



# “Financing Moroccan SMES: Analysis of the influencing factors and the crucial role of the government guarantee scheme”

<b>AUTHORS</b>	Oussouadi Kamal  Cherkaoui Kenza
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Oussouadi Kamal, Ph.D. Student,  
Management Department, Mohammed  
V University of Rabat, Morocco.  
(Corresponding author)

Cherkaoui Kenza, Ph.D., Professor,  
Management Department, Mohammed  
V University of Rabat, Morocco.



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Oussouadi Kamal (Morocco), Cherkaoui Kenza (Morocco)

# FINANCING MOROCCAN SMEs: ANALYSIS OF THE INFLUENCING FACTORS AND THE CRUCIAL ROLE OF THE GOVERNMENT GUARANTEE SCHEME

**Abstract**

This study uses a quantitative approach to examine the determinants of SME financing in Morocco. The sample consists of 500 Moroccan SMEs that have submitted applications for bank finance, with their applications being assessed for a possible government credit guarantee. The sample includes companies that obtained state-guaranteed bank financing, those whose applications were rejected but that obtained other financing, and those that did not obtain financing, all evaluated in the year following the application. The analysis is based on nominal logistic regression to examine the interactions between different variables, including the amount of credit requested, profitability, debt level, repayment capacity, size, managerial shareholding, decision-making maturity, and the presence of a government credit guarantee. Following careful collection and analysis of the data, a number of results were drawn. In particular, it emerged that high profitability, solid repayment capacity, a minimum size requirement, an appropriate level of debt, high decision-making maturity and the presence of a government credit guarantee are significant factors that increase the likelihood of obtaining financing. On the other hand, the amount of credit requested and the manager's shareholding did not show any significant impact on the probability of obtaining financing.

**Keywords**

SME financing, credit guarantee schemes, government credit guarantees, Morocco

**JEL Classification**

G21, G23, G32, G38

**INTRODUCTION**

Access to finance plays an essential role in the development and growth of small and medium-sized enterprises (SMEs). The availability of adequate sources of finance enables SMEs to bring their projects to fruition, promote innovation, generate jobs, and make a significant contribution to the economy. First of all, access to finance is of paramount importance when starting up a business. Entrepreneurs frequently need capital to bring their ideas to life and make their operations a reality. Lack of appropriate access to finance could hinder the realization of many innovative ideas, limiting the potential for innovation and job creation. Furthermore, access to finance enables SMEs to exploit opportunities for growth. This may involve expanding production, diversifying products, or exploring new markets. These crucial steps require capital investment, which can be hampered in the absence of available finance. Access to finance gives SMEs the flexibility they need to respond to market and economic changes. In addition, access to finance plays a vital role in cash flow management. SMEs often require working capital to cover operational expenses and maintain the normal course of their business. Reliable access to finance can help avoid late payments to suppliers, maintain production and ensure sound financial management.

Government guarantee schemes are of vital importance in the field of SME financing, as they provide lenders with double security while consolidating investor confidence. Often issued by government institutions or public bodies, these guarantees act as shields in the event of default by SME borrowers. These government guarantee schemes help to reduce the risk perceived by lenders. SMEs, particularly young companies and those operating in high-risk sectors, may be perceived as riskier by financial institutions because of their limited track record or relatively small size. Government guarantee schemes provide a form of insurance to lenders, partly mitigating the risk of default and thus encouraging them to lend to SMEs. In addition, these guarantees improve access to finance for SMEs by widening the pool of potential lenders. By reducing the perceived risk, they widen the pool of potential lenders, resulting in greater access to finance for more businesses. This is particularly crucial for SMEs that may not have access to other types of collateral, such as tangible assets. Overall, identifying the factors that influence access to finance and the impact of institutional guarantees in this context, such as the study in question, is of major importance in guiding policies and measures to support the SME sector and encourage economic dynamism.

## 1. LITERATURE REVIEW

Erel et al. (2015) examined how borrower characteristics and the amounts of credit applied for influence the likelihood of obtaining bank finance. They found that factors such as credit quality, firm size and the amount of credit applied for are important determinants of whether finance is obtained. Cole (1998) studied how long-term relationships between banks and SMEs influence access to credit. He noted that SMEs can benefit from established lending relationships to obtain finance, but higher amounts of credit can still be difficult to obtain due to perceived risks. Aysan and Disli (2019) explored how the relationship between credit risk and SME finance can work both ways. This dynamic could mean that higher amounts of credit, typically associated with higher risk, could have a lower probability of securing finance. Altunbaş et al. (2010) examined how businesses obtain large amounts of finance. SMEs might be less likely to find alternatives to banks, which could affect their likelihood of obtaining large amounts of funding. Acharya and Steffen (2015) explored how SMEs might be affected by bank risk. Higher risk levels for banks could lead to stricter financing conditions for SMEs, including lower amounts of credit for high needs.

Beck and Demirguc-Kunt (2006) have pointed out that profitable SMEs are more likely to access finance, as they present less risk to lenders. High profitability can increase the ability of SMEs to repay their loans and therefore increase their likelihood of obtaining finance. Antoniou et al. (2006) explored the determinants of the structure of

corporate debt. They found that more profitable firms were more likely to have a longer-term debt structure, which could increase their probability of obtaining large amounts of credit. Hyytinen and Toivanen (2005) examined the effects of financial constraints on innovation and economic growth. Profitable companies could be better positioned to overcome financial constraints, which could increase their probability of obtaining high amounts of credit. Brown and Petersen (2011) examined the relationship between cash reserves and business R&D spending. A profitable firm with cash reserves may be better prepared to repay loans, which could increase lender confidence and improve the probability of obtaining financing. Hovakimian et al. (2012) examined whether firms' default probabilities were consistent with static trade-off theory. A profitable firm with low default probabilities could have a higher probability of obtaining financing for large amounts. Allen and Carletti (2008) examined the role of liquidity in financial crises. A profitable company may be better able to maintain its liquidity, which could increase the probability of obtaining financing for large amounts, even in crisis environments. Generally speaking, the profitability of an SME can have a positive influence on its ability to obtain financing, particularly large amounts of credit. High profitability generally strengthens the confidence of lenders and investors in the company's ability to repay loans, which can lead to an increased likelihood of obtaining the financing needed to support the SME's growth and development.

Rajan (1992) examined corporate financing decisions, highlighting the idea that companies with

a high level of debt could be perceived as having a higher level of risk in the eyes of lenders, which could have the effect of reducing their chances of obtaining financing. Acharya et al. (2013) explored the link between the quality of corporate governance and value creation, observing that companies with high levels of debt could appear less attractive to investors and lenders due to the increased risk associated with them, potentially reducing their financing opportunities. Myers and Majluf (1984) investigated the financing choices of companies by considering the retention of privileged information. In this context, a company with a high level of debt could face increased financing costs due to informational asymmetries, negatively impacting its prospects of obtaining financing. Lewellen (2006) examined financing decisions in a setting where managers are risk averse. Companies that take on large amounts of debt could be perceived as being more exposed to financial risks, which could reduce their probability of obtaining financing. Berger and Udell (2002) have focused on the organizational structure of banks and its influence on access to credit for small businesses. In the case of companies with a high level of debt, it may be more difficult to obtain credit, as banks may perceive a higher level of risk. Stein (2003) has discussed the impact of asymmetric information on companies' investment choices. A company with a high level of debt could be perceived as facing agency problems and default risks, which would reduce its chances of obtaining financing. This highlights that a high level of debt can have a negative impact on opportunities to obtain finance. Considerations relating to risk, financial performance and financing strategies play a crucial role in this complex relationship between debt and access to finance.

Petersen and Rajan (1995) undertook an exploration of the effects of competition in credit markets on lending dynamics. They noted that firms demonstrating strong repayment capacity may develop more robust lending relationships with lenders, which may increase their chances of securing financing. Li and Ongena (2015) analyzed the impact of bank loan announcements on borrowers' stock returns. A company with strong repayment capacity could generate greater confidence among investors and lenders, which could enhance its prospects of securing financing. Wruck (1990) examined the

impact of financial distress on organizational effectiveness. In this context, a company with a solid repayment capacity could be perceived as presenting less risk of financial distress, which could increase its likelihood of obtaining financing. Hartzell et al. (2008) have discussed the role of corporate governance in IPO processes. A company with a solid repayment capacity may be better able to rely on solid governance, thereby increasing investor confidence and, consequently, the probability of receiving financing. Fama and French (2002) conducted a study based on the predictions of the trade-off and debt sequence theories. A company with a solid repayment capacity might prefer to use external debt rather than internal resources, and this choice could have a positive influence on its chances of obtaining financing. Graham (2000) has investigated the tax advantages associated with debt. In this context, a company with a solid repayment capacity could benefit from the tax advantages associated with debt, thereby increasing its probability of obtaining financing. It is therefore important to have a solid repayment capacity when determining the probability of obtaining financing for an SME. Such a capacity would reduce the risks perceived by lenders and investors, generating greater confidence and thus improving the prospects of obtaining more substantial amounts of finance.

Beck and Demirguc-Kunt (2006) examined the constraints on access to finance for small and medium-sized enterprises. They noted that larger SMEs may have better access to finance due to their ability to present stronger financial statements and more viable projects. Beck and Levine (2003) examined the relationship between SMEs, economic growth, and poverty reduction. Larger SMEs could play a more important role in the economy, which could encourage lenders and investors to support them more. De-Mel et al. (2008) examined returns to capital in microenterprises. Although this study focuses on microenterprises, the principle can be extended to larger SMEs. Larger firms may be more attractive to investors because of their ability to generate returns. Lee et al. (2015) examined access to finance for innovative SMEs since the financial crisis. Larger SMEs may be better positioned to demonstrate their innovative potential, which could improve their likelihood of securing finance. Bruton et al. (2010) examined the governance, ownership struc-

ture and performance of IPO firms. Larger companies may be better prepared to meet governance and transparency requirements, thereby improving their probability of obtaining financing. Hall et al. (2009) examined innovation and productivity in SMEs. Larger SMEs may have a greater capacity to implement innovations and improve their productivity, which could make them more attractive to lenders and investors. Larger companies often have tangible advantages in terms of resources, growth, capacity for innovation and attractiveness to investors, which can enhance their access to finance and their ability to obtain higher amounts of credit.

Bates (1990) explored the success factors and longevity of small businesses. He noted that managers with a larger equity stake in the SME might be more motivated to ensure the success of the business, which could improve their likelihood of obtaining finance. Berger and Udell (2002) studied the availability of credit for small businesses and relationship lending. They noted that managers with a high equity stake may strengthen relationships with lenders, which could increase their likelihood of obtaining financing. Blanchflower and Oswald (1998) examined the characteristics of entrepreneurs. They noted that managers with a large share of the company's capital could demonstrate a strong commitment, which could positively influence their probability of obtaining financing. Sutter et al. (2019) examined entrepreneurship as a solution to extreme poverty. They suggested that leaders with a substantial equity stake might be more motivated to succeed, which could influence their likelihood of securing funding. Colombo and Grilli (2005) explored human capital and the growth of technology start-ups. Managers with a substantial equity stake in the company could be perceived as having a better understanding of financial and operational issues, which could influence their likelihood of obtaining financing. Stuart and Sorenson (2003) examined the geography of entrepreneurial opportunities. Managers with a significant stake in the company could be perceived as having a stronger personal interest in the company's success, which could positively influence their probability of obtaining financing. Managers with a significant financial interest can show strong commitment and increased responsibility, which can boost the confidence of investors and lenders, improving their access to finance and their ability to obtain higher amounts of credit.

Eisenhardt (1989) noted that more mature businesses might present stronger plans and strategies, which could positively influence their likelihood of obtaining finance. Davidsson and Honig (2003) studied the role of social and human capital among entrepreneurs. Companies with a higher level of maturity could better demonstrate their ability to manage challenges and seize opportunities, which could influence their likelihood of obtaining financing. Busenitz et al. (2003) examined research into emerging entrepreneurship. More mature companies may better manage the risks and uncertainties associated with entrepreneurship, which could positively influence their likelihood of obtaining financing. Zajac and Westphal (1994) examined managerial incentives and monitoring in large firms. They demonstrated that mature firms could better manage incentives and stakeholder relations, which could positively influence their probability of obtaining financing. Wiklund and Shepherd (2003) examined the knowledge-based resources, entrepreneurial orientation, and performance of SMEs. SMEs with higher maturity might make better use of their resources to support their entrepreneurial orientation, which could positively influence their probability of obtaining financing. Lumpkin and Dess (1996) explored entrepreneurial orientation and its relationship with performance. Companies with a high degree of maturity could better implement a coherent entrepreneurial orientation, which could positively influence their probability of obtaining financing. Based on the above, more mature SMEs can better manage risks, optimize their resources, and implement coherent strategies, which can enhance their attractiveness to investors and lenders, improving their access to finance and their ability to obtain higher amounts of credit.

Beck and Demircug-Kunt (2006) examined the constraints on access to finance for small and medium-sized enterprises. They noted that institutional guarantees, such as government guarantee schemes, can reduce the risk perceived by lenders and improve the probability of obtaining finance. Hyytinen and Toivanen (2005) examined the role of financial constraints in firm innovation and growth. They suggested that Credit guarantee schemes can promote SME investment and expansion. Uesugi and Yamashiro (2010) examined the effectiveness of Credit guarantee schemes for small firms. They noted that Credit guarantee schemes,

when well designed and implemented, can improve access to finance and increase the likelihood of obtaining finance for SMEs. Gai and Rossolini (2016) studied the determinants of the design of credit guarantees for SMEs. They found that Credit guarantee schemes, supported by effective public policies, can positively influence the likelihood of obtaining finance. Domeher et al. (2017) investigated the role of credit guarantee schemes in the small business lending market. They found that these schemes can improve access to credit and reduce loan rationing, thereby increasing the chances of obtaining finance for SMEs. Waniak-Michalak et al (2022) examined the effectiveness of guarantee schemes for SMEs. They found that these schemes can improve access to finance and reduce credit costs, thereby increasing the likelihood of SMEs obtaining finance. Ughetto et al. (2017) examined whether firms benefit from investment loan guarantees. They concluded that these guarantees could reduce credit constraints and increase the chances of obtaining financing for SMEs. The presences of Credit guarantee schemes, where the state acts as guarantor of bank finance, can play a major role in increasing the chances of SMEs obtaining finance. These guarantees can reduce the risks perceived by lenders, boost confidence and facilitate access to finance, thereby improving SMEs' ability to obtain higher amounts of credit. Based on the above literature review, the following hypotheses can be formulated:

- H1: *The size of the loan applied for is inversely related to the probability of obtaining finance.*
- H2: *High SME profitability is associated with a greater likelihood of obtaining finance.*
- H3: *An SME with a high level of debt is less likely to obtain financing.*
- H4: *An SME's solid repayment capacity is positively correlated with a greater probability of obtaining financing.*

- H5: *The larger the SME, the greater the chance of obtaining financing.*
- H6: *The greater the manager's stake in the SME's capital, the greater the chance of obtaining finance.*
- H7: *The greater the SME's decision-making maturity, the greater the chance of obtaining financing.*
- H8: *The presence of a government credit guarantee increases the chances of obtaining financing.*

## 2. METHODS

In this study, a sample of 500 Moroccan SMEs was examined, all of which applied for bank financing with a government credit guarantee. This sample represents both companies that were successful in obtaining state-backed bank financing and those whose applications were rejected. The second category of SMEs is made up of both companies that have obtained other means of financing and those that have not managed to obtain any financing at all. The main objective of this study is to analyze the determinants that influence SMEs obtaining finance in this specific context. The aim is to determine which factors have a significant impact on the probability that an SME will succeed in obtaining finance, taking into account variables such as repayment capacity, total debt, profitability, company size, level of management shareholding, etc. Particular attention was also paid to the marginal impact of credit guarantee schemes on SMEs obtaining financing. The aim is to explore how the presence of this guarantee affects an SME's chances of obtaining finance, controlling for other influential factors. The econometric model adopted is a nominal logistic regression given by the following formula:

$$PRFNC = \alpha + \overbrace{\beta_1 \cdot AMTCRT + \beta_2 \cdot PRF + \beta_3 \cdot IDTP + \beta_4 \cdot RPCAP}^{\text{Characteristics of the financing application}} + \underbrace{\delta_1 \cdot SIZE + \delta_2 \cdot MNSH + \delta_3 \cdot DMM}_{\text{Control variables}} + \gamma \cdot GRVCG + \varepsilon, \quad (1)$$

where *PRFNC* is the probability of obtaining financing which is a binary variable which takes the value of 1 if the SME obtains bank financing and 0 otherwise; *AMTCRT* is the amount of credit requested in DH; *PRF* is the profitability of the SME measured by Net Profit Margin = (Net Profit / Total Revenues) × 100%; *IDTP* reflects the total indebtedness of the SME measured by net debt; *RPCAP* is the SME's repayment capacity represented by the Interest Coverage Ratio measured by: Earnings before interest and tax / Interest (a high coverage ratio of 4 or 5 is a sign of good repayment capacity); *SIZE* represents the size of the SME measured by Total Assets; *MNSH* is the manager's shareholding in the capital of the SME; *DMM* is the decision-making maturity of the SME measured by the average of the respective ages of the manager and the firm; and *GRVCG* is the government credit guarantee which is a binary variable that takes 1 if the SME obtains the government credit guarantee and 0 otherwise.

The empirical methodology used in this study adopts a logistic regression. Logistic regression differs from linear regression in that it is not based on the same assumptions as linear regression based on ordinary least squares. For the analysis to be valid, the logistic regression model must meet certain assumptions. When these assumptions are not met, problems such as biased coefficient estimates or large standard errors for the coefficients can occur. Before using the model for statistical inference, it's crucial to evaluate its fit and address key considerations. Logistic regression doesn't require a strict linear relationship between dependent and independent variables, nor does it mandate normality in error term distribution or homoscedasticity. This flexibility makes it adaptable for various scenarios.

Unlike linear regression, in logistic regression the dependent variable is not measured on an interval or ratio scale. Logistic regression, while distinct from linear regression, nevertheless has fundamental similarities in terms of its methodological requirements:

- **Appropriate Outcome Structure:** The dependent variable must match the type of logistic regression used (binary or ordinal), ensuring model suitability.
- **Independence of Observations:** Each observation should stand alone, excluding dependencies like repeated or paired data, ensuring unique data contributions.
- **Absence of Multicollinearity:** Independent variables should not exhibit high correlations, preventing unstable parameter estimates.
- **Absence of Specification Error:** The model must be correctly specified with relevant variables and an appropriate link function, substantiated by literature. Awareness of potential specification errors is crucial, and alternative link functions can be explored.

### 3. RESULTS

In Table 1, the Difference represents the difference in value between the full model and the reduced model. The value of -Log-likelihood is 177.09524. This value indicates how much better the full model fits than the reduced model in terms of log-likelihood. A higher deviation suggests a better fit. The comparison between the full model and the reduced model is reinforced by the likelihood ratio test (chi-square). With a value of 354.1905 for the chi-squared test and an associated probability (Prob. > chi-square) very close to zero (<0.0001), there is strong evidence that the full model offers a significantly better fit than the reduced model.

The -Log-likelihood values for the Full (169.22) and Reduced (346.31) models provide information on the goodness of fit of each model. The Full model has a lower log-likelihood than the reduced model, indicating a better fit of the Full model to the data. The pseudo-R-squared (0.51) indicates that the Difference model explains approximately 51.14% of the variation in log-likelihoods between the Full and Reduced models. This suggests that the Full model provides a better fit. The AICc (356.81) and BIC (394.37) values provide information on the goodness of fit and complexity of the models. The Full model appears to have lower values for these criteria than the reduced model, again suggesting that the Full model is more robust. Thus, the results indicate that the Full model provides a better fit to the data than the reduced model, with a significant difference in log-likelihoods and a

**Table 1.** Adjustment details

Source: Authors.

Model	-Log-likelihood	Degrees of freedom	Chi-square	Prob. > chi-square
Difference	177,09524	8	354,1905	<,0001*
Full	169,22231			
Reduced	346,31755			
R square (U)				0,5114
AICc				356,812
BIC				394,376
Observations (or weighted sums)				500

highly significant chi-square test. Thus, the measures of fit and the information criteria suggest that the full model provides significant information.

The confusion matrix provided in Table 2 presents the results of the nominal logistic regression analysis, where “PRFNC” represents the probability of obtaining funding. This matrix allows to assess the performance of the model by comparing its predictions with actual observations. By analyzing the different parts of the confusion matrix, conclusions can be drawn about the quality of the model.

**Table 2.** Confusion matrix

Source: Output JMP.

Absolute frequencies		
Observations	Expected numbers	
PRFNC	1	0
1	222	36
0	37	205
Relative frequencies		
Observations	Predictions	
PRFNC	1	0
1	0,860	0,140
0	0,153	0,847

Firstly, the model correctly predicted a high probability of obtaining financing (PRFNC = 1) in 222 cases, which represents approximately 86.0% of actual observations with a high probability. However, the model incorrectly predicted a high probability of obtaining funding in 36 cases (PRFNC = 1, prediction = low probability). The model correctly predicted a low probability of obtaining funding (PRFNC = 0) in 205 cases, which represents approximately 84.7% of actual observations with a low probability. However, the model incorrectly predicted a low probability of obtaining funding in 37 cases (PRFNC = 0, prediction = high probability). The model showed a reasonable ability to correctly predict high and low probabilities of obtaining funding, with accuracy rates of

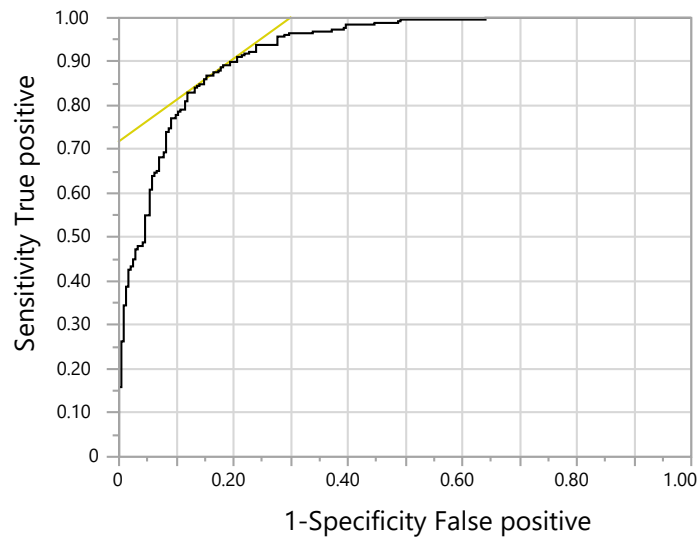
approximately 86.0% and 84.7%, respectively. This suggests that the model can capture trends in the data. Although accuracy rates were generally high, the model made errors by predicting high probabilities when the actual probability was low, and vice versa. This indicates that the model may have difficulty distinguishing certain observations with similar probabilities.

Figure 1 shows the results of an ROC (Receiver Operating Characteristