

Quality of Accounting Information and SMEs' Financial Performance: The Mediating Role of Bank and Informal Financing

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**This article is accepted for publication in
*Research in International Business and Finance***

To be cited as:

Bugandwa Ciza T., Kala Kamdoug J.R., Biga-Diambeidou M., Tchokote I.D., Birindwa Kibekenge G. (2025). Quality of Accounting Information and SMEs Financial Performance: The Mediating Role of Bank and Informal Financing, *Research in International Business and Finance*. In press

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Abstract

This study examines the relationship between the use of the quality of accounting information and the financial performance of small and medium-sized enterprises (SMEs), focusing on the underlying intermediary mechanism, namely access to bank and informal finance in the process. We processed data from 331 SMEs in the Democratic Republic of Congo (DRC) with a structural equation model and our results show that the quality of accounting information positively affects the financial performance of SMEs and access to bank financing; the results suggest informal financing positively affects the financial performance of SMEs and access to formal financing. We also find that using accounting information can lead SMEs to pay attention to informal finance, which negatively affects their overall financial performance. Our research contributes to understanding the critical role that informal finance plays in the performance of SMEs and their access to formal finance in DRC and similar financial environments in vastly underexplored African contexts where a thriving banking sector coexists with various informal financing alternatives.

Keywords: *financial performance, SMEs, accounting information, bank financing, informal financing, Africa*

1. Introduction

Accounting information is an essential resource for the management of a company (Marius, Denisa, & Florina, 2012; Tchapnga, 2016). Accounting information comprises information derived from data from general accounting, costing systems, budgeting systems, and monitoring systems (Chapellier, 1997). The source of accounting information is, therefore, the accounting data that constitute its raw material (Ngongang, 2005; Tchouassi, 2017). The production of accounting data and the use of the resulting information for decision-making define accounting practices (Chapellier, 1997). Research on the accounting practices of small and medium-sized enterprises (SMEs) has produced mixed results (Chapellier, 1997). While some authors believe that SME managers rely more on intuition and make very little use of accounting and financial information

(Chapellier, 1997; Moussa, 2020), an increasing number of recent studies show that SME managers are aware of the value of accounting information and use it in the management of their companies (O Tanor Dieng, 2018; Kueda & Ngassa, 2019; Pacôme, 2020).

Accounting information can be critical to firms' access to finance. African SMEs have difficulty accessing external finance due to the lack of transparent information about their activities (Beck & Demircug-Kunt, 2006). Because of this opacity of information, banks perceive these SMEs as too risky and thus ration credit. Without proper financing from banks, these companies must seek alternative means of funding where information opacity does not necessarily inhibit access. The absence or poor quality of financial information means that SMEs sometimes resort to certain types of financing, such as supplier credit (Dhieux, Severin, & Vigneron, 2015; Khan, 2022). Accounting and financial information quality impacts whether SME managers can access external financing at a lower cost (Sarapaivanich & Kotey, 2006).

Beyond facilitating access to external financing, accounting information influences the performance of SMEs (Alnajjar, 2017). By tracking the costs generated by the company in the pursuit of its objectives, accounting information is essential for evaluating company efficiency (Marius et al., 2012). It provides managers with information critical to operational decisions (O Tanor Dieng, 2018).

Several studies analyse the relationship between the use of an accounting system and a firm's performance, which includes financial, marketing, production, human aspects, etc. (Al-Delawi & Ramo, 2020; Marius et al., 2012). However, work that explores the intermediary mechanism and, specifically, the role of access to different types of financing in the relationship between the quality of accounting information and SME financial performance is scarce. SME financial performance refers to assessing how well SMEs manage their financial resources and achieve operational, tactical, and strategic business objectives (Gerba & Viswanadham, 2016).

This paper seeks to fill this gap in the literature. Our work contributes to the discussion about the relationship between the use of accounting information and the financial performance of SMEs by considering 1) the role the quality of accounting information plays in accessing different types of financing; and 2) the underlying intermediary mechanism, namely access to bank and informal finance, in the quality accounting information–SMEs financial performance relationship. Our work asks the following research questions: (1) How does the quality of accounting information affect the financial performance of SMEs? (2) Does access to finance (i.e. Bank and Informal finance) mediate the relationship between the quality of accounting information and SME financial performance?

To answer these research questions, we surveyed a sample of 331 managers of SMEs in the Democratic Republic of Congo (DRC). The DRC offers an ideal economic context for this study, with its high proportion of SMEs operating in the informal sector leading to various informal financing alternatives compared to bank financing. A census conducted by the National Institute of Statistics shows that more than 90% of businesses operating in the DRC are not registered with the state and, therefore, do not have a business registration number, a national identification number, or a tax identification number ([INS, 2022](#)). Furthermore, DRC SMEs have long evolved on the margins of accounting. The use of accounting information is beginning to take hold in this sector with the advent of the Organisation for the Harmonisation of Business Law in Africa (OHADA) accounting system in the country. However, SMEs still struggle to adopt and use this system to produce reliable accounting information ([Banque Mondiale, 2010](#); [Iragi & Cirhuza, 2021](#); [Safari & Nshobole Bahirwe, 2018](#)).

Our study, conducted through a combination of email surveys and online forums, involved a comprehensive questionnaire on the accessibility of different financing types (Bank and Informal financing), the use of accounting information, and financial performance. The robustness of our findings is underpinned using a partial least squares structural equation model (SEM-PLS) in data analysis.

Our results show that the accounting information positively influences SMEs' financial performance and access to bank financing. The use of accounting information has a negative influence on the use of informal financing. Our work reveals a positive influence of informal financing on financial performance and access to bank financing. Overall, this research argues that SMEs in the DRC that incorporate disruptive social finance into their strategic financing, combining bank and informal financing, tend to be more successful and receive more funding than their peers.

This study contributes to research with empirical evidence from a particular context where a thriving banking sector coexists with various informal financing alternatives. Our analysis demonstrates how the use of accounting information is an important variable that explains access to different sources of finance. The literature suggests that accounting information reduces information asymmetry and promotes SME access to formal financing ([Sarapaivanich & Kotey, 2006](#); [Yifu & Xifang, 2006](#)). However, this relationship has yet to be studied in a context where accounting information is unreliable.

This study provides an in-depth understanding of the financing strategies of SMEs in the DRC. It highlights certain variables likely to improve SMEs' access to bank financing and helps to understand the reasons for using informal financing, leading to a better SME financial performance. In fact, informal financing is widely used by small

businesses. This is especially true in a context where access to bank financing is limited (Allen et al, 2019). This study's results can guide policymakers in promoting the use of accounting information and access to finance. They can also guide SME managers in their decisions.

The next section presents the conceptual framework, and the subsequent section describes the methodological approach. Sections four and five present and discuss our results. Finally, we investigate our work's theoretical and empirical implications and explore avenues for further research.

2. Conceptual framework

This research is based on the agency theory, which posits that relationships between various actors in a company arise from potential conflicts of interest and that the objective of each actor is to maximize individual interest (Jensen, 1986). Conflicts of interest result from asymmetric information leading to opportunistic behaviour (Lin, Song, Sharma, & Lee, 2020). In accounting, the agency relationship comprises two layers. On the one hand, there are the relationships between shareholders and managers, and on the other, the relationships between managers and creditors (Bajaj, Kashiramka, & Singh, 2021; Mounir, 2022).

2.1. High-quality of accounting information and SMEs' financial performance

A typical agency relationship in any SME is between creditors and the manager (Adair & Adaskou, 2011; Mounir, 2022). Ownership is often concentrated in the hands of the owner-manager in SMEs, increasing the risk of opportunism (Adair & Adaskou, 2011; Wamba & Lontsi, 2022). The owner-manager alone possesses all the information about the company and does not always agree to disclosing reliable information to banks (Mounir, 2022). Such information asymmetry presents a potential moral hazard to banks; lending to larger companies is preferable. This situation accentuates the difficulties of SMEs' access to finance (Lin et al., 2020). As a result, information asymmetry deprives SMEs of a vital resource (Abu Bakar & Ahmad, 2016; Talebi, Rezazadeh, & Najmabadi, 2015).

Extant management literature emphasizes the link between the quality of accounting information and firm performance. Without the intention of being exhaustive, we can highlight this relationship in SMEs in the sub-Saharan context. The use of

accounting information allows SMEs to reduce information asymmetry. Accounting information covers costs generated by the firm in pursuit of its objectives, which is essential in evaluating the efficiency of firms (Marius et al., 2012). Managers use accounting information to make decisions; accounting can play a crucial role in company operations and help assess the evolution of company performance (Ousmane Tanor Dieng, 2019).

Furthermore, high-quality accounting information influences performance in specific measures (Mbumbu & Muzita, 2020). In a study of Cameroonian SMEs, Ngongang (2005) Ngongang (2005) Ngongang (2005) Ngongang (2005) Ngongang (2005) Ngongang (2005) finds that certain SME accounting practices positively and significantly influence their performance. Several other studies corroborate these results (Bélaïd & Bergeron, 2006; Domeher, Musah, & Hassan, 2017). In analysing the impact of accounting and financial information on the efficiency of SMEs, Ngongang (2005) Ngongang (2005) Ngongang (2005) Ngongang (2005) Ngongang (2005) highlights a significant positive relationship between the quality of accounting information, the use of this information, and the performance of SMEs. Mohammed Nabil and Hind (2022) show in their research that structure and governance mechanisms designed to frame the quality of accounting and financial information generate significant profitability for the company and consequently reflect a high level of economic performance. Lavigne and St-Pierre (2002) Lavigne and St-Pierre (2002) Lavigne and St-Pierre (2002) Lavigne and St-Pierre (2002) Lavigne and St-Pierre (2002) conclude that an accounting information system adapted to the needs of the SMEs influences the latter's performance. Accounting gives managers the information they need to make more informed decisions and improve their organizations' financial performance (Argiles & Slof, 2003). Accounting information is increasingly valuable when it is of good quality (Monteiro, Vale, Silva, & Pereira, 2021). We thus hypothesize that:

H1: The use of high-quality accounting information' positively and significantly influences the financial performance of SMEs.

2.2. High-quality of accounting information and financing access

SMEs often experience difficulties accessing formal financing because the perception of significant information asymmetry affects their relations with a central provider of external resources, the banks (Haidara, Cisse, & Kaka, 2023). One of the main reasons why SMEs struggle to access external financing is the need for more financial information about their activities (Beck & Demirguc-Kunt, 2006). Banks experience an opacity of information within SMEs, deem SMEs as too risky for investment, and deploy

credit rationing. Some previous studies suggest that this credit rationing of SMEs can be reduced by improving the quality of accounting and financial information. For example, Feldman and Francis (2002) Feldman and Francis (2002) Feldman and Francis (2002) Feldman and Francis (2002) Feldman and Francis (2002) show that the cost of capital and the cost of debt decrease as the quality of accounting information increases. Other authors conclude that firms with low accounting quality incur higher financial costs, use short-term debt more frequently, and must provide more collateral (Bharath, Sunder, & Sunder, 2008; Easley & O'Hara, 2004). Smith (1987) Smith (1987) Smith (1987) Smith (1987) Smith (1987) Smith (1987) concludes that since the quality of financial information reduces information asymmetry, it affects firms' financial decisions. Regardless of the quality, studies have shown that the simple use of accounting information has a positive effect on the performance of small enterprises (Cele, Nyide, & Stainbank, 2022; Yanto, Kiswanto, Pramono, & Jati, 2020).

H2a: Using high-quality accounting information positively and significantly influences access to bank financing.

The absence or poor quality of financial information sometimes forces SMEs to use certain types of financing, such as supplier credit (Dhieux et al., 2015). Without bank-required information, these firms seek other more accessible means of financing, namely informal financing. The quality and quantity of accounting and financial information influence the financial structure of SMEs (Van Caneghem & Van Campenhout, 2012). The lower quality of accounting and financial information hinders the access of SME managers to external financing at a lower cost (Sarapaivanich & Kotey, 2006). A study conducted on 129 developing countries highlights a positive relationship between the quality of accounting and financial information and SMEs' access to several sources of financing (Chit, 2019). Thus, we hypothesize that:

H2b: Using high-quality accounting information negatively influences the use of informal financing.

2.3. Access to financing and performance of SMEs

Since the use of accounting information influences access to different types of financing, the different type of financing an SME uses may mediate the relationship between accounting information and financial performance. Studies focusing on the relationship between access to formal finance and performance highlight the positive impact of access to finance on SME performance. In a study conducted using data collected in 30 African countries, Fowowe (2017) Fowowe (2017) Fowowe (2017)

Fowowe (2017) concludes that difficulties in accessing bank financing impede the growth of African SMEs. He gives evidence of a significant relationship between African SME growth and access to formal financing, adopting both a subjective and objective measure of access to finance and accounting for financial and non-financial performance indicators. According to this study, improving access to finance would improve the performance of SMEs. After taking a similar approach to data from 119 developing countries, Wang (2016) Wang (2016) Wang (2016) Wang (2016) Wang (2016) Wang (2016) Wang (2016) also concludes that access to finance is perceived to be the biggest obstacle to the growth of SMEs. Within-country studies based on survey questionnaires yield similar results. Based on a survey of 320 SME managers in Kenya, Onyiego et al. (2017) Onyiego, Namusonge, and Waiganjo (2017) Onyiego, Namusonge, and Waiganjo (2017) Onyiego, Namusonge, and Waiganjo (2017) Onyiego, Namusonge, and Waiganjo (2017) also conclude that access to finance positively influences SMEs' financial performance. Multiple other studies concur that bank financing positively and significantly influences the performance of SMEs (Domeher, Musah, & Poku, 2017; Esubalew & Raghurama, 2020; Nyaga, 2020).

Despite the proven positive impact of bank finance on firm performance, African SMEs' access to bank finance remains limited for several reasons, including the lack of collateral required by banks, the lack of information on SME solvency, and the weakness of the relationship between the bank and the SME (Quartey, Turkson, Abor, & Iddrisu, 2017). This limited access has led many of these SMEs to seek alternative sources of financing, primarily of an informal nature, to develop their activities. The consequence of this situation is a very high bankruptcy rate in the African context and minimal expansion possibilities. Many SMEs that survive will stay within the same geographically limited customer base, offering the same products and services over a very long period. Hence, SMEs need access to bank credit in the early stage as a lever to boost performance (operational, strategic, financial, etc.) (Arcuri & Levratto, 2020). Thus, we hypothesize that:

H3a: Access to bank financing has a significant positive influence on SMEs' financial performance.

Studies reviewing the impact of informal financing on SME performance have mixed results (Aryeetey, Senbet, & Udry, 1997). Some studies argue that these types of financing positively influence firm performance (Mutie, Muturi, & Njeru, 2020; Priyadharsan, 2019), while others argue that informal financing hurts performance (Mutsonziwa & Fanta, 2021). Additionally, due to the high cost and short maturities associated with informal financing negatively impacts SMEs' performance (Cowling, Liu, & Zhang, 2018). A study of over 10,000 micro, small, and medium enterprises in sub-

Saharan Africa shows a poor performance of SMEs using informal finance compared to those with access to formal finance (Mutsonziwa & Fanta, 2021). In contrast with this research, other studies determined that there is a positive relationship between informal finance and the performance of SMEs. Priyadharsan (2019) Priyadharsan (2019) Priyadharsan (2019) shows that informal finance has a moderate influence on the performance of SMEs, promoting their creation. A study in Kenya concludes that informal finance has a positive and statistically significant impact on SME performance (Mutie et al., 2020). However, this same study highlights that, despite its positive influence on performance, informal finance has a high cost that limits its use. However, informal finance has advantages that are not negligible, such as accessibility. This is not insignificant in a context where financing is seldom an asset for SMEs (Woldie, Isaac Mwita, & Saidimu, 2012). Therefore, informal finance remains more accessible to SMEs for two main reasons. On the one hand, informal lenders such as family and friends have sufficient information about the business and the entrepreneur. On the other hand, interpersonal relationships between informal lenders and SME managers mean that both parties understand each other's activities and management mechanisms (Van Song et al., 2022). Thus, we hypothesize that:

H3b: Access to informal finance has a positive and significant influence on SMEs financial performance.

2.4. Use of informal financing and access to bank financing

A preference for bank finance has been highlighted in studies of SME financing preferences (Kent Baker, Kumar, & Rao, 2020; Zabri, Ahmad, & Lean, 2015). This preference can be explained by the fact that banks offer large amounts of credit, a degree of legal credibility, and other financial services, such as access to current accounts (Beck, Demirgüç-Kunt, & Maksimovic, 2008). The use of informal finance is more prevalent in areas where access to bank credit is difficult (Allen, Qian, & Xie, 2019). Informal financing thus emerges as a more accessible alternative. Despite a preference for bank financing, SMEs are often denied bank credit due to their weak finances, collateral requirements, formalities, and other characteristics of bank credit, such as high interest rates (Hunjra, Azam, Bruna, & Taskin, 2022; Kent Baker et al., 2020). However, the use of informal finance is different from bank finance. Informal financing can facilitate the development of formal financing (S. Tang & Guo, 2017). Degryse, Lu, and Ongena (2016) identified a complementarity effect between formal and informal finance amongst Chinese firms.

The reality in SME activities teaches us that SME financing generally takes place in two phases. The first phase occurs during the SME's initial period of life when it

presents a high level of risk for the banking sector, and only the informal sector is likely to grant credit. The second phase, however, is a long-term commitment. It is bank financing, which is generally more accessible to SMEs with a proven track record in their economic context, notably regarding management quality and financial stability over a substantial period (Nguyen & Canh, 2021). This steady support is a key part of the sustainability of SME development. Therefore, informal finance is essential to the development of SMEs. Thus, we propose the following hypothesis:

H4: Access to informal finance positively influences access to bank finance.

2.5. The mediating role of finance access in the relationship between use of high quality accounting information and financial performance

Accounting information plays a vital role in the management of organizations. It provides the company's management with the necessary information for performance management and reassures other stakeholders about the company's value creation (Hla & Teru, 2015). The quality of accounting information, heavily influenced by accounting practices, is a key determinant of SME access to finance (Ikem, Chidi, & Titus, 2012). The literature argues that the absence of high-quality accounting information creates an information asymmetry, hindering SMEs from accessing necessary external resources for their performance (Abu Bakar & Ahmad, 2016; Talebi et al., 2015).

On the one hand, given the financial information banks require when granting credit, it is logical to assume that SMEs accessing bank credit will likely have a sound accounting information system (Flayyih, Mohammed, & Talab, 2019). In informal financing, on the other hand, the existing literature maintains that access to funding depends on social proximity between borrower and lender (Aryeetey, 2005). This situation will be unlikely to encourage SMEs to establish a reliable accounting information system. The following hypotheses, if proven, could significantly impact the financial strategies of SMEs:

H5a: Access to bank financing positively mediates the relationship between using accounting information and financial performance.

H5b: Access to informal financing negatively mediates the relationship between using accounting information and financial performance.

Figure 1 below summarises the relationships between the study variables

<<Insert Figure 1 here>>

3. Methodology

3.1. Study context

The results of this study are in the form of a survey of SME managers in the DRC. As initially explained in the Introduction (Section 1), the context choice also lies in that, as in many African countries, the informal sector dominates the Congolese economy. Next, the DRC possesses a poorly developed financial system where access to bank financing is restricted (Demirgüç-Kunt, Klapper, Singer, Ansar, & Hess, 2020). Significant challenges in producing accounting and financial information characterize the DRC (Banque Mondiale, 2010). To thrive in this context, many SMEs resort to alternatives such as informal financing, including family assistance, tontines, donations, grants, etc. (Beck et al., 2008; Fowowe, 2017). The DRC has recently adopted the OHADA accounting system to help address these structural challenges, including the transition from informal to formal financing. However, the appropriation of this system still poses problems to companies (Banque Mondiale, 2010; Iragi & Cirhuza, 2021; Safari & Nshobole Bahirwe, 2018). The DRC represents a unique and interesting context of exploratory study for contributing to the literature in our research field.

3.2. Operationalization of concepts

3.2.1 Financial performance

Financial performance indicates whether the firm's strategy and implementation will increase shareholder wealth (Jovanovic, 2012). SME financial performance refers to assessing how well SMEs manage their financial resources and achieve their operational, tactical, and strategic business objectives. Financial performance covers several dimensions: profitability, liquidity, solvency, efficiency, and growth. It is measured sometimes by objective indicators, sometimes by subjective indicators, and/or by a combination of both (Chong, 2008; Gerba & Viswanadham, 2016). The objective approach uses indicators such as sales growth or return on investment (ROI) the company provides. The subjective approach looks at the same indicators but considers the level of performance that managers self-report (Gauzente, 2000). This study opted for a subjective measure of financial performance using a measurement scale inspired by previous work (Bugandwa Mungu Akonkwa, Bahati Mukulu, Bugandwa Ciza, Mwaza, & Lunanga, 2021; Delaney & Huselid, 1996; Mason, Floreani, Miani, Beltrame, &

Cappelletto, 2015; Van Looy & Shafagatova, 2016). This approach is most appropriate for measuring the financial performance of SMEs in the DRC context. Indeed, companies may sometimes report false quantitative indicators of financial performance to avoid taxes or due to inadequate financial skills (Gerba & Viswanadham, 2016).

3.2.2 *Quality of accounting information*

Accounting information is all the accounting and financial data needed to make organizational decisions (Tchapnga, 2016). In this research, the specific focus lies on the use of the quality of accounting information. According to Schipper and Vincent (2003) Schipper and Vincent (2003), quality accounting information is employed to assist the users of information to make beneficial decisions. Hence, the quality of accounting information is very important because it will affect the capital providers and other stakeholders in making decisions (Beest, Braam, & Boelens, 2009). To measure the quality of accounting information variable, we rely on a robust and reliable measurement scale, the degree/frequency of accounting disclosure proposed by (O Tanor Dieng, 2018). In a study on the influence of the SME manager's profile on the use of accounting information in the Senegalese context, the author surveyed 59 SMEs, revealing that the types of accounting information used are related to costs, annual accounts, and the budget.

3.2.3 *Access to financing: Bank and informal financing*

We define access to finance as the ability of individuals, households, entrepreneurs, and businesses to access and use a range of financial services if they so choose (Rojas-Suarez, 2010). The literature cites several sources of financing that SMEs can use – bank financing, informal financing, donation, equity, etc. – characteristics universal to different financing models (Bello, 2017; Ibidunni et al., 2018; Kent Baker et al., 2020). Two broad categories group external funding: financing from banks and/or microfinance institutions versus other financing alternatives grouped as informal financing. Beck et al. (2008) Beck et al. (2008) Beck et al. (2008) Beck et al. (2008) Beck et al. (2008) Beck et al. (2008) state that informal finance includes tontines, loans from friends and family, loans from unregistered borrowers, and supplier credit. This refers to financing that occurs within social or business networks without involving a formal financial intermediary (Allen et al., 2019).

3.3. Sample and data collection

3.3.1 *Design of the survey questionnaire*

Building on the approach adopted to operationalize study variables (Section 2.2), we designed a survey questionnaire to collect information on the diverse variables. The questionnaire consists of two sections: one on general business information and one on the measurement of the variables. The first section asked SME managers whether or not their company was registered with the existing public framework of the Congolese government (whether it had a business registration number or a patent). This question allowed us to distinguish between formal firms (i.e. business and economic activities under the supervision of the DRC government) and informal firms (those that are not registered and do not come under the regulation of the DRC government). Other questions in this section focused on the sector of activity, number of employees, and length of time in business. The constructs 'use of quality of accounting information', 'formal financing', 'informal financing', and 'financial performance' were measured in the second part of the questionnaire. We used a 5-point Likert scale to measure these constructs (the questionnaire is available under request).

3.3.2 Pretest of the questionnaire

We pursued the pretesting of the questionnaire in two phases. First, we submitted the questionnaire to three experts in the field of entrepreneurial finance to ensure the nominal value of all constructs used. The objective was to verify the items contained in the questionnaire are relevant to measure the construct to which they refer and whether these items cover the different facets of this construct in the research environment. The second phase of the pretest sought to verify that the questions were straightforward and contained the same meaning for all respondents. With this aim, we submitted the questionnaire to 10 SME managers of various profiles and asked each individual to answer and comment on their understanding of each question.

3.3.3 Calculation of the minimum sample

The sample size is a critical consideration in studies that use structural equation modelling following the PLS-SEM approach (J. Hair, Hult, Ringle, & Sarstedt, 2022) to ensure the statistical validity of the results. A sample size that is too small may not reveal certain significant relationships within the study population (Hair Jr, Matthews, Matthews, & Sarstedt, 2017). It can also lead to results that differ from those obtained from another sample. To determine the sample size, we used the G*Power software. This software allows us to determine the sample size while considering the power of the statistical tests (Bourque, Blais, & Larose, 2009). The use of this software requires the following information: effect size; probability of error; power of the effect; number of predictors; or latent explanatory variables. The present study seeks to explain perceived

performance based on three explanatory variables with a probability of error of 0.05. We set the power of the effect at 0.80 and the effect size at 0.15 following the recommendations of (J. Hair et al., 2022). From these data, G*Power indicates a minimum sample size of 77 respondents.

3.3.4 Pilot test

The pilot test phase ensures that the model is robust on a part of the sample. This test makes it possible to verify the validity and reliability of the constructs used before the end of the survey. Analyses carried out at this level allow for eliminating items that deteriorate model quality. For the present study, the pilot test included the first 50 respondents and led to the deletion of four items.

3.3.5 Data collection

We performed data collection electronically using Google Forms. To reach the respondents, we emailed the questionnaire to SME managers and shared it via relevant online forums (WhatsApp Group, Facebook Group, Telegram Group, etc.). Each time, we asked respondents to share the questionnaire with other SME leaders in their directory who fitted the profile. During the data collection (August 19, 2020, to October 29, 2020), 331 individuals completed the online questionnaire on the Google Forms platform. We approached known profiles and asked for their participation and endorsement in sharing the survey, so we are confident in the relevance of the participants. We ensured anonymity to heighten honesty. This sample size is well above the minimum thresholds calculated using G*Power (77).

3.4. Data processing

SmartPLS 4 software supported data processing. Structural equation modelling uses the partial least squares approach (PLS-SEM) to test hypotheses and validate measurement scales. This multivariate analysis technique enables analysis of the relationship between latent variables and their measures and the relationships between different latent variables in a research model (Hair Jr et al., 2017). It allows for the simultaneous measurement of multiple dependency relationships. We analysed our research model in two phases following the recommendations of Manley et al. (2021) Manley, Hair, Williams, and McDowell (2021) Manley, Hair, Williams, and McDowell (2021) Manley, Hair, Williams, and McDowell (2021) Manley, Hair, Williams, and McDowell (2021): (1) evaluation of the

measurement model; and (2) evaluation of the structural model. The measurement model analysis ensures that the items selected in a measurement scale measure the latent construct to which they refer. We ensure this through evaluating reliability, convergent validity, and discriminant validity. Internal consistency and reliability were assessed from the extraction of external loadings, VIF, Cronbach's alpha, composite reliability (CR), rho, and mean-variance. Discriminant validity was assessed through the Fornell and Larcker criterion and HTMT indices. Examining the r^2 , f^2 , Q^2 , the structural coefficients, and the significance of the structural coefficients, PLS-predict, and the Importance of Performance Map Results (IPMA) allowed for the structural model evaluation.

4. Results

4.1. Profile of SMEs

Table 1 gives the profile of the SMEs surveyed. More than half of surveyed SMEs operate in the informal sector. More than 80% of the businesses surveyed are under five years old, work in the commercial sector, and employ fewer than five people.

<<Insert TABLE 1 here>>

4.2. Analysis of the measurement model

The measurement model's analysis is conducted by verifying the validity and reliability of the constructs.

4.2.1 Assessment of reliability (internal consistency) and convergent validity

The following criteria encouraged an evaluation of reliability and convergent validity: external loadings; VIF; Cronbach's alpha; CR; rho; and average variance extracted (AVE).

<<Insert TABLE 2 here >>

These results indicate strong validity and reliability of the constructs used. The AVEs are above 0.5 for all the measured constructs and range between 0.58 and 0.73. The indicators of composite reliability are well above 0.7 and vary between 0.85 and 0.95. Cronbach's alpha's are all above 0.7. All loadings are above the 0.7 threshold. All VIFs

are close to 3, indicating no collinearity problem. These items suggest that the constructs included in the model have good reliability and convergent validity.

4.2.2 Assessment of discriminant validity

Assessing discriminant validity tests how each construct differs from the other latent variables in the model (J. F. Hair, Risher, Sarstedt, & Ringle, 2019). The assessment compares correlations between constructs to their cross-sectional contributions to ensure that the variance shared between latent variables (measured by the correlations between constructs) is less than the variance shared by a construct with its indicators (measured by the square root of the mean variance extracted). Since this approach has limitations when the loadings of the indicators are close (J. F. Hair et al., 2019), we use the HTMT criterion to complement (Manley et al., 2021). Table 3 presents the results:

<<Insert TABLE 3 here>>

This table shows that the constructs present excellent discriminant validity. All the correlations between the constructs are lower than the square roots of the AVEs as required by the Fornell and Larcker criterion.

<<Insert TABLE 4 here >>

4.2.3 Common method bias

This study endeavours to reduce the common method bias (CMB) when the independent and dependent variables under evaluation risk conflation through appropriately constructed interviews with entrepreneurs leading SMEs. These managers are familiar with aspects related to using high-quality accounting information in their company, have access to different financing types, and can objectively assess their organization's financial performance. As recommended by (Kock, 2015), this study also tests the full collinearity variance inflation factors (VIFs) to identify possible CMB. Table 5 shows that the VIFs for all constructs are less than 3.3, indicating that the model does not have a CMB.

<< Insert TABLE 5 here>>

4.3. Analysis of the structure model

4.3.1 Hypothesis testing

We observe p-values and student's T for the endogenous variables to test our hypotheses. Our results (see Table 6) show that quality accounting information positively influences Financial Performance ($\beta=0.289$; Sig=0.000). Furthermore, informal financing significantly influences the performance of SMEs ($\beta=0.302$; Sig=0.000). The relationship between access to bank financing and financial performance is insignificant ($\beta=-0.011$; Sig=0.815). The results also show that the use of quality accounting information negatively influences the use of informal financing ($\beta=-0.225$; Sig=0.000) but has a positive influence on the use of bank financing ($\beta=0.148$; Sig=0.020). Using informal finance facilitates access to bank finance ($\beta=-0.254$; Sig=0.000).

<<Insert TABLE 6 here>>

The mediator effect was analysed following the procedure recommended by Hair Jr et al. (2017). Table 7 indicates an indirect effect between the use of quality accounting information and the financial performance of SMEs with informal financing ($\beta=-0.071$; Sig = 0.000). The negative indirect relationship between the use of quality accounting information and financial performance indicates the existence of a competitive mediation by informal financing. The mediating role of bank financing is insignificant ($\beta=-0.007$; Sig = 0.5). Figure 2 sums up the results of the study model tested.

<<Insert TABLE 7 and FIGURE 2 here>>

Table 8 shows the results on R-square and Q-square. The R-square indicates the model's explanatory power and to what extent the explanatory variables retained in the model explain the independent variable. All R-squares are weak (Financial Performance 0.133; Bank Financing 0.07; Informal Financing 0.05). The Q-square analysis indicates that all explanatory variables retained in the model have predictive relevance. All

constructs have Q squares greater than 0 (Bank Financing 0.027; Financial Performance 0.084; Informal Financing 0.025).

<< Insert TABLE 8 here>>

Table 9 shows that the model has low predictive power. All indicators have higher root mean squared errors (RMSE) under PLS than in a linear regression model.

<< Insert TABLE 9 here>>

Table 10 presents the IPMA results. IPMA identifies the exogenous variable that is more relative to a target endogenous variable but has relatively lower performance (J. Hair et al., 2022). The Informal Finance variable has the highest relative importance (0.207) and the lowest relative performance (30.019). Additionally, Bank Financing, which has a negative performance (-0.019), negatively impacts Financial Performance, even if its weak importance mitigates this impact (3.300).

<< Insert TABLE 10 here>>

Table 11 indicates the presence of small effect sizes for all exogenous variables except for the bank financing variable. The thresholds for assessing effect size are 0.02 small, 0.15 medium, and 0.35 large effects (J. Hair et al., 2022).

<< Insert TABLE 11 here>>

5. Discussion of the results

5.1. Quality accounting information and SMEs financial performance

This study indicates that when an SME frequently uses accounting and financial information, this positively influences its financial performance. This result aligns with the conclusions of several previous works, such as those of (Bélaïd & Bergeron, 2006; Ngongang, 2005; Tchapnga, 2016). The more an SME uses quality accounting and

financial information, the better it controls its activity. It can, therefore, better allocate resources and improve overall efficiency. Analysing quality accounting information allows SMEs to detect weaknesses in their operations and improve performance. Quality accounting information provides SMEs valuable assistance in decision-making and planning activities (Elisabeth Penti & Akhsa, 2016). These decisions translate into better financial performance.

5.2. Quality accounting information and access to different types of financing

5.2.1 Use of quality accounting information and bank financing

The results of this study indicate a positive and significant relationship between the use of quality accounting information and access to bank financing. The more an SME uses quality accounting information, the more it accesses bank financing. Accounting information reduces the information asymmetry between SMEs and banks. This information asymmetry helps explain the rationing of credit to which SMEs are subjected by bankers (Beck & Demirguc-Kunt, 2006; Onyiego et al., 2017). The presence of a sound accounting information system within an SME significantly impacts a banker's decision-making process. It provides a clear vision of the SME's activity and performance, equipping the banker with the necessary information to base its decision on granting credit. Without reliable accounting and financial information, bankers do not know how to estimate the risk they incur in financing an SME and will tend not to grant credit. These results on the positive relationship between the use of quality accounting and financial information and access to bank financing also support the findings of other researchers (Chit, 2019).

5.2.2 Use of quality accounting information and informal financing

The results of this study also show a negative relationship between the use of quality accounting and financial information and the use of informal financing. The more an SME uses an accounting information system, the less frequently it resorts to informal financing. SMEs often use informal financing as an alternative to cope with their exclusion from the formal financial system (Dhieux et al., 2015). Reliable accounting and financial information facilitate SME access to bank financing, reducing reliance on informal financing. While positively impacting performance, informal financing is often characterized by high costs and short maturities (Bello, 2017, Mutie et al., 2020), reducing favourable effects. An SME with access to other types of financing through its accounting and financial information system tends to use informal financing less.

5.3. Bank financing and financial performance

This study finds that bank financing does not influence the financial performance of SMEs. Studies on the relationship between bank financing and financial performance have produced varied results. Some studies show a positive impact of bank financing on performance (Ahiawodzi & Adade, 2012; Bello, 2017; Brixiová, Kangoye, & Yogo, 2020; Esubalew & Raghurama, 2020). Other studies fail to confirm this positive influence of bank financing on performance (Ibidunni et al., 2018; Imoughele & Ismaila, 2014; Ndombi Avouba, 2022), potentially explained by the limited SME use of bank financing. The entrepreneurs surveyed have almost no access to bank credit and must use other sources of financing for their businesses. In this context, SME managers may perceive this type of financing in a poor light.

5.4. Informal finance and performance

The results of this study show a positive impact of informal financing on the performance of small and medium enterprises. These results are consistent with those found by (Mutie et al., 2020; Priyadharsan, 2019). In an environment characterized by difficulties in accessing formal credit, informal financing provides young firms with the means to benefit from specific market opportunities, reorganize their activities, and better satisfy their customers. Informal finance thus plays an essential role in improving the performance of SMEs. These findings are consistent with Allen et al. (2019), who showed that informal financing provides an informational advantage and thus has a positive effect on performance.

5.5. Informal financing and bank financing

This study shows that informal financing positively influences access to bank financing. SMEs experience exclusion from formal financing due to their low financial capacity and insufficient guarantees to present to bankers (Kent Baker et al., 2020). In this context, informal financing becomes an alternative that allows SMEs to develop their activities and build up sufficient assets to access credit in the formal sector. Informal finance can thus play an essential role in the capital market by complementing the banking sector (F. Tang, Norman, & Vendrazyk, 2017).

5.6. Indirect effect of quality accounting information on financial performance through informal financing

The results of this study show a significant negative influence of quality accounting information on financial performance through informal financing. Contextual aspects can explain this result. Producing quality accounting information is optional for access to informal financing, which is not the case for bank financing. For access to informal financing, the social proximity between lender and borrower and the reputation of the SME's manager is preponderant here, and there are very few objective elements, such as accounting information (Aryeetey, 2005). What is more, SMEs that use informal financing, as is the case for many SMEs in the DRC (Galdino, Kiggundu, Jones, & Ro, 2018), will have minimal tendency to produce quality accounting information, unlike those with access to bank financing (Archer, Sharma, & Su, 2020), where the quality of accounting information is highly demanding (Palazuelos, Crespo, & del Corte, 2018). As a result, for those SMEs that rely mainly on informal financing, decision-makers will have a limited quality of information on which to make managerial decisions that could be more logically efficient. These inefficient decisions obviously hurt the SME's financial performance. Hence, informal financing negatively mediates the relationship between quality accounting information and financial performance.

6. Conclusion

This study highlights the critical influence of quality accounting information on the financial performance and financing options of SMEs in the Democratic Republic of Congo (DRC). Our findings demonstrate that good-quality accounting practices significantly improve access to formal bank financing, fostering greater financial inclusion and credibility with institutional lenders. However, the use of quality accounting information reduces reliance on informal financing channels, which, paradoxically, are shown to have a positive impact on SME financial performance in the DRC.

The research underscores the pivotal role of informal financing in sustaining SMEs, serving as both a complement to, and a bridge toward, formal financing options. Furthermore, it reveals that SMEs incorporating disruptive social finance strategies into their financing frameworks achieve higher financial success and greater access to funding compared to their counterparts.

These findings carry important theoretical and practical implications. They highlight the need for a nuanced approach to SME financing that balances formal and informal mechanisms, particularly in emerging economies where access to traditional financing remains limited. Policymakers and financial institutions should consider fostering innovative financing models that integrate both informal and formal strategies. Finally, this study opens avenues for future research to explore the long-term impacts of

blending diverse financing approaches on SME growth and sustainability in similar contexts.

6.1. Theoretical implications

This study contributes to the literature by offering early empirical evidence on how the quality of accounting information impacts the financial performance of SMEs within a unique context where informal financing dominates over formal banking mechanisms. Existing management theories suggest strong links between managerial information quality, decision-making, and firm performance (Baum & Wally, 2003; Brian, 1992; Degryse & de Jong, 2006; Goll & Rasheed, 1997; Kunc & Morecroft, 2010; Maloney, McCormick, & Mitchell, 1993). This research extends those frameworks by examining the intermediary mechanisms that mediate the relationship between accounting information and financial performance, particularly the role of access to bank and informal financing.

The findings suggest three key theoretical implications:

The role of informal financing: Informal financing plays a critical role when quality accounting information is lacking. The negative mediation effect ($\beta = -0.07$) of informal financing underscores how the absence of accounting quality can compromise financial performance through poor decision-making, as SMEs relying on informal financing face fewer requirements for producing accurate financial information.

Bank financing mediation: While the mediation of bank financing on the relationship between accounting information and SME performance was positive ($\beta = 0.007$), the causal link remains weak in the DRC context. This is likely influenced by the dominance of informal financing and weak regulatory institutions, suggesting the need for further research into this area.

Causal link between financing types: A significant link exists between informal and bank financing, corroborating theories of SME financing lifecycles in developing countries (Aryeetey, 2008). This lifecycle reflects SMEs transitioning from reliance on informal financing in their early stages to bank financing as they achieve financial maturity.

6.2. Practical implications

This study provides valuable insights into the financing strategies employed by SMEs in the DRC and their implications for financial performance.

Improving access to formal financing: The research highlights variables that can enhance SMEs' access to bank financing while explaining the reliance on informal financing. With the DRC's low financial inclusion rate and persistent challenges in SME access to finance (Demirgüç-Kunt et al., 2020), the findings underscore the critical role of quality accounting information in bridging this gap. Policymakers can leverage these insights to promote the adoption of standardized accounting systems, such as OHADA, to improve transparency and facilitate access to formal financing. This recommendation is particularly relevant given that many SMEs in the DRC struggle to implement OHADA's requirements effectively (Iragi & Cirhuza, 2021).

Guidance for SME managers and policymakers: The study highlights key factors influencing SME financial performance, emphasizing the dual impact of accounting quality and financing strategies. By recognizing these elements as critical internal and external resources, SME managers can enhance decision-making processes to optimize performance. For policymakers, the findings provide actionable insights into variables that affect SME success, enabling targeted interventions to improve financial sector support. Given the predominance of formal and informal SMEs in the Congolese economy (Kaghoma, 2014; Nshombo & Mmenge, 2020), addressing these challenges is essential to fostering a more robust SME sector.

Supporting SMEs in challenging contexts. Operating in a poorly developed financial sector (Kauffmann, 2005), SMEs in the DRC face significant hurdles that limit their growth. This study identifies strategies to mitigate these challenges, focusing on the role of financial transparency and the strategic use of diverse financing sources. Implementing these recommendations could significantly enhance SME performance, contributing to broader economic development in the DRC.

6.3 Limits, and avenues for new research

This study acknowledges certain limitations that highlight opportunities for further exploration.

Data collection constraints. The absence of a comprehensive database of SMEs operating in the DRC presented significant challenges in selecting a fully random sample. This limitation likely led to the exclusion of some entrepreneurs, potentially affecting the generalizability of the findings. Future studies could address this gap by developing more representative data sets to encompass the diversity of SMEs across the region.

Focus on informal financing. The study emphasizes the interaction between informal and formal financing in SME operations. While commercial banks are prevalent across Africa, the diversity within informal financing mechanisms remains

underexplored. A deeper analysis of the coexistence and interplay of these two forms of financing could provide valuable insights into their combined impact on the sustainability and growth of African SMEs, particularly in financially constrained contexts like the DRC.

Indirect effects of accounting information. The findings reveal an indirect negative effect of quality accounting information on financial performance via informal financing. This counterintuitive result suggests the need for further research to unravel the mechanisms driving this relationship. Specifically, studies could examine how the transition from informal to formal financing pathways influences SME decision-making, resource allocation, and overall performance.

Future research can address these areas to build a more comprehensive understanding of SME financing dynamics in emerging economies, contributing to more effective policy interventions and management practices.

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FIGURES

Figure 1 : Theoretical model

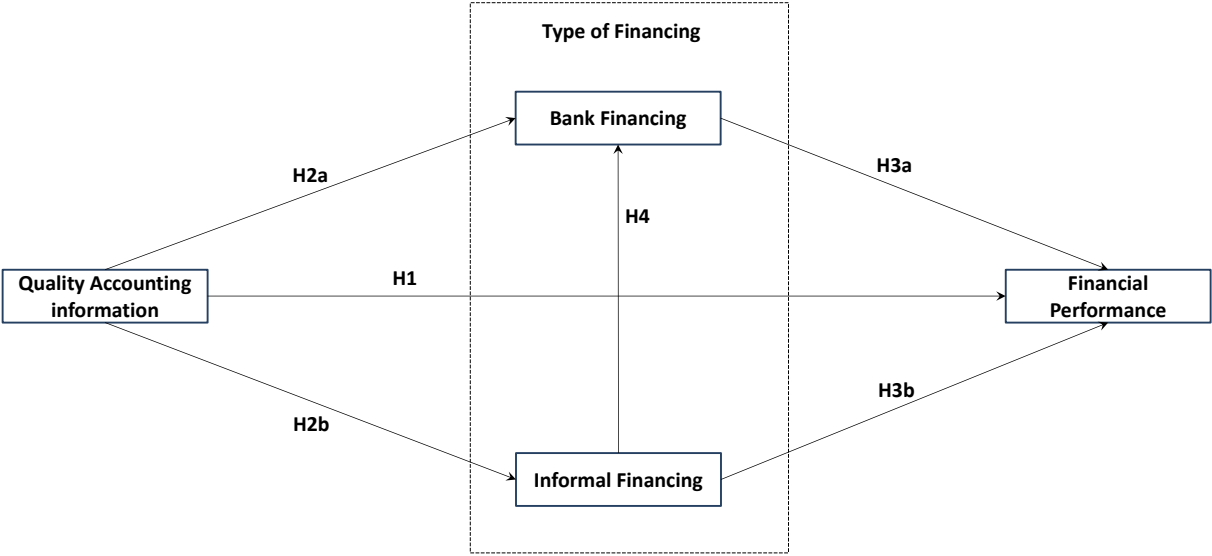
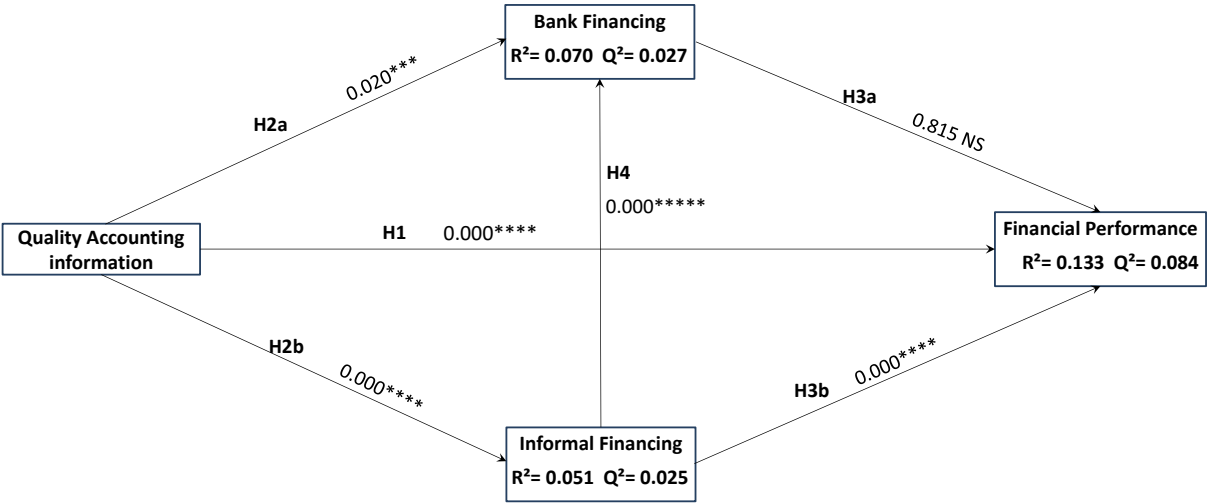


Figure 2 : Structural equation evaluation



TABLES

Table 1

Profil of the SME.

Characteristic of the company	Total	Percentage
Status of the company		
Formal	145	43,8%
Informal	186	56,2%
Total	331	100,0%
Activity sector		
Trade	151	45,6%
Industry	16	4,8%
Agriculture	44	13,3%
Service	58	17,5%
NTIC	23	6,9%
Agrobusiness	39	11,8%
Total	331	100,0%
Duration of the company's existence		
Less than 1 year	96	29,0%
1 to 5 years	194	58,6%
6 to 10 years old	35	10,6%
More than 10 years	6	1,8%
Total	331	100,0%
Number of employees		
One employee	145	43,8%
Between 2 and 5 employees	149	45,0%
Between 6 and 10 employees	23	6,9%
More than 10 employees	14	4,2%
Total	331	100,0%

Table 2

Reliability and Convergent Validity.

Construct/Items	Outer Loadings	VIF
Bank Financing		
$\alpha=0.881,$ $Rho=0.922,$ $CR=0.912,$ $AVE=0.674$		
FB1 : I have access to long-term credit (+ 5 years) from banks and/or MFIs (microfinance institutions)	0.787	2.325
FB2 : I have access to medium term credit (1 to 5 years) from banks and/or MFIs	0.841	2.932
FB3 : I have access to short-term credit (less than one year) from banks and/or MFIs	0.858	2.438
FB4 : I have access to overdraft facilities with banks and/or MFIs	0.745	1.774
FB5 : In general, how often do you use bank financing	0.868	2.248
Informal Financing		
$\alpha=0.771,$ $Rho=0.850,$ $CR=0.846,$ $AVE=0.5830$		
FI1 : I use tontines to finance my activities or	0.857	1.712
FI2 : I use credit from friends and family to finance my activity	0.658	1.355
FI3 : I use trade credit with suppliers of goods	0.856	1.668
FI5 : I use credit from informal lenders to finance my activities (currency trader)	0.657	1.427
Accounting Information		
$\alpha=0.947,$ $Rho=0.956,$ $CR=0.956,$ $AVE=0.730$		
IC1 : Frequency of use of Balance Sheet Information	0.814	2.363
IC2 : Frequency of use of Cash flow statement information	0.875	4.023
IC3 : Frequency of use of Information on the table of intermediate management balances	0.862	3.923
IC4 : Frequency of use of Budget Information	0.893	4.413
IC5 : Frequency of use of Cost information	0.862	4.327
IC6 : Information on variances between objectives and achievements	0.832	3.063

IC7 : Information on the profitability of activities	0.817	3.325
IC8 : How would you rate the use of accounting information in your company?	0.877	3.727
Financial Performance		
$\alpha=0.914,$	$Rho=0.928,$	$CR=0.932,$
	$AVE=0.696$	
PF1 : Sales volume growth compared to your direct competitor	0.817	2.262
PF2 : Profit growth compared to your direct competitor compared to your direct competitor	0.858	2.718
PF3 : Growth in cash flow generated compared to your direct competitor	0.854	3.071
PF4 : Return on investment growth compared to your direct competitor	0.780	2.295
PF5 : Market share growth compared to your direct competitor	0.835	3.140
PF6 : Overall, how would you rate your financial performance compared to your direct competitor	0.859	2.813

Table 3

Discriminant validity Fornell and Larcker.

	Accounting Information	Bank Financing	Financial Performance	Informal Financing
Accounting Information	0.854			
Bank Financing	0.091	0.821		
Financial Performance	0.220	0.082	0.834	
Informal Financing	-0.225	0.220	0.234	0.764

Table 4 Discriminant validity HTMT

	Accounting Information	Bank Financing	Financial Performance	Informal Financing
Accounting Information				

Bank Financing	0.108		
Financial Performance	0.231	0.096	
Informal Financing	0.235	0.246	0.235

Table 5

Common Method Bias (CMB).

	VIF
Accounting Information	1.178
Bank Financing	1.061
Financial Performance	1.168
Informal Financing	1.212

Table 6

Hypothesis test.

	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Decision
H1. Accounting Information -> Financial Performance	0.289	0.052	5.508	0.000****	Supported
H2a. Accounting Information -> Bank Financing	0.148	0.064	2.333	0.020***	Supported
H2b. Accounting Information -> Informal Financing	-0.225	0.055	4.057	0.000****	Supported
H3a. Bank Financing -> Financial Performance	-0.011	0.045	0.234	0.815 NS	Not Supported
H3b. Informal Financing -> Financial Performance	0.302	0.051	5.966	0.000****	Supported
H4. Informal Financing -> Bank Financing	0.254	0.065	3.896	0.000*****	Supported

*p < 0.1; ** p < 0.05; *** p < 0.01; **** p < 0.001 (Hair Jr et al., 2021); n.s. = not significant.

Table 7

Mediating Effect.

	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
H5. Accounting Information -> Bank Financing -> Financial Performance	0.007	0.010	0.674	0.500
H5. Accounting Information -> Informal Financing -> Financial Performance	-0.071	0.020	3.584	0.000

Table 8

R Square and Q square.

	R Square	Q Square
Bank Financing	0.070	0.027
Financial Performance	0.133	0.084
Informal Financing	0.051	0.025

Table 9

PLS predict.

	PLS				LM			
	RMSE	MAE	MAPE	Q ² _predict	RMSE	MAE	MAPE	Q ² _predict
PF1	0.780	0.552	24.101	0.033	PF1	0.771	0.577	24.465
PF2	0.770	0.549	23.916	0.042	PF2	0.773	0.576	24.699
PF3	0.826	0.596	26.385	0.009	PF3	0.824	0.602	26.570
PF4	0.835	0.641	29.250	0.003	PF4	0.826	0.635	28.859
PF5	0.909	0.682	32.628	0.029	PF5	0.905	0.699	32.715
PF6	0.813	0.586	26.572	0.042	PF6	0.807	0.603	26.754

Table 10**Importance Performance Map Results (IPMA).**

Construct	Total Effects (Financial Performance)	Performances (Index value)
Accounting Information	0.141	44.300
Bank Financing	-0.019	3.300
Informal Financing	0.207	30.019

Table 11**Effect size (f^2).**

	Accounting Information	Informal Financing	Bank Financing	Financial Performance
Accounting Information		0.053	0.022	0.089
Informal Financing			0.066	0.094
Bank Financing				0.000
Financial Performance				