

Accounting information quality and trust as determinants of credit granting to SMEs: the role of external audit

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Abstract This study analyses whether loan officers' perception of the accounting information quality (AIQ) and the trustworthiness of SMEs are associated with a better willingness to grant them credit. Empirical evidence is obtained from a survey of 471 bank loan officers in Spain, who are asked to answer in relation to audited and not-audited firms. Using a Structural Equation Modeling (SEM) approach, the results obtained confirm that the loan officers' willingness to facilitate SMEs' access to credit is positively influenced by their general perception about the AIQ, but only if it is audited. In the case of not-audited firms, AIQ does not play a direct role in credit granting decision, but is relevant in trust formation. Besides, in the case of audited firms, only the "competence" dimension of trust is relevant, whereas in not-audited firms, both "competence" and "honesty" have an impact on credit granting. "Benevolence" does not have an influence in any case. The study has implications for SMEs, banks, policy makers and auditors.

Keywords SMEs · Credit granting · Loan officers · Accounting information quality · Trust · External audit

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1 Introduction

The availability of external finance for small- and medium-size enterprises (SMEs) is a topic of significant research interest among academics and a crucial issue for policymakers (Berger and Udell 2006; De la Torre et al. 2010). Especially, a high rate of interest is set on bank debt, as it is the most common source of external finance¹ since their size precludes them from accessing capital markets.

Even so, SMEs frequently experience problems when trying to access credit (Schiffer and Weder 2001; Beck et al. 2005, 2006, 2008; Hyytinen and Väänänen 2006). The most common argument is the opaqueness generally attributed to SMEs, which accentuates information asymmetries (Berger and Udell 1998; Berger et al. 2001; Mason and Stark 2004; Berger and Frame 2007; Hyytinen and Pajarinen 2008). It can be particularly challenging to collect information about SMEs. It is not unusual for small businesses to have a short history, a lack of formal or public records, or a deficiency of formal control systems (Bruns et al. 2008). This

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¹ For more detailed information about the relevance of bank financing to SMEs, see the Survey on the Access to Finance of Enterprises (SAFE) of the European Central Bank (ECB). Available in www.ecb.europa.eu

lack of information can put the banks at a disadvantage, by making it difficult to differentiate between high-risk and low-risk borrowers (Stiglitz and Weiss 1981; Berger and Udell 1998).

Within this context, relationship lending is particularly relevant (Petersen and Rajan 1994; Boot 2000), as asymmetric information problems tend to be more acute for SMEs than for large firms (Berger et al. 2001). In relationship lending, the bank relies on a range of private information gathered through contact with the firm, their owners and managers and the local community in which they operate (Berger and Udell 2006). Furthermore, banks also use other lending techniques in order to evaluate the firm's riskiness, such as the evaluation of financial statements or credit-scoring (Berger and Udell 2006). In addition, trying to minimise the probability of error, banks seek to formalise both the information-gathering process and the loan officer's decision process (Bruns et al. 2008). However, despite all formal procedures to support the decision to grant credit, in many (or even most) cases, credit risk management is not automated, and it is ultimately based on a loan officer's judgement and perceptions (De la Torre et al. 2010).

The present study precisely delves into the line of research focused on the perceptual variables that affect loan officers' final lending decision, which is still very limited. It adds to previous research in various ways. Firstly, instead of analysing one variable in isolation, we propose a research model with two perceptual variables as determinants of loan officers' willingness to grant credit to SMEs: accounting information quality (AIQ) and trust. Secondly, Moro et al. (2015) considered information quality in general, but we focus specifically on accounting information, as the financial statements are the primary data source for evaluating credit risk (Gómez-Guillamón and Vidal 2008; Brown and Moles 2012). Additionally, we also consider this variable as an antecedent of trust. Thirdly, to the best of our knowledge, only four studies have examined the role of trust in the small firm banking relationship (Harhoff and Korting 1998; Hernandez-Canovas and Martínez-Solano 2010; Howorth and Moro 2012; Moro and Fink 2013), and only the last two have taken into account its multidimensional character. Furthermore, Howorth and Moro (2012) introduced a single variable in the regression model,

and Moro and Fink (2013) were only able to examine two dimensions of trust. We separately analyse the effect of honesty, competence and benevolence. Fourthly, none of the previous studies regarding the influence of information quality and trust on SMEs' credit access have used a methodology based on Structural Equation Modeling (SEM). This approach allows a better measurement of complex constructs with multi-item scales, as well as permitting improved estimates of the interrelations between the analysed variables, providing an overview of the aspects of the phenomenon studied. Finally, we take into account the possible effect of external audit in the process, as the main objective of this professional service is to provide quality to accounting information and trust to its users.

From the answers of 471 bank loan officers to an online survey, the empirical evidence suggests three major findings. Firstly, there is a generally positive relationship between the perception of the AIQ and the willingness to grant credit to SMEs, but only if the financial statements are audited. If not, AIQ does only play an indirect role in the credit decision through its influence on trust formation. Secondly, in the case of audited firms, only the "competence" dimension of trust is relevant, whereas in not-audited firms, both "competence" and "honesty" have an impact on credit granting. Thirdly, we find that information quality is an antecedent of trust also in the specific context of credit granting. These findings mainly suggest that external audit fulfils its function of providing transparency to information, and trust to decision-makers, so that the perception of AIQ only has a direct impact on the willingness to grant credit if the SMEs are audited, and the loan officers do pay attention to the SMEs' perceived honesty if the accounting information is not supported by an external auditor. Thus, it seems logical that SMEs should consider the possibility of hiring an external auditor voluntarily if they want to improve the loan officers' willingness to grant them credit.

The remainder of the paper is structured as follows. In the second section, a theoretical revision of credit granting to SMEs is made, paying attention to the role of external audit, AIQ and trust, and justifying the proposed research hypotheses. In the third section, the methodology is explained. In the fourth section, results are exposed. Finally, in the fifth section, implications derived from the work, limitations and future lines of research are set forth.

