.

4.2.3. Investment decisions practices

Analysing the survey results concerning investment decision practices (Table 7), we find that larger MEs and family firms are more likely to perform investment valuation studies (refer to Table 7 for significant mean differences and t-tests in bold). Also, larger MEs are more likely to base their investment decisions on theoretical knowledge rather than the CEO's gut feeling. Firms with higher ROA are also the ones where the CEOs get more involved in the investment decisions. An interesting result is that family firms are more likely to evaluate investment projects using the IRR technique when compared with non-family MEs. Another interesting result is that firms with a lower number of employees perform investment evaluation studies more often than firms with a higher number of employees and use cash-flow forecasts more frequently to evaluate investments. Firms with more tangible assets are also the ones where the investment decisions are more often based on the CEO's own experience. One odd result is the fact that ME with international exposure perform less frequent investment evaluation studies. One possible explanation for this result is that these firms are subsidiaries of larger international corporations that mainly sell to them, and for that reason, these firms' managers are required to perform investment valuation less frequently. Alternatively, MEs selling to big foreign corporations might have less bargaining power and less need to conduct investment valuation studies. Another interesting result is that young firms rely more heavily on the CEO's own experience for investment decisions when compared to older firms. One possible reason for this result is that young firms are normally managed by young entrepreneurs who must rely on their gut feeling when analysing investments in the early stages of their new ideas and businesses. Furthermore, when evaluating investment projects, managers with higher education are more likely to use the IRR, the payback rule, and the 'sensitivity analysis'. As expected, managers with finance education are also more likely to base their investment decisions on theoretical knowledge. Moreover, managers with finance education are also more likely to use the IRR. Finally, striking results emerge from the last column of Table 7, where we can see that MEs where there are women in management are more likely to make investment evaluation studies, use cash-flow forecasts to evaluate investments, the CEO gets more involved, and the investment decisions are mainly based on theoretical knowledge.

4.2.4. Accounting information systems practices

Turning our attention to the survey responses related to AIS practices (Table 8), the results reveal that, overall, MEs with high values of tangibility, where managers have a higher level of education and finance

Table 7. Survey responses to questions related to investment practices.

	Sales		Assets		Leverage		ROE		ROA		Services sector		Family firm	
	Low	High	Low	High	Low	High	Low	High	Low	High	No	Yes	No	Yes
Question	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)
How frequently does your company perform investment evaluation studies?	3.923	3.779 *0.887* (0.376)	**3.692**	**4.010*** ***−1.966*** **(0.051)**	3.817	3.885 *−0.413* (0.680)	3.788	3.913 *−0.768* (0.443)	3.798	3.904 *−0.650* (0.517)	3.387	3.610 *−0.967* (0.335)	3.795	**4.304**** ***−1.981*** **(0.049)**
How frequently does your company use cash-flows forecasts to evaluate investments?	3.644	3.510 *0.818* (0.414)	3.442	3.712 *−1.645* (0.102)	3.548	3.606 *−0.350* (0.726)	3.519	3.635 *−0.701* (0.484)	3.558	3.596 *−0.233* (0.816)	3.806	3.876 *−0.344* (0.731)	3.535	3.913 *−1.446* (0.150)
How often does your company compare actual cash flows to forecasted cash flows generated by investments?	3.885	3.846 *0.268* (0.789)	3.779	3.952 *−1.211* (0.227)	3.827	3.904 *−0.537* (0.592)	3.875	3.856 *0.134* (0.893)	3.904	3.827 *0.537* (0.592)	4.323	4.424 *−0.572* (0.568)	3.838	4.087 *−1.093* (0.276)
How frequently does the CEO get involved in investment decisions?	4.471	4.346 *0.994* (0.321)	4.317	4.500 *−1.457* (0.147)	4.452	4.365 *0.687* (0.493)	4.327	4.490 *−1.302* (0.194)	**4.288**	**4.529*** ***−1.924*** **(0.056)**	0.645	0.678 *−0.358* (0.721)	4.373	4.696 *−1.615* (0.108)
Are investment decisions mainly based on the CEO's own experience?	0.712	0.635 *1.181* (0.239)	0.654	0.692 *−0.589* (0.557)	0.644	0.702 *−0.884* (0.378)	0.673	0.673 *0* (1)	0.635	0.712 *−1.181* (0.239)	0.484	0.458 *0.269* (0.788)	0.676	0.652 *0.226* (0.822)
Are investment decisions mainly based on theoretical knowledge?	0.423	0.500 *−1.111* (0.268)	**0.404**	**0.519*** ***−1.672*** **(0.096)**	0.500	0.423 *1.111* (0.268)	0.481	0.442 *0.554* (0.580)	0.481	0.442 *0.554* (0.580)	0.548	0.458 *0.931* (0.353)	0.443	0.609 *−1.502* (0.135)
Does your company use the *NPV* technique to evaluate investment projects?	0.433	0.510 *−1.109* (0.269)	0.471	0.471 *0.000* (1.000)	0.452	0.490 *−0.553* (0.581)	0.452	0.490 *−0.553* (0.581)	0.423	0.519 *−1.389* (0.166)	0.387	0.508 *−1.246* (0.214)	0.476	0.435 *0.369* (0.713)
Does your company use the *IRR* technique to evaluate investment projects?	0.442	0.538 *−1.387* (0.167)	0.442	0.538 *−1.387* (0.167)	0.519	0.462 *0.830* (0.408)	0.500	0.481 *0.276* (0.783)	0.462	0.519 *−0.830* (0.408)	0.710	0.667 *0.469* (0.640)	0.465	**0.696**** ***−2.100*** **(0.037)**
Does your company use the *payback* technique to evaluate investment projects?	0.673	0.673 *0.000* (1.000)	0.654	0.692 *−0.589* (0.557)	0.712	0.635 *1.181* (0.239)	0.712	0.635 *1.181* (0.239)	0.712	0.635 *1.181* (0.239)	0.355	0.362 *−0.072* (0.943)	0.670	0.696 *−0.244* (0.808)
Does your company use the "*sensitiveness analysis*" technique to evaluate investment projects?	0.337	0.385 *−0.719* (0.473)	0.346	0.375 *−0.431* (0.667)	0.337	0.385 *−0.719* (0.473)	0.308	0.413 *−1.590* (0.113)	0.327	0.394 *−1.008* (0.314)	3.387	3.610 *−0.967* (0.335)	0.357	0.391 *−0.324* (0.746)

See notes in Table 3.

Table 7. (*Continued*) – Survey responses to questions related to investment practices.

	Employees		Tangibility		International activity		Firm age		Respondent education		Finance education		Women in management	
	Low	High	Low	High	Low	High	Low	High	Low	High	No	Yes	No	Yes
Question	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)
How frequently does your company perform investment evaluation studies?	**4.087**	**3.615***** ***2.952*** **(0.004)**	3.875	3.827 *0.295* (0.768)	**3.959**	**3.583**** ***2.114*** **(0.036)**	3.822	3.881 *−0.361* (0.719)	3.764	3.897 *−0.779* (0.437)	**3.511**	**3.950**** ***−2.285*** **(0.023)**	**3.705**	**4.058**** **−2.159** **(0.032)**
How frequently does your company use cash-flows forecasts to evaluate investments?	**3.731**	**3.423*** ***1.884*** **(0.061)**	3.538	3.615 *−0.467* (0.641)	3.642	3.417 *1.243* (0.215)	3.551	3.604 *−0.319* (0.750)	3.569	3.581 *−0.066* (0.947)	3.362	3.640 *−1.418* (0.158)	**3.434**	**3.779**** **−2.082** **(0.039)**
How often does your company compare actual cash flows to forecasted cash flows generated by investments?	3.923	3.808 *0.806* (0.421)	3.952	3.779 *1.211* (0.227)	3.899	3.783 *0.730* (0.466)	3.776	3.960 *−1.293* (0.198)	3.778	3.912 *−0.891* (0.374)	3.830	3.876 *−0.268* (0.789)	3.787	3.977 −1.310 (0.192)
How frequently does the CEO get involved in investment decisions?	4.471	4.346 *0.994* (0.321)	4.365	4.452 *−0.687* (0.493)	4.399	4.433 *−0.249* (0.803)	4.421	4.396 *0.194* (0.846)	4.333	4.449 *−0.871* (0.385)	4.298	4.441 *−0.952* (0.342)	**4.320**	**4.535*** **−1.693** **(0.092)**
Are investment decisions mainly based on the CEO's own experience?	0.683	0.663 *0.294* (0.769)	**0.567**	**0.779***** ***−3.322*** **(0.001)**	0.696	0.617 *1.102* (0.272)	**0.748**	**0.594**** ***2.381*** **(0.018)**	0.681	0.669 *0.167* (0.868)	0.702	0.665 *0.481* (0.631)	0.656	0.698 −0.632 (0.528)
Are investment decisions mainly based on theoretical knowledge?	0.452	0.471 *−0.277* (0.782)	0.462	0.462 *0.000* (1.000)	0.480	0.417 *0.824* (0.411)	0.449	0.475 *−0.384* (0.702)	0.403	0.493 *−1.235* (0.218)	**0.340**	**0.497**** ***−1.900*** **(0.059)**	**0.402**	**0.547**** **−2.075** **(0.039)**
Does your company use the *NPV* technique to evaluate investment projects?	0.481	0.462 *0.277* (0.782)	0.452	0.490 *−0.553* (0.581)	0.466	0.483 *−0.223* (0.824)	0.458	0.485 *−0.391* (0.696)	0.444	0.485 *−0.559* (0.577)	0.447	0.478 *−0.378* (0.706)	0.492	0.442 0.708 (0.480)
Does your company use the *IRR* technique to evaluate investment projects?	0.519	0.462 *0.830* (0.408)	0.519	0.462 *0.830* (0.408)	0.480	0.517 *−0.481* (0.631)	0.486	0.495 *−0.130* (0.897)	**0.375**	**0.551**** ***−2.445*** **(0.015)**	**0.319**	**0.540***** ***−2.703*** **(0.007)**	0.459	0.535 −1.076 (0.283)
Does your company use the *payback* technique to evaluate investment projects?	0.683	0.663 *0.294* (0.769)	0.692	0.654 *0.589* (0.557)	0.655	0.717 *−0.851* (0.396)	0.664	0.683 *−0.300* (0.764)	**0.569**	**0.728**** ***−2.338*** **(0.020)**	0.596	0.696 *−1.284* (0.201)	0.639	0.721 −1.234 (0.219)
Does your company use the "*sensitiveness analysis*" technique to evaluate investment projects?	0.385	0.337 *0.719* (0.473)	0.404	0.317 *1.299* (0.196)	0.365	0.350 *0.201* (0.841)	0.374	0.347 *0.408* (0.684)	**0.264**	**0.412**** ***−2.126*** **(0.035)**	0.340	0.366 *−0.326* (0.745)	0.385	0.326 0.880 (0.380)

See notes in Table 3.

Table 8. Survey responses to questions related to accounting information systems (AIS) practices.

	Sales		Assets		Leverage		ROE		ROA		Services sector		Family Firm	
	Low	High	Low	High	Low	High	Low	High	Low	High	No	Yes	No	Yes
Question	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)
How frequently does your company use AIS to produce financial reports?	4.135	4.250 *−0.781* (0.436)	4.029	4.356 *−2.237* (0.026)	4.260	4.125 *0.912* (0.363)	4.221	4.163 *0.390* (0.697)	4.144	4.240 *−0.651* (0.516)	4.065	4.215 *−0.724* (0.470)	4.168	4.391 *−0.951* (0.343)
How frequently does your company analyse information produced by AIS?	4.154	4.337 *−1.348* (0.179)	4.144	4.346 *−1.491* (0.137)	4.308	4.183 *0.920* (0.359)	4.212	4.279 *−0.495* (0.621)	4.163	4.327 *−1.205* (0.230)	4.129	4.266 *−0.715* (0.475)	4.238	4.304 *−0.307* (0.760)
How frequently does your firm use the information produced by AIS in the decision-making process?	4.096	4.144 *−0.339* (0.735)	4.038	4.202 *−1.155* (0.249)	4.144	4.096 *0.339* (0.735)	4.038	4.202 *−1.155* (0.249)	**3.990**	**4.250*** ***−1.843*** **(0.067)**	3.935	4.153 *−1.092* (0.276)	4.108	4.217 *−0.483* (0.630)

See notes in Table 3.

Table 8. (*Continued*) – Survey responses to questions related to accounting information systems (AIS) practices.

	Employees		Tangibility		International activity		Firm age		Respondent education		Finance education		Women in management	
	Low	High	Low	High	Low	High	Low	High	Low	High	No	Yes	No	Yes
Question	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)
How frequently does your company use AIS to produce financial reports?	4.106	4.279 *−1.174* (0.242)	**4.317**	**4.067*** ***1.702*** **(0.090)**	4.162	4.267 *−0.641* (0.522)	4.084	4.307 *−1.514* (0.131)	**3.986**	**4.301**** ***−2.049*** **(0.042)**	**3.681**	**4.342***** ***−3.870*** **(0.000)**	4.123	4.291 −1.120 (0.264)
How frequently does your company analyse information produced by AIS?	4.183	4.308 *−0.920* (0.359)	**4.385**	**4.106**** ***2.070*** **(0.040)**	4.236	4.267 *−0.201* (0.841)	4.178	4.317 *−1.025* (0.306)	**4.000**	**4.375***** ***−2.666*** **(0.008)**	**3.723**	**4.398***** ***−4.326*** **(0.000)**	4.197	4.314 −0.850 (0.396)
How frequently does your firm use the information produced by AIS in the decision-making process?	4.154	4.087 *0.474* (0.636)	**4.279**	**3.962**** ***2.262*** **(0.025)**	4.081	4.217 *−0.867* (0.387)	4.084	4.158 *−0.523* (0.601)	3.986	4.191 *−1.380* (0.169)	**3.617**	**4.267***** ***−3.973*** **(0.000)**	4.066	4.198 −0.918 (0.360)

See notes in Table 3.

education, more frequently use AIS to produce financial reports, analyse information and incorporate it into the decision-making process. The scores of these results are quite high in absolute terms (above 4), and the t-test of mean differences is statistically significant. Once again, managers' education appears to be a determinant of accounting systems use. Another result from this table is that firms with higher ROA are more likely to use the information provided by AIS in the decision-making process (t-stat: −1.843, *p* value: 0.067).

4.2.5. Financial statement analysis practices

In Table 9, we present the survey results related to financial analysis practices. MEs with high values of assets produce, project and analyse financial statements more frequently than smaller MEs. They also tend to use financial ratios more often and generate reports beyond the ones legally required (see Table 9 for significant mean differences and t-statistics highlighted in bold). These results support the Graham and Harvey (2001) size factor explanation of corporate finance practices. The findings also indicate that leverage is associated with the frequency of the CEO's involvement in preparing financial statements. This result might be related to the fact that more indebted firms need to be careful when preparing financial statements for the purpose of obtaining loans and other types of external financing. MEs with higher ROE are more likely to use financial statements in their decision-making process and are positively associated with the frequency of elaborating other types of financial reports and using KPIs. MEs from the services sector are more likely to project financial statements, compare actual financial statements with the projected ones, and use them in the decision-making process. These services sector MEs are also more likely to produce other types of financial reports beyond the ones legally required. An intriguing result is that MEs with fewer employees use financial ratios more frequently than MEs with more employees. One possible explanation for this result is that firms with more employees rely more heavily on non-financial ratios for performance evaluation, such as reputation, notoriety, public recognition, etc. Another interesting finding is that firms with low values of tangibility produce financial statements more frequently, compare projected financial statements with actual financial statements more frequently, and the CEO is more involved in analysing financial statements. This might indicate that MEs with higher values of intangibles, given their volatile nature, need to monitor the financial performance of those intangible assets more closely and therefore compute and analyse financial statements more frequently compared to MEs composed of more tangible assets. When examining the survey results concerning respondent education, we find that firms with higher-educated managers analyse financial statements more often and use KPIs more frequently. The results for the 'Finance education' variable are once again striking: MEs with managers holding a finance education produce more financial statements, analyse them more often, produce projected financial statements more often, compare actual financial statements with the projected ones more often, use them in the decision-making processes more often, produce facultative reports more often and use KPIs more often than firms with managers not having any finance education. Lastly, the results also show that firms with women in management compare actual financial statements to projected financial statements more frequently and use financial ratios more frequently, highlighting the role of gender diversity in small firms' management.

4.3. Results discussion by firm and manager characteristics

The survey's conditional analysis yielded several findings. Considering the diverse set of control variables utilised in the univariate analysis, we present a concise summary of the results, organised by each variable under examination in this section.

4.3.1. Sales

The survey findings indicate notable distinctions in cash and trade accounts management practices based on sales levels. Companies with high sales demonstrate a higher frequency of engaging in cash reconciliations. Moreover, MEs characterised by high sales levels tend to adhere more closely to payment policies and conduct more frequent evaluations of accounts receivable. These results underscore the impact of sales volume on shaping the cash and trade accounts management approaches adopted by

Table 9. Survey responses to questions related to financial analysis practices.

	Sales		Assets		Leverage		ROE		ROA		Services sector		Family firm	
	Low	High	Low	High	Low	High	Low	High	Low	High	No	Yes	No	Yes
Question	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)
How frequently does your company produce financial statements?	3.981	3.904 *0.473* (0.637)	**3.721**	**4.163***** ***–2.770*** **(0.006)**	3.933	3.952 *–0.118* (0.906)	3.885	4.000 *–0.710* (0.478)	3.875	4.010 *–0.829* (0.408)	3.806	3.966 *–0.700* (0.485)	3.930	4.043 *–0.439* (0.661)
How frequently does your company analyse financial statements?	4.087	4.163 *–0.524* (0.601)	**3.990**	**4.260*** ***–1.850*** **(0.066)**	4.173	4.077 *0.656* (0.513)	4.029	4.221 *–1.316* (0.190)	4.067	4.183 *–0.787* (0.432)	3.871	4.169 *–1.456* (0.147)	4.119	4.174 *–0.235* (0.814)
How frequently does your company produce *projected financial statements*?	3.731	3.529 *1.248* (0.213)	**3.490**	**3.769*** ***–1.730*** **(0.085)**	3.548	3.712 *–1.009* (0.314)	3.587	3.673 *–0.533* (0.594)	3.635	3.625 *0.059* (0.953)	**3.290**	**3.689*** ***–1.763*** **(0.079)**	3.632	3.609 *0.092* (0.927)
How often does your company compare *actual financial statements* to *projected financial statements*?	3.712	3.615 *0.553* (0.581)	3.606	3.721 *–0.664* (0.508)	3.635	3.692 *–0.332* (0.741)	3.529	3.798 *–1.556* (0.121)	3.635	3.692 *–0.332* (0.741)	**3.323**	**3.723*** ***–1.650*** **(0.100)**	3.649	3.783 *–0.483* (0.630)
How frequently does your company use financial statements in decision-making process?	3.942	3.904 *0.244* (0.808)	3.865	3.981 *–0.732* (0.465)	3.962	3.885 *0.488* (0.626)	**3.788**	**4.058*** ***–1.718*** **(0.087)**	3.846	4.000 *–0.977* (0.330)	**3.581**	**3.983*** ***–1.831*** **(0.069)**	3.930	3.870 *0.239* (0.811)
How frequently does your company use financial ratios?	3.692	3.519 *1.008* (0.315)	**3.356**	**3.856***** ***–2.965*** **(0.003)**	3.577	3.635 *–0.335* (0.738)	3.529	3.683 *–0.895* (0.372)	3.577	3.635 *–0.335* (0.738)	3.290	3.661 *–1.542* (0.125)	3.589	3.739 *–0.547* (0.585)
How often does your company produce financial reports other than the ones legally required?	3.538	3.327 *1.137* (0.257)	**3.250**	**3.615**** ***–1.976*** **(0.049)**	3.442	3.423 *0.103* (0.918)	**3.269**	**3.596*** ***–1.765*** **(0.079)**	3.356	3.510 *–0.826* (0.410)	**3.032**	**3.503*** ***–1.810*** **(0.072)**	3.416	3.565 *–0.501* (0.617)
How often does your company use key performance indicators (KPIs)?	3.529	3.356 *0.986* (0.325)	3.308	3.577 *–1.540* (0.125)	3.433	3.452 *–0.109* (0.913)	**3.279**	**3.606*** ***–1.875*** **(0.062)**	3.346	3.538 *–1.097* (0.274)	2.968	3.525 *–2.287* (0.023)	3.427	3.565 *–0.493* (0.622)
How frequently does the CEO get involved in preparing financial statements?	3.519	3.356 *0.868* (0.386)	3.433	3.442 *–0.051* (0.959)	**3.269**	**3.606*** ***–1.798*** **(0.074)**	3.452	3.423 *0.153* (0.879)	3.462	3.413 *0.255* (0.799)	3.290	3.463 *–0.654* (0.514)	3.395	3.783 *–1.295* (0.197)
How frequently does the CEO get involved in analysing financial statements?	4.106	3.904 *1.243* (0.215)	3.923	4.087 *–1.005* (0.316)	3.962	4.048 *–0.531* (0.596)	3.933	4.077 *–0.886* (0.377)	3.904	4.106 *–1.243* (0.215)	3.935	4.017 *–0.356* (0.722)	3.995	4.087 *–0.355* (0.723)

See notes in Table 3.

Table 9. (*Continued*) – Survey responses to questions related to financial analysis practices.

	Employees		Tangibility		International activity		Firm age		Respondent education		Finance education		Women in management	
	Low	High	Low	High	Low	High	Low	High	Low	High	No	Yes	No	Yes
Question	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)	Mean	Mean *t-stat* (*p* value)
How frequently does your company produce financial statements?	3.942	3.942 *0.000* (1.000)	**4.250**	**4.000*** ***1.715*** **(0.088)**	3.986	3.833 *0.855* (0.394)	3.991	3.891 *0.613* (0.541)	3.847	3.993 *−0.852* (0.395)	**3.553**	**4.056***** ***−2.629*** **(0.009)**	3.869	4.047 −1.079 (0.282)
How frequently does your company analyse financial statements?	4.048	4.202 *−1.051* (0.294)	3.702	3.558 *0.890* (0.375)	4.108	4.167 *−0.362* (0.718)	4.187	4.059 *0.870* (0.385)	**3.917**	**4.235**** ***−2.087*** **(0.038)**	**3.681**	**4.255***** ***−3.358*** **(0.001)**	4.090	4.174 −0.566 (0.572)
How frequently does your company produce *projected financial statements*?	3.692	3.567 *0.771* (0.442)	3.788	3.538 *1.444* (0.150)	3.655	3.567 *0.495* (0.621)	3.645	3.614 *0.191* (0.849)	3.500	3.699 *−1.167* (0.245)	**3.340**	**3.714*** ***−1.943*** **(0.053)**	3.541	3.756 −1.308 (0.192)
How often does your company compare *actual financial statements* to *projected financial statements*?	3.731	3.596 *0.775* (0.439)	**4.058**	**3.788*** ***1.718*** **(0.087)**	3.642	3.717 *−0.389* (0.697)	3.645	3.683 *−0.220* (0.826)	3.514	3.743 *−1.255* (0.211)	**3.383**	**3.745*** ***−1.755*** **(0.081)**	**3.533**	**3.849*** ***−1.803*** **(0.073)**
How frequently does your company use financial statements in decision-making process?	3.952	3.894 *0.366* (0.715)	3.654	3.558 *0.559* (0.577)	3.892	4.000 *−0.621* (0.535)	3.953	3.891 *0.394* (0.694)	3.806	3.985 *−1.087* (0.278)	**3.574**	**4.025**** ***−2.421*** **(0.016)**	3.828	4.058 −1.444 (0.150)
How frequently does your company use financial ratios?	**3.750**	**3.462*** ***1.687*** **(0.093)**	3.538	3.327 *1.137* (0.257)	3.622	3.567 *0.289* (0.773)	3.551	3.663 *−0.651* (0.516)	3.486	3.669 *−1.014* (0.312)	3.404	3.665 *−1.269* (0.206)	**3.443**	**3.837**** ***−2.285*** **(0.023)**
How often does your company produce financial reports other than the ones legally required?	3.510	3.356 *0.826* (0.410)	3.558	3.327 *1.318* (0.189)	3.439	3.417 *0.109* (0.913)	3.495	3.366 *0.692* (0.490)	3.361	3.471 *−0.559* (0.577)	**3.043**	**3.547**** ***−2.288*** **(0.023)**	3.320	3.593 −1.450 (0.149)
How often does your company use key performance indicators (KPIs)?	3.500	3.385 *0.657* (0.512)	3.423	3.452 *−0.153* (0.879)	3.426	3.483 *−0.297* (0.767)	3.467	3.416 *0.292* (0.770)	**3.139**	**3.603**** ***−2.550*** **(0.011)**	**3.106**	**3.540**** ***−2.086*** **(0.038)**	3.336	3.593 −1.446 (0.150)
How frequently does the CEO get involved in preparing financial statements?	3.490	3.385 *0.561* (0.575)	4.038	3.971 *0.413* (0.680)	3.432	3.450 *−0.084* (0.933)	3.458	3.416 *0.223* (0.824)	3.389	3.463 *−0.375* (0.708)	3.702	3.360 *1.524* (0.129)	3.352	3.558 −1.077 (0.283)
How frequently does the CEO get involved in analysing financial statements?	4.029	3.981 *0.295* (0.768)	**4.250**	**4.000*** ***1.715*** **(0.088)**	3.966	4.100 *−0.744* (0.458)	4.019	3.990 *0.175* (0.861)	3.792	4.118 *−1.918* (0.056)	3.894	4.037 *−0.738* (0.462)	3.984	4.035 −0.310 (0.757)

See notes in Table 3.

MEs. This result is in line with the findings documented by Graham and Harvey (2001), where size is a determining factor in how a company's finances are managed.

4.3.2. Assets

MEs with high assets demonstrate more frequent reconciliation of accounting and cash records, active engagement in credit transactions, significant involvement of CEO in receivables management activities and meticulous control of obsolete and damaged inventory. These entities enjoy easier access to external finance, regularly analyse the cost of capital and debt service impact and compare diverse loan proposals. High-assets MEs also exhibit a higher commitment to thorough investment valuation studies and decisions mainly based on theoretical knowledge. Leveraging AIS, they actively produce, project, analyse financial statements and use financial ratios for decision-making. These findings are consistent with the size factor explaining differences in corporate finance practices showed by Graham and Harvey (2001).

4.3.3. Leverage

The survey results indicate distinct patterns in the financial practices of MEs based on their leverage levels. Consistent with Myers and Majluf (1984), MEs with high leverage demonstrate a tendency for investing excess cash more frequently and engaging in more frequent computations of storage costs. This suggests that highly leveraged MEs exhibit a heightened focus on optimising their cash management strategies and operational efficiency. Furthermore, the association between leverage and the frequency of the CEO's involvement in preparing financial statements underscores the importance placed by more leveraged MEs on financial reporting, possibly driven by the need to manage debt-related obligations and maintain favourable relationships with lenders.

4.3.4. Profitability (ROE and ROA)

The survey outcomes reveal a consistent link between profitability indicators, such as ROE and ROA and various financial practices among ME. In MEs with higher ROA, CEO involvement in cash management is notably elevated, suggesting that superior financial performance aligns with more hands-on cash management strategies. Moreover, MEs exhibiting higher ROE and ROA are inclined to adopt credit-related practices, including selling products or services on credit, adhering to payment policies and analysing the value of accounts receivable. This indicates that financially successful MEs are more strategic in their trade account management. Additionally, the positive association between higher ROE and planning orders for quantity discounts underscores the financial astuteness of such firms in optimising costs. Furthermore, MEs with higher ROA showcase a heightened involvement of CEOs in investment decisions and a greater reliance on AIS for decision-making. These results are consistent with those of Graham and Harvey (2001) and Deloof (2003).

4.3.5. Services sector

With respect to activity sector, we find that MEs outside the services sector are more prone to plan orders to secure quantity discounts and more compliant with delivery schedules. Moreover, these non-services sector firms are more diligent in recording obsolete and damaged inventory. These results are expected since inventory management activities are typical of non-services firms. On the financing front, services sector ME stand out with more frequent engagement in financing activities. This includes experiencing easier access to external finance, a more frequent assessment of the impact of debt service on cash flows, and a higher frequency of comparing different loan proposals. Furthermore, MEs within the services sector demonstrate a more extensive use of financial statements in decision-making processes, projecting financial statements and producing various financial reports beyond legal requirements. These divergent financial practices suggest that the nature of the business sector significantly shapes the financial management strategies and priorities of MEs, potentially influenced by industry-specific challenges and opportunities. These results extend the results documented by Anand (2002) in which sector plays a role in shaping financial management practices.

4.3.6. Family

The survey outcomes shed light on distinctive financial practices within family MEs extending the works of Patel and Guedes (2022). Notably, family firms exhibit a higher likelihood of recording cash deficits or surpluses, suggesting a more detailed approach to cash management. Furthermore, financial activities are more frequent in family MEs, showcasing their proactiveness in securing external finance, assessing the impact of debt service on cash flows and analysing the cost of capital. The tendency of family MEs to engage in more extensive financing activities aligns with their potential emphasis on stability and long-term financial viability. Moreover, the survey reveals that family MEs are more inclined to conduct investment valuation studies, demonstrating a thorough approach to evaluating potential ventures. Specifically, the preference for using the IRR technique in investment project evaluation underscores a methodical decision-making process within family MEs, potentially driven by a focus on sustainable growth and profitability.

4.3.7. Employees

The survey results underscore the distinctive behaviours exhibited by MEs based on their workforce characteristics. Notably, MEs with a limited workforce demonstrate a higher propensity to invest excess cash more frequently than their counterparts with a larger number of employees. This finding hints at the agility and flexibility of smaller teams in navigating financial decisions, potentially driven by a streamlined decision-making process (De Kok et al., 2006). Moreover, MEs with lower levels of human capital are more attentive to inventory management tasks, evident in their frequent consideration of storage costs. This heightened focus suggests a strategic awareness of the substantial impact that effective inventory management can have on overall firm performance, potentially compensating for the lack of extensive human resources. Additionally, smaller firms, characterised by a lower number of employees, exhibit a greater frequency of investment evaluation studies and employ cash-flow forecasts more often in their decision-making. These practices may reflect the resourceful and hands-on approach necessitated by limited staffing, emphasising the importance of strategic financial planning in the absence of a large workforce. Furthermore, the preference for employing financial ratios more frequently by MEs with fewer employees suggests a reliance on quantitative metrics for performance evaluation, aligning with the notion that smaller teams may prioritise measurable financial indicators in their decision-making processes.

4.3.8. Tangibility

The survey outcomes shed light on the financial practices tied to the tangibility of assets within MEs. Notably, MEs with higher tangibility values exhibit a notable reliance on the CEO's personal experience for cash management decisions, suggesting a hands-on approach to financial decision-making in firms with more tangible assets. This trend extends to inventory management, where high tangible assets firms, often non-services entities, engage more frequently in control activities on warehouse inventory levels. Moreover, MEs with substantial tangible assets not only rely more on the CEO's own experience for inventory management but also base their investment decisions more often on the CEO's experiential knowledge. This pattern implies a preference for practical insights over theoretical considerations in MEs with a tangible asset focus (Almeida & Campello, 2007). Furthermore, the survey reveals that MEs with high tangibility values are more inclined to leverage AIS for producing financial reports and incorporating information into decision-making. On the contrary, MEs with low tangibility values showcase a heightened frequency in producing financial statements, comparing projected statements with actual ones, and involving CEOs more in financial statement analysis.

4.3.9. International

The survey findings provide intriguing insights into the distinctive financial practices of MEs with international exposure. Notably, these international MEs exhibit a higher likelihood of engaging in credit transactions for their products or services. This inclination towards credit sales may stem from the complexities of international trade relationships, where offering credit terms can be a strategic approach to attract and

retain global clients. However, a counterintuitive discovery emerges concerning investment evaluation studies, with international MEs performing these studies less frequently. The diminished frequency of investment evaluations may result from a power dynamic where smaller firms selling to major foreign corporations have less bargaining power, potentially alleviating the need for rigorous investment assessments.

4.3.10. Firm age

With respect to the age of MEs, the results reveal that younger firms exhibit a heightened inclination to perform analyses of the account 'Provision for Bad and Doubtful Debts'. This focus on assessing potential credit losses may reflect the cautious financial approach adopted by emerging businesses as they navigate uncertainties in their early stages. Additionally, the survey reveals that young firms tend to rely more heavily on the CEO's personal experience for investment decisions compared to their older counterparts. This finding suggests that the entrepreneurial managers of newer MEs may lean on their instincts and experiential knowledge when making investment choices in the dynamic and evolving landscape of young MEs. These results are consistent with those of Ilaboya and Ohiokha (2016), where younger firms exhibit more aggressive behaviour.

4.3.11. Education

The survey underscores the pivotal role of education, particularly finance education, in shaping the financial practices of MEs. Lower education levels are associated with higher scores in cash reconciliation activities and a greater reliance on the CEO's personal experience in cash management, suggesting that less educated managers may employ more hands-on, experience-based approaches to financial tasks. In contrast, MEs led by managers with higher education levels are more likely to sell products or services on credit. Moreover, higher-educated managers enjoy easier access to external finance, reflecting a correlation between education and financial reliability. The propensity of educated managers to analyse the impact of debt service on cash flows, compare different loan proposals, and employ sophisticated evaluation techniques like IRR suggests a more informed decision-making approach. This educational advantage extends to the use of AIS, where MEs led by managers with higher education levels and finance education leverage AIS more frequently to produce financial reports and inform decision-making processes. Overall, the findings highlight the empowering influence of education on microenterprise financial practices, fostering strategic decision-making and utilisation of more advanced financial tools.

4.3.12. Finance education

The survey illustrates the substantial impact of finance education on diverse facets of MES financial practices. MEs led by managers with finance education exhibit a heightened capability for financial forecasting, as evidenced by more frequent cash balance projections. This education-based advantage extends to credit practices, with finance-educated managers being more likely to sell products or services on credit. Moreover, a finance education substantially facilitates access to external finance, underscoring its role in establishing financial credibility. The propensity of finance-educated managers to actively compare different loan proposals suggests a discerning approach to financing decisions. Furthermore, these managers engage in more frequent analyses of the cost of equity and debt, indicating a comprehensive understanding of capital structure dynamics. The educational advantage extends to investment decisions, where finance-educated managers are more likely to base choices on theoretical knowledge and employ sophisticated evaluation techniques such as the IRR. Importantly, MEs led by managers with finance education demonstrate a holistic embrace of advanced financial tools, utilising AIS more frequently for financial reporting, analysis and decision-making. This overarching pattern underscores the multifaceted benefits of finance education in enhancing the financial acumen and practices of MEs. These results add new and interesting knowledge to the findings presented by Graham and Harvey (2001) and Brounen et al. (2004). Education and in particular education in finance, are of extreme importance for the level of sophistication and effectiveness in financial management practices within MEs. Our study underscores the critical role that financial literacy plays in enhancing the ability of managers to make informed and strategic financial decisions.

4.3.13. Women in management

The survey findings underscore the notable impact of gender diversity in management on various aspects of microenterprise financial practices. MEs with women in management exhibit a heightened awareness of financial dynamics, as evidenced by their increased concern with registering cash deficits/surpluses and their diligent use of cash forecasts in decision-making. Moreover, the presence of women in management correlates with a higher likelihood of selling products or services on credit, showcasing a nuanced approach to revenue generation. These MEs also demonstrate a commitment to effective inventory management, aligning inventories with forecasted sales more frequently. The influence of women in management extends to financial decision-making, with such firms being more engaged in practices like assessing the impact of debt service on cash flows, analysing the cost of capital (equity and debt) and comparing different loan proposals. Notably, MEs with women in management exhibit a comprehensive approach to investment decisions, engaging more frequently in evaluation studies, using cash-flow forecasts, involving the CEO and basing decisions on theoretical knowledge. This gender-inclusive leadership approach also manifests in financial reporting and analysis practices, as these firms are more likely to compare actual financial statements to projections, use financial ratios more frequently, emphasising the valuable role of gender diversity in shaping financial management practices in MEs (Terjesen et al., 2016).

5. Conclusion

In this article, we thoroughly investigate how MEs conduct their corporate finance functions. We survey these firms on cash, accounts receivable and inventory management practices. Additionally, we inquire about their financing and investing decisions, as well as how they utilise AISto analyse their financials.

The survey unveils hands-on CEO involvement in cash management and careful attention to accounts receivable in MEs. Although they use AIS for financial reporting, the use of financial ratios is infrequent. Also, these companies do not frequently compute the cost of capital and primarily use the payback rule as an investment decision criterion.

With respect to the conditional results, the survey findings provide insights into the financial management practices of MEs, revealing that factors, such as size (measured by asset value), managers' education, especially in finance, significantly influence the sophistication of corporate finance functions. Additionally, management diversity is a key driver across various financial functions, and family businesses exhibit heightened concern for these financial aspects. Furthermore, distinct financial management practices are observed based on firm age, sector, international exposure, leverage and workforce.

In general, this study reveals that MEs, due to their small size, encounter difficulties in applying more advanced financial analysis and management techniques. These findings support our basic hypothesis that small companies employ more rudimentary financial management techniques, reinforcing the concept of their 'Liability of Smallness'.

With respect to policy implications, this study underscores the importance of promoting financial education for ME managers to enhance their financial management practices. Developing educational programs that cover WCM, investment decision-making and the use of AIS can significantly improve financial literacy, leading to better performance and sustainability for MEs. Furthermore, the findings reveal that many MEs rely on simpler financial methods, indicating a need for policymakers to support the adoption of advanced financial management tools. This can be achieved through subsidies, grants, and training programs to facilitate the use of financial software and techniques. Additionally, MEs, particularly those with limited assets, face difficulties in accessing external finance. To address this, policies should improve the availability of financing options through microfinance programs, collateral support, and connections with potential investors, alongside offering more flexible loan terms and lower interest rates to ensure the growth and stability of MEs.

This research work possesses several limitations. First, the number of responses is relatively small compared to the population of Portuguese ME, which is approximately 1.2 million (Pordata, 2019). The fact that we only selected companies with an email address may introduce some bias, as it excludes many micro-entrepreneurs who do not have an email address. This limitation could impact the generalizability

of our findings, as the sample may not fully represent the broader population of Portuguese MEs. We were able to obtain contact information from only around three thousand companies, with responses received from 208 MEs. Due to this limited response pool, we opted for a univariate analysis of the results. Despite exploring various variables, it is important to note that many of them exhibit correlations, potentially exposing spurious relationships between these variables and the financial management practices under scrutiny. However, beyond the size effect extensively examined in the literature, the analysis conducted reveals significant findings concerning the impact of education, especially in the field of finance, as a determinant of the sophistication of financial management practices. Family businesses also display distinct characteristics in their financial management approaches. Future research should aim to overcome these limitations by including a broader range of MEs managers.

Future studies could explore a broader range of ME managers by incorporating a more diverse set of educational backgrounds, managerial experience and industry types. This would provide a clearer and more comprehensive view of how different managerial profiles impact financial management practices in MEs.

Acknowledgements

The author gratefully acknowledges financial support from FCT – Fundação para a Ciência e Tecnologia (Portugal), national funding through research grant UIDB/04007/2020. Author wish to express profound appreciation to Maria João Guedes and Joana Braga for their invaluable research assistance and useful insights to an early version of this article. Author is also sincerely grateful for the insightful and constructive feedback provided by the three anonymous reviewers, whose suggestions have greatly improved the clarity, quality and overall impact of this article.

Author contribution

Paulo Morais Francisco conducted all aspects of this research. He developed the core research question, study design, and methodological approach (conceptualisation, methodology). Paulo carried out data analysis, literature review, and investigation, producing the study's main insights (Formal Analysis, Investigation). He drafted and refined the manuscript, ensuring clarity and coherence (Writing – Original Draft, Review & Editing) and created visual representations of the findings (visualisation). All authors have approved the final manuscript.

Disclosure statement

There are no interests to declare.

Funding

This article is financed by national funds of the FCT – Portuguese Foundation for Science and Technology within the project UIDB/04007/2020.

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Data availability statement

Data available on reasonable request from the corresponding author.

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