2 Theoretical background and research hypotheses

2.1 External audit of financial statements and credit granting

Research focused on financial statement lending usually pays attention to external audit, because as a service that checks and verifies accounting information, it can improve its quality and the trust that SMEs transmit to its stakeholders. That way, the audit of the financial statements is a key factor for the evaluation of the companies during credit granting processes (Dedman et al. 2014).

From a general point of view, Barton and Waymire (2004) affirm that the audit increases the likelihood that the information of the financial statements will be more accurate and free from distortions, and mitigates the managerial optimism in the financial reporting. In this line, Dechow et al. (2010) state that investigators consider auditors to be a determinant of AIQ for their role in mitigating both intentional and unintentional errors in financial statements. In addition, Van Tendeloo and Vanstraelen (2008) consider that the verification carried out by the audit provides users of accounting information with security on the accuracy of financial statements, the non-existence of accounting fraud and the going concern status.

From that basis, many studies investigate whether or not the external audit has an impact on the decision-making related to credit granting. Among them, several focus on the type of auditor (e.g. Pittman and Fortin 2004; Huguet and Gandía 2014), some pay attention to the opinion of the audit report (e.g. Gómez-Guillamón and Vidal 2008; Niemi and Sundgren 2012), and others examine the difference in credit access and credit conditions between audited and not-audited firms (e.g. Blackwell et al. 1998; Allee and Yohn 2009; Minnis 2011; Palazuelos et al. 2017). In the last case, there is wide evidence that firms with audited financial statements benefit in the form of greater access to credit and lower debt costs, which implies that the assurance delivered by an audit has informational value for the bank.

Accordingly, external audit is supposed to increase the quality of accounting information and strengthen the trust that stakeholders can put into the companies, thus influencing, among others, credit granting decision-making by bank loan officers. For that reason, we will test our research hypotheses in two possible scenarios, depending on whether SMEs are audited (scenario A) or not (scenario B).

2.2 Credit granting to SMEs: the relevance of AIQ

SMEs face difficulties in accessing equity finance as well as bank credit because they are informationally opaque (Berger and Udell 1998; Berger et al. 2001; Mason and Stark 2004; Berger and Frame 2007; Hyytinen and Pajarinen 2008). Simply put, the lack of information available, both in terms of quantity and accuracy, can put the banks at a disadvantage by making it difficult to distinguish SMEs that will repay their loans from those that will not (Stiglitz and Weiss 1981; Berger and Udell 1998). For that reason, lenders may demand more guarantees and increase the cost of debt when negotiating with these firms. In some cases, lenders may not even be willing to provide funding and will consequently deny credit.

It is believed that the key factor in accessing bank financing is overcoming asymmetric information problems between the borrower and the lender (Petersen and Rajan 1994; Goldberg and White 1998). Thereby, literature has proven the importance of different factors in order to mitigate this conflict and increase credit availability for SMEs, such as the length of the relationship (Petersen and Rajan 1994), the closeness of the interaction between the loan manager and the SME's management (D'Auria et al. 1999), the bank's involvement in the firm's management (Elsas and Krahen 1998), the physical distance between the lender and the borrower (Petersen and Rajan 2002; Alessandrini et al. 2009) or the loan officers' trust in the firm (Howorth and Moro 2012; Moro and Fink 2013). However, some believe that the information provided is the most important element for the reduction of information asymmetries (Moro et al. 2015). In this sense, empirical studies (Pagano and Jappelli 1993; Love and Mylenko 2003; Brown et al. 2009; Moro et al. 2014) have shown the positive effect that information sharing has on the availability of credit to SMEs. In a more specific way, several studies show that the better the information in terms of quantity and quality, the greater the probability of access to credit (Ennew and Binks 1999) and its volume (Moro et al. 2015), and the lower the guarantees or security required (Zecchini and Ventura 2009) and the interest rates applied (Elsas and Krahen 1998).

Hence, in the decision-making process of credit granting, an important valuation factor is the availability of different sources of information, with accounting information being one of the most relevant (Bruno 1968; Danos et al. 1989). In fact, most often, the most

important information that credit institutions have in making decisions about the provision of funds to companies are financial statements (Gómez-Guillamón and Vidal 2008; Brown and Moles 2012). Furthermore, its evaluation is one of the lending technologies on which a bank lending decision is based (Berger and Udell 2006). However, accounting information loses its utility if it does not meet a number of quality criteria that serve to allow users to make the most appropriate and suitable decisions at all times. That is, accounting information has to be as timely, accurate, complete, relevant and reliable as possible to serve as a basis for making business and financial decisions (Schipper and Vincent 2003; IASB 2009).²

For example, Van Caneghem and Van Campenhout (2012) discovered a positive relationship between the amount and the quality of financial statement information, and SMEs' leverage. According to this evidence, AIQ will positively influence loan officers' willingness to grant credit to SMEs. Consequently, the first research hypothesis is proposed:

H1. Loan officer-perceived SME's AIQ has a positive effect on the willingness to grant credit.

2.3 The role of trust in the bank-SME relationship

Trust as a variable has been incorporated in many models of behaviour proposed in different areas of knowledge, such as psychology (e.g. Simons and Peterson 2000), organisational theory (e.g. Dirks and Ferrin 2001) or marketing (e.g. Morgan and Hunt 1994). However, although the interest in the topic is growing, the role of trust is still under-investigated in the specific line of research of bank-SME relationship.

Bromiley and Harris (2006) argue that excluding trust from models of bank lending may partially reduce their

quality or explanatory capability. In fact, as we said before, it is believed that the essence of successful lending is overcoming the asymmetry of information problems between the borrower and the lender that would otherwise create incentives for borrowers to default on their loans (Petersen and Rajan 1994; Goldberg and White 1998). This presumes that lending is based on a lack of trustworthiness, which relies on an opportunistic assumption of human behaviour (Barney 1990). Definitely, when a bank decides to provide credit, even though it is a contractual relationship, it is underpinned by the assessment of the trustworthiness of the borrower to repay the principal and interest on the agreed terms (Moro and Fink 2013). Following this argument, in the scope of this investigation, we understand trust as the expectation of decision-makers (loan officers as credit providers) on the future behaviour of clients (SMEs as credit seekers) and, specifically, their belief that they will comply with their obligations in the relationship in the terms stipulated (repayment of principal and interest).

Previous research on trust has proven its influence on multiple factors that improve the quality of relationships, such as commitment (Morgan and Hunt 1994) or satisfaction (Geyskens et al. 1998). In addition, it favours decision-making in situations where information is scarce (Luhmann 2000), which is usually prevalent among SMEs. Moreover, the literature has proposed that trust should be a multidimensional construct. In particular, there are three dimensions that have most frequently been associated with the concept of trust: honesty, competence and benevolence (Flavián et al. 2006). Honesty refers to the belief in sincerity, truthfulness and frankness (Morgan and Hunt 1994). In the bank-SME relationship, honesty can increase the loan manager's perception that the firm provides transparent information and is reliable in keeping its promises. Competence shows the ability, knowledge and skills that the other party has in order to carry out those activities to which it is committed (Mayer et al. 1995). The perception that the SME is competent will make the loan officer think that the firm is able to successfully carry out its activities, thus reducing the perceived likelihood of defaulting on the loan. Finally, benevolence indicates the belief that one party is genuinely interested in the welfare of the other, without the intention of carrying out opportunistic behaviour, and is motivated to seek a joint benefit (Doney and Cannon 1997). Thereby, benevolence can increase the expectation that the SME will fulfil its commitments due to the social ties established in the relationship.

² Section 2 of International Financial Reporting Standard for Small and Medium-sized Entities (IFRS for SMEs), published by the International Accounting Standards Board (IASB), establishes 11 qualitative characteristics (understandability, relevance, materiality, reliability, substance over form, prudence, completeness, comparability, timeliness, balance between benefit and cost, undue cost or effort) that financial information must gather. However, five dimensions have been most frequently used to refer to "information quality": timeliness, accuracy, completeness, relevance and reliability (see, among others, Monczka et al. 1998; Xu et al. 2003; Nicolaou and McKnight 2006).

Previous empirical studies on relationship lending that consider trust as one of the key variables have some limitations. Harhoff and Korting (1998) measure it using a dummy variable. Hernandez-Canovas and Martínez-Solano (2010) only consider whether the loan officer uses trust as a criterion for making credit decisions. Finally, Howorth and Moro (2012) and Moro and Fink (2013) take into account the multidimensional character of the variable, but the former introduced a single variable in the regression model, and the latter were only able to examine two dimensions of trust.

Taking a step further, in view of the importance that trust can have in the decisional process of credit granting, and considering the possible effect of its three dimensions separately, we propose the following hypotheses:

- H2a. Loan officer-perceived SME's honesty has a positive effect on the willingness to grant credit.
- H2b. Loan officer-perceived SME's competence has a positive effect on the willingness to grant credit.
- H2c. Loan officer-perceived SME's benevolence has a positive effect on the willingness to grant credit.

2.4 AIQ and trust

From the cognitive perspective of trust, it is based on the beliefs and perceptions of one party about the characteristics, traits and ways of acting of another (McAllister 1995). In this way, several authors understand that providing sufficient information in terms of quantity and quality can be perceived as a positive behaviour, in such a way that it constitutes an antecedent of the generation of trust (Morgan and Hunt 1994; Nicolaou and McKnight 2006; Kim et al. 2008).

Within the specific context of bank lending, there is no previous research in the literature that considers the influence of the quality of the accounting information provided by the company on the trust placed in it by the loan officer. However, when considering whether to grant a loan, the natural response for a bank is to seek more information in order to reduce uncertainty about the likelihood of loan repayment (Bruns et al. 2008). That makes us understand that trust towards credit applicants is constructed individually as the bank collects and assesses requisite information. Consequently, the perception that the SME provides high-quality

information may influence the loan officer's trust in the firm. More specifically, it could be interpreted as a sign that the firm aims to be honest, being transparent and not hiding any relevant information which would have an effect on decision-making. It could also be indicative that the firm is competent and that it is aware of how to maintain a successful relationship with the bank. In a similar way, providing high-quality accounting information may relate to benevolence, as it could mean that the company cares enough to provide helpful information and achieve common goals.

Accordingly, this study considers AIQ as an antecedent factor of trust, and tests three additional hypotheses:

- H3a. Loan officer-perceived AIQ has a positive effect on perceived SME's honesty.
- H3b. Loan officer-perceived AIQ has a positive effect on perceived SME's competence.
- H3c. Loan officer-perceived AIQ has a positive effect on perceived SME's benevolence.

Figure 1 summarises the theoretical model according to our research hypotheses.

3 Methodology

In order to empirically contrast the proposed research hypotheses, we developed a quantitative study aimed to bank loan officers in Spain. In this sense, Spain represents an ideal case of study for multiple reasons. First of all, it is a developed country with a high predominance of SMEs, similar to other European and OECD countries (Artola and Genre 2011; Muller et al. 2015). Additionally, the Spanish economy remained in 2016 as the fifth largest among the 28 of the European Union and the fourth among the 19 euro zone countries (Eurostat 2017). Secondly, its financial sector is highly developed, and it is characterised by a strong bank intermediation (Bank of Spain 2016). Finally, Spain has been one of the countries experiencing the hardest credit restrictions due to the financial crisis of 2008.³ All together, these make Spain a suitable benchmark for the analysis of SMEs' bank financing.

³ For more detailed information about the impact of the financial crisis on the Spanish SMEs access to credit, see the Survey on the Access to Finance of Enterprises (SAFE) of the European Central Bank (ECB) for the period 2009–2016. Available in www.ecb.europa.eu

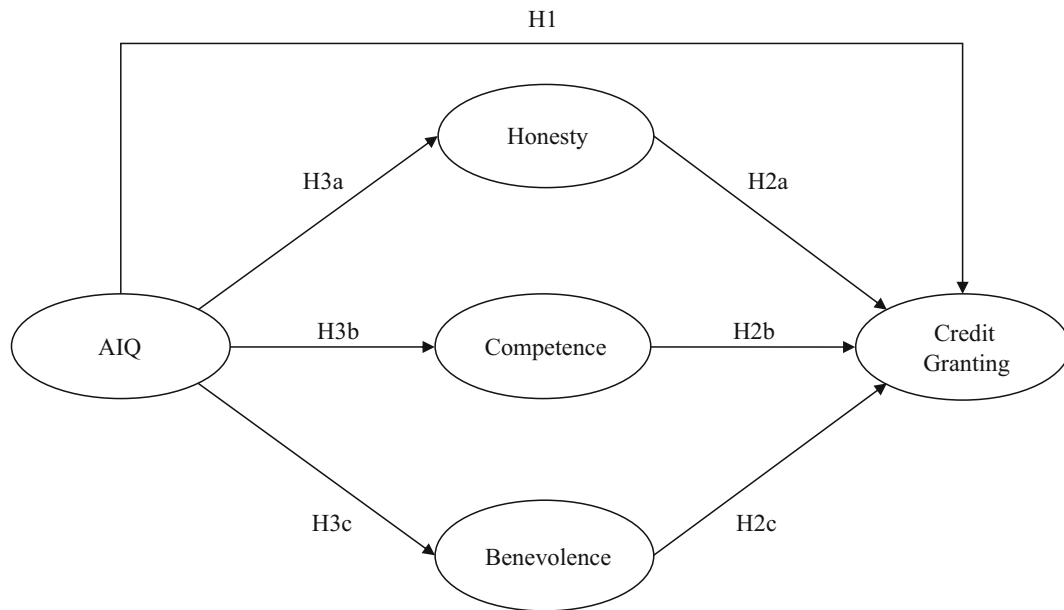


Fig. 1 Research model

Prior to the quantitative research, and in order to have a full understanding of the credit granting process in commercial banks, we undertook a qualitative study based on personal interviews with managers of the Risk Analysis (two people) and Auditing (two people) departments. In all cases, the managers confirmed that although there were quantitative indicators/scores that were taken into account by managers in the credit granting process, the final decision was taken in most cases by the loan officer. This supports the approach of our research, based on the cognitive variables affecting loan officers' decision-making. Additionally, the information obtained in the personal interviews was taken into consideration to adapt the measurement instruments in the questionnaire to the specific scope of this research. Below we detail the measurement scales used in the study, as well as the sampling design.

3.1 Data collection and measurement

The collection of information was conducted through an online personal questionnaire, which included the following question areas: (1) perception about the variables included in the research model (AIQ, trust dimensions and credit granting), measured separately for audited (scenario A) and not-audited SMEs (scenario B), and (2) the sociodemographic and professional characteristics of respondents. Specifically, 1069 emails were sent

to bank loan officers, receiving a total of 471 valid responses, which represents a response rate of 44.1%. That way, we got a sample of 471 observations with loan officers' responses for audited and not-audited SMEs in every case, and we are able to contrast the hypotheses in those two scenarios.

The variables of the model were measured using multi-item instruments, which allowed us to obtain evaluations of psychological variables that cannot be quantified directly (Churchill and Iacobucci 2002). The evaluations were obtained using Likert scales of seven positions (1 = strongly disagree and 7 = strongly agree). The scales were adapted from previous studies in order to ensure content validity (see Appendix). The scale for the measurement of the "credit granting" variable is based on the works of Nicolaou and McKnight (2006) and Wagner et al. (2011), assuming that the intention to continue with the relationship of exchange is similar to the intention to grant access to financing. Likewise, each of the dimensions of trust (honesty, competence and benevolence) were measured on a scale of four indicators based on the items proposed by Doney and Cannon (1997) and Flavián et al. (2006), again adapted to the context of credit granting. Finally, the scale used to measure the quality of the information provided in the financial statements was developed using the instrument proposed by Monczka et al. (1998) and Nicolaou and McKnight (2006). The two

studies analyse the quality of information in different contexts (supplier-buyer alliances and inter-organisational data exchanges, respectively) but using the same five characteristics, which are also applicable to the accounting information collected for the credit granting processes.

3.2 Sampling design

The universe of the study is made up of Spanish bank loan officers with different levels of responsibility in credit granting decision-making, so that both employees of local bank branches and members of the Territorial Committees, or even of the Credit Operations Organisations of the central offices, participated. The collaborating bank is specialised in the segments of SMEs, families and self-employed, with branch offices throughout the whole national territory. In particular, 471 bank loan officers from 23 Spanish provinces answered the online questionnaire.

Table 1 summarises the sociodemographic and professional characteristics of the sample of loan officers used in the present investigation. Of the total number of participants, 66% were men and 34% were women, with a mean age of 44 years. Half of the sample had completed university studies, which shows the level of education that is generally required to work in the banking sector. In addition, the majority (86.4%) occupy a position with local responsibility. This is also consistent with the hierarchical structure of financial institutions, where, when the level of responsibility increases, the number of employees decreases. Moreover, lending to SMEs is managed mainly

on a local scale. Respondents had worked in the sector for an average of approximately 20 years.

3.3 Statistical analysis

Before the results derived from these analyses can be explained, it is necessary to note that, in order to avoid potential problems related to Common Method Variance (CMV) bias, the anonymity of the participants was guaranteed and it was indicated clearly in the introductory screen of the questionnaire that there were no right or wrong answers. In this way, we tried to reduce the level of fear and make respondents less likely to edit their responses so that they were “socially desirable” or more in line with what they thought the researcher wanted them to answer (Chang et al. 2010).

Besides, the Harman’s single-factor test was conducted in IBM-SPSS software to check whether the correlation among variables was significantly influenced or not by their common source (Chang et al. 2010). The results of the analysis indicate that the items load into more than one factor and that they are not concentrated in one general factor. Consequently, this method also supports the idea that CMV does not significantly influence this quantitative research.

Additionally, it is important to point out that the questionnaire was sent to the bank loan officers twice. In the first round, 369 individuals responded, while 102 did it in the second. To test for non-response bias, we compared the data of the first-round respondents with the data of the second-round respondents. The later respondents were considered as surrogates of

Table 1 Sociodemographic and professional profile of the sample

Gender	Male	66%
	Female	34%
Age (mean (std. dev.))	44 (7.028)	
Education	Professional training	4.9%
	Secondary	8.9%
	Mid-level university studies	24.4%
	High-level university studies	50.1%
	Postgraduate	11.7%
Level of job responsibility	Local	86.4%
	Regional	10.6%
	National	3%
Years of experience in the banking sector (mean (std. dev.))	20 (7.222)	

non-respondents (Armstrong and Overton 1977). The rationale is that non-respondents would be similar to late respondents based on factors such as lack of interest on the subject matter or the requirements of their jobs. The results of the comparison test between the earlier and later participants with respect to the background variables (gender, age, education, level of job responsibility, and years of experience) revealed that there are no statistical differences between the two groups.

The descriptive statistics of the variables are summarised in Appendix. In this sense, the average values obtained for all the items measured are clearly higher for the evaluation of audited SMEs than for not-audited SMEs, and *t* tests show that there are significant differences in the average values of all the items between audited SMEs and not-audited SMEs. Accordingly, decision-makers perceive that audited SMEs present accounting information of higher quality and are more trustworthy, and consequently, they would be willing to grant them credit in a greater extent.

4 Results

The statistical analyses were developed using a covariance-based SEM methodology and particularly EQS 6.1 software. First, the measurement model was estimated with confirmatory factor analysis (CFA) to test the psychometric properties of the measurement scales (reliability and validity). Next, the model was estimated in order to contrast the research hypotheses, both for the audited (scenario A) and not-audited (scenario B) SMEs.

4.1 Estimation of the measurement model

The results obtained for the goodness-of-fit indices show a correct specification of the measurement model, for both audited and not-audited SMEs. In particular, there are three main classes of fit criteria: measures of absolute fit, measures of incremental fit and measures of parsimonious fit (Hair et al. 2010). In this case, the statistics adopted are given by EQS 6.1, widely used in the SEM literature (Hair et al. 2010). In particular, the Bentler-Bonett Normed Fit Index (BBNFI), Bentler-Bonett

Table 2 Confirmatory factor analysis (scenario A—audited SMEs)

Factor	Variable	Standard coef.	R^2	Cronbach's α	Composite reliability	Ave.	Goodness-of-fit indices
Credit granting	CGR1	0.91	0.83	0.96	0.96	0.87	BBNFI = 0.90 BBNFI = 0.92 RMSEA = 0.07 IFI = 0.93 CFI = 0.93 Normed $\chi^2 = 3.25$
	CGR2	0.93	0.87				
	CGR3	0.94	0.88				
	CGR4	0.95	0.89				
Honesty	HON1	0.87	0.76	0.93	0.93	0.78	
	HON2	0.89	0.79				
	HON3	0.89	0.80				
	HON4	0.88	0.78				
Competence	COM1	0.91	0.83	0.94	0.95	0.81	
	COM2	0.90	0.80				
	COM3	0.91	0.84				
	COM4	0.88	0.78				
Benevolence	BEN1	0.89	0.80	0.93	0.93	0.78	
	BEN2	0.80	0.63				
	BEN3	0.93	0.86				
	BEN4	0.91	0.84				
AIQ	AIQ1	0.86	0.73	0.96	0.96	0.82	
	AIQ2	0.94	0.88				
	AIQ3	0.93	0.86				
	AIQ4	0.93	0.86				
	AIQ5	0.86	0.74				

Table 3 Confirmatory factor analysis (scenario B—not-audited SMEs)

Factor	Variable	Standard coef.	R ²	Cronbach's α	Composite reliability	Ave.	Goodness-of-fit indices
Credit granting	CGR1	0.86	0.74	0.95	0.95	0.84	BBNFI = 0.90 BBNNFI = 0.91 RMSEA = 0.08 IFI = 0.92 CFI = 0.92 Normed $\chi^2 = 3.9$
	CGR2	0.93	0.87				
	CGR3	0.94	0.88				
	CGR4	0.93	0.87				
Honesty	HON1	0.85	0.72	0.93	0.93	0.76	
	HON2	0.88	0.78				
	HON3	0.89	0.80				
	HON4	0.87	0.76				
Competence	COM1	0.85	0.73	0.94	0.94	0.78	
	COM2	0.85	0.73				
	COM3	0.92	0.84				
	COM4	0.92	0.85				
Benevolence	BEN1	0.85	0.72	0.89	0.89	0.68	
	BEN2	0.70	0.50				
	BEN3	0.87	0.76				
	BEN4	0.86	0.74				
AIQ	AIQ1	0.74	0.55	0.91	0.91	0.68	
	AIQ2	0.87	0.75				
	AIQ3	0.83	0.69				
	AIQ4	0.86	0.73				
	AIQ5	0.81	0.66				

Non-Normed Fit Index (BBNFI) and Root Mean Square Error of Approximation (RMSEA) are calculated for the measurement of overall model fit; Incremental Fit Index (IFI) and Comparative Fit Index (CFI) as measures of incremental fit; and Normed χ^2 for the measurement of the parsimony of the model. The results, summarised in Tables 2 and 3, confirm that for both audited and not-audited SMEs, the BBNFI, BBNNFI, IFI and CFI statistics clearly exceed the recommended minimum value of 0.9, RMSEA is located within the maximum limit of 0.08 and normed χ^2 takes a value close to the recommended value of 3.0 and clearly under the maximum limit of 5.0 (Hair et al. 2010).

The reliability of the measurement scales was evaluated using Cronbach's alpha, compound reliability and ave coefficients (Bagozzi and Yi 1988). The values of these statistics are, in every case, clearly above the required minimum values of 0.7 and 0.5 respectively (Hair et al. 2010), which supports the inner reliability of the proposed constructs (Tables 2 and 3). The convergent validity of the scales is also confirmed (Tables 2 and 3), since all items are significant to a confidence level of 95% and their standardised lambda coefficients are higher than 0.5 (Steenkamp and Van Trijp 1991).

Discriminant validity of the scales was tested following the procedure proposed by Fornell and Larcker

Table 4 Results of discriminant validity tests (scenario A—audited SMEs)

	Credit granting	Honesty	Competence	Benevolence	AIQ
Credit granting	0.87 ^a				
Honesty	0.35 ^b	0.78 ^a			
Competence	0.37 ^b	0.81 ^b	0.81 ^a		
Benevolence	0.22 ^b	0.45 ^b	0.46 ^b	0.78 ^a	
AIQ	0.25 ^b	0.55 ^b	0.41 ^b	0.14 ^b	0.82 ^a

^a AVE. coefficient

^b Squared correlation between pairs of latent variables

Table 5 Results of discriminant validity tests (scenario B—not-audited SMEs)

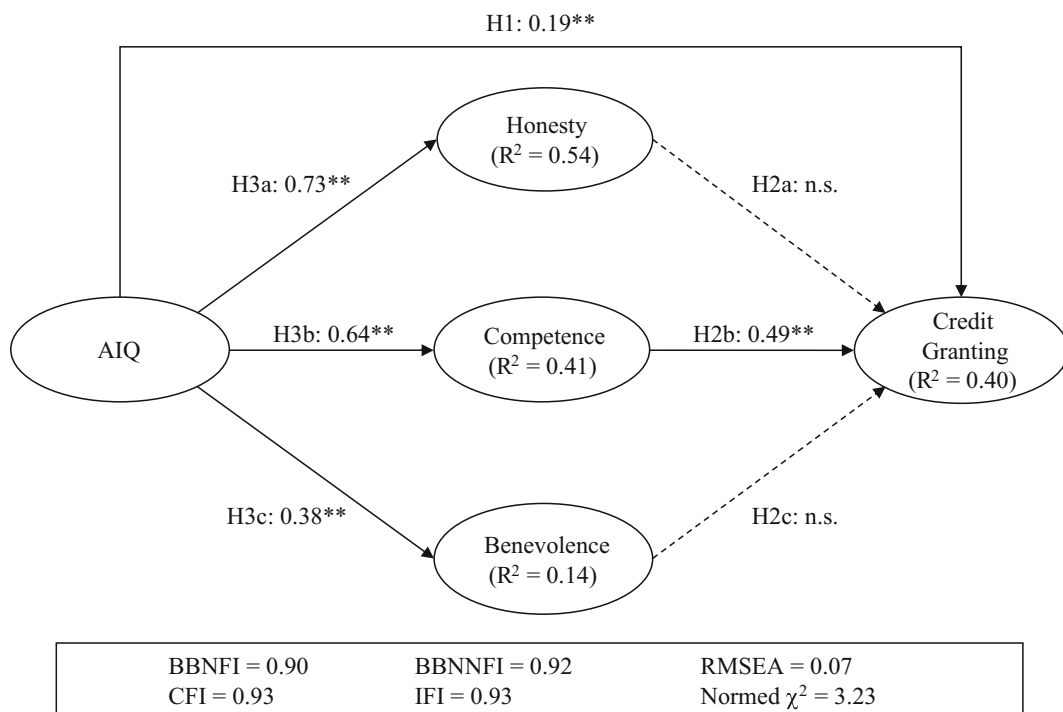
	Credit granting	Honesty	Competence	Benevolence	AIQ
Credit granting	0.84 ^a				
Honesty	0.35 ^b	0.76 ^a			
Competence	0.35 ^b	0.76 ^b	0.78 ^a		
Benevolence	0.21 ^b	0.38 ^b	0.48 ^b	0.68 ^a	
AIQ	0.18 ^b	0.45 ^b	0.29 ^b	0.14 ^b	0.68 ^a

^a AVE. coefficient^b Squared correlation between pairs of latent variables

(1981), which requires comparison of the variance extracted for each pair of constructs (ave coefficient) with the squared correlation estimate between these two constructs (Tables 4 and 5). In all cases except one, the variances extracted for each construct are greater than the squared correlation between them. Only in the case of audited SMEs is the ave coefficient of honesty slightly lower than the squared correlation between honesty and competence, but in general terms, the empirical evidence obtained supports the discriminant validity of the measurement scales for both audited and not-audited SMEs.

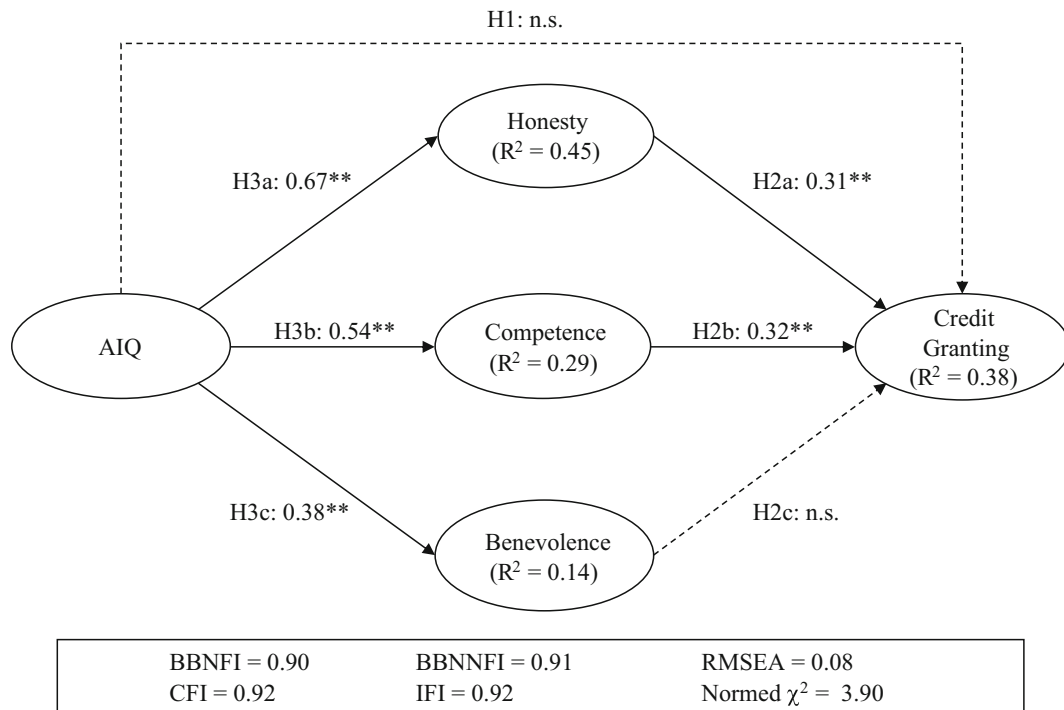
4.2 Estimation of hypothesised structural model

Once the psychometric properties of the scales were adequately examined in the previous stage, the model was estimated using the Robust Maximum Likelihood method. This method avoids the problems related to non-normality of data by providing the outputs “robust chi-square statistic” and “robust standard errors,” which have been corrected for non-normality (Byrne 1994), and consequently guarantees the validity of the model estimation. Figures 2 and 3 summarise the results for the



** Standardized coefficient and p-value < 0.05

Fig. 2 Structural model estimation (scenario A—audited SMEs)



** Standardized coefficient and p-value < 0.05

Fig. 3 Structural model estimation (scenario B—not-audited SMEs)

estimation of the proposed research model both for audited and not-audited SMEs, indicating the goodness-of-fit indices of the structural model, R^2 statistics for each dependent variable and standardised coefficients and p values for each relationship. Additionally, Table 6 shows a summary of the rejected and not-rejected hypotheses both in scenario A and B.

First of all, the obtained results confirm that the perception by decision-makers that the accounting information is high quality has a direct effect on their

willingness to grant credit, but only for the case of audited SMEs (H1 is not rejected in scenario A). This is a sign that banks attribute a huge value to the fact that the financial statements are audited, in such a way that otherwise, AIQ does not have a direct influence on the credit granting decision (H1 is rejected in scenario B).

Secondly, according to our empirical evidence, only the competence dimension of trust positively influences loan officers’ willingness to grant credit in the case of audited SMEs (H2b is not rejected in scenario A), while

Table 6 Summary of results (scenario A and scenario B)

	Audited firms (scenario A—Fig. 2)	Not-audited firms (scenario B—Fig. 3)
H1: AIQ → credit granting	Not rejected	Rejected
H2a: honesty → credit granting	Rejected	Not rejected
H2b: competence → credit granting	Not rejected	Not rejected
H2c: benevolence → credit granting	Rejected	Rejected
H3a: AIQ → honesty	Not rejected	Not rejected
H3b: AIQ → competence	Not rejected	Not rejected
H3c: AIQ → benevolence	Not rejected	Not rejected

when considering not-audited SMEs, both the honesty and competence dimensions are significant (H2a and H2b are not rejected in scenario B). The influence of the benevolence dimension is not significant in any case (H2c is rejected in scenario A and B).

Finally, a better perception about AIQ leads to higher value of trust dimensions on the SMEs in all cases, thus supporting the last three proposed hypotheses (H3a, H3b and H3c are not rejected in scenario A nor B). Therefore, in the case of audited SMEs, perceived AIQ has a direct effect on the outcome of the relationship (willingness to grant credit) and also an indirect effect through its influence on the perceived SMEs' competence by bank loan officers. On the contrary, for non-audited SMEs, perceived AIQ does only play an indirect role in the credit decision through its influence on trust formation (specifically through honesty and competence dimensions).

5 Conclusions

This study empirically explores the association between loan officers' perceptions of SMEs' AIQ and trust and the disposition to grant them credit. Additionally, it takes into account the possible effect of external audit in the proposed research model for credit granting decision-making. We use original data on bank loan officers' perceptions of the above-mentioned variables, collected using an online questionnaire.

5.1 Discussion and implications

From a theoretical point of view, we reach three major findings. Firstly, we find that for audited SMEs, the perception that the accounting information is high quality directly affects loan officers' willingness to grant them credit. In the opposite case, that is to say, for not-audited SMEs, AIQ does not play a direct role in the credit decision, although it is relevant in trust formation. This result gives a first idea of the importance of providing the professional judgement of an auditor about the quality of the financial statements when trying to access bank financing. Definitely, loan officers perceive that AIQ is better if the financial statements are audited, and in that case, they are more willing to grant credit to the SMEs. In other words, external audit helps overcoming information asymmetry problems and increases the probability that loan officers allow SMEs to get credit. This way, we agree with previous research that states that the audit report is crucial when credit institutions

make decisions about the provision of funds (Gómez-Guillamón and Vidal 2008; Huguet and Gandía 2014). In this case, we demonstrate the relevance of the audit service asking directly to the loan officers, whose answers provide evidence that the quality of the accounting information exerts a positive effect on credit granting in the case that the financial statements are audited.

Secondly, regarding the influence of the trust dimensions, we find that perceived SMEs' honesty is relevant for loan officers' decision-making only when the financial statements are not audited. Otherwise, loan officers are only worried about SMEs' competence. This finding supports the idea that audited SMEs are able to transmit that they are honest enough simply because an independent external expert has evaluated their accounting information. It seems that the loan officers perceive that the auditor's certification is a sign that confirms that the SMEs are transparent enough and provide sincere and honest information, so that the main factor affecting their willingness to grant credit is, as we said before, AIQ. On the contrary, if the financial statements are presented without the audit report, AIQ is not relevant, and the loan officers' willingness to grant credit is affected by both SMEs' perceived honesty and competence. Perceived SMEs' benevolence is not significant in any case. Thereby, our findings provide additional evidence to that obtained in other countries with respect to the influence of trust on credit granting processes (Howorth and Moro 2012; Moro and Fink 2013), although we demonstrate that its dimensions influence the loan officers' willingness to grant credit in a different way according to whether the SMEs are audited or not.

Thirdly, we find that the perception that the accounting information provided by the SMEs is high quality in terms of completeness, accuracy, timeliness, relevance and reliability, exerts a positive influence on the trust perceived by loan officers in any case. In that sense, previous research has proved that information quality is an antecedent of trust in different contexts, such as interorganisational data exchanges (Nicolaou and McKnight 2006) or electronic commerce (Kim et al. 2008), so we add to the existing literature by proving the relation also in the specific context of credit granting.

All in all, the present study mainly suggests that SMEs that go to financial institutions in search of financing should be aware that their behaviour both outside and

inside the firm may influence lending decisions. On the one hand, they should consider the possibility of hiring an external auditor voluntarily if they want to improve the loan officers' willingness to grant them credit. As we have explained, the perception of AIQ is better in the case of audited firms, and the results have confirmed that, in such scenario, it is a variable that affects loan officers' decision-making. On the other hand, if the SMEs decide not to audit their financial statements, they should be aware of the importance of transmitting a trustworthy behaviour, especially in terms of honesty and competence. That is to say, loan officers value the audit service, but if financial statements are not audited, they can compensate the lack of verified information by evaluating the honesty and competence of the SMEs management.

Further, our research makes a clear call for greater consideration of some of the legal provisions on accounting and auditing in Europe, that are in line with reducing both the quantity and quality of information that SMEs are required to submit (for example, the increase in the thresholds for SME audit exemption; see Directive 2013/34/EU). As we have demonstrated, external audit is relevant when SMEs try to access bank financing, and so is AIQ, either with a direct impact on the loan officers' willingness to grant credit or through its influence on trust formation. For that reason, lower requirements in terms of quantity and quality of information may lead to problems for SMEs when trying to access financing, which ultimately results in lower competitiveness of such firms.

Finally, the obtained results may also be of interest to auditors, who can enhance the relevance and validity of their work based on the opinions revealed by bank loan officers, who are one of the main users of the financial statements and one of the most important stakeholders of SMEs. That is to say, they might take these findings as an argument to persuade SMEs of the desirability of hiring audit services voluntarily.

5.2 Limitations and future lines of research

To conclude, it is necessary to mention that in spite of the systematic methodology followed throughout the development of this study, the research that was carried out does present some limitations. On the one hand, it must be taken into account that the geographical scope of the study is limited to Spain and that we just work with one financial institution. In this sense, Spain has similar characteristics to other European and OECD countries in terms of development, relevance of SMEs and bank intermediation.

Furthermore, since the beginning of the crisis and throughout it, Spain has been used as a reference country for the study of the difficulties of SMEs and, in particular, for access to credit, so it can be considered an international benchmark. Even so, the results should be interpreted with caution, as the external audit and the variables considered in the research model could have been better valued by the loan officers due to the high credit restriction phase Spain is going through. With regard to the collaborating bank, it has a national implementation and has met the requirements set by the regulator for all entities in the sector, which makes it comparable to its competitors. Likewise, the high sample size reduces the possibility of bias. On the other hand, we focus on the loan officers' willingness to grant credit, which may not exactly match with their effective behaviour. In any case, loan officers are daily faced with decisions on whether to grant credit, so it is likely that their responses to the survey reflect their perceptions and behaviour in past real situations. Moreover, loan officers' perceptions and intentions are very important indicators in order to understand the cognitive process underlying credit granting decision to SMEs.

Finally, based on the research carried out, it would be interesting to examine in future investigations the effect of other explanatory variables on the credit granting decision-making by loan officers, such as the reputation of the SME, their previous experience with the client, the business objectives set by the organisation and the general risk policy of the financial institution, among others. Regarding the external audit service, differences in valuations could be analysed depending on whether they are provided by a Big 4 or non-Big 4 firm. Furthermore, it would be interesting to extend the scope of the research to other potential users of the financial statements, such as companies that finance the internationalisation of SMEs, public subsidy bodies or suppliers of the firm. Additionally, it is worth mentioning the possibility of replicating this theoretical model in other countries with different economic, cultural and legal characteristics, which could affect the valuations.

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Appendix. Descriptive statistics

AIQ (7-point Likert scale): The information presented in the audited/not-audited financial statements of SMEs is...		Average value— not audited	Average value— audited	Sig. (2-tailed)
AIQ1	Timely	4.85	5.71	0.000***
AIQ2	Accurate	4.48	5.72	0.000***
AIQ3	Complete	4.36	5.77	0.000***
AIQ4	Relevant	4.83	5.79	0.000***
AIQ5	Reliable	4.25	5.80	0.000***

***Sig. < 0.01

TRUST (7-point Likert scale): in general, SMEs that present their financial statements audited/not audited...		Average value— not audited	Average value— audited	Sig. (2-tailed)
Honesty				
HON1	Are transparent	4.15	5.29	0.000***
HON2	Provide sincere and honest information	4.28	5.29	0.000***
HON3	Are reliable in keeping their promises	4.66	5.12	0.000***
HON4	Will probably fulfil their commitments	4.77	5.26	0.000***
Competence				
COM1	Provide guarantees about their skills to carry out their activities	5.10	4.49	0.000***
COM2	Have the ability/skills to fulfil their commitments	5.20	4.62	0.000***
COM3	Have sufficient experience in the activity performed	5.31	4.67	0.000***
COM4	Are managed by competent and diligent staff	5.27	4.35	0.000***
Benevolence				
BEN1	Take into account the impact that the actions have on the bank	4.28	3.62	0.000***
BEN2	Seek to establish relationships with the bank in which mutual benefit is a priority	4.39	3.94	0.000***
BEN3	Make efforts/sacrifices to fulfil their obligations with the bank	4.79	4.52	0.000***
BEN4	Are concerned about the interests and needs of the bank	4.18	3.59	0.000***

***Sig. < 0.01

Credit granting (7-point Likert scale): in general, SMEs that present their financial statements audited/not-audited...		Average value —not audited	Average value —audited	Sig. (2-tailed)
CGR1	Have a high probability that the bank makes a positive assessment of their overall position	4.06	5.09	0.000***
CGR2	Have a high probability that the bank feels predisposed to work with them	4.10	5.17	0.000***
CGR3	Have a high probability of getting funding	4.09	5.11	0.000***
CGR4	Have a high probability that the bank wants to establish long-term relationships with them	4.15	5.17	0.000***

***Sig. < 0.01

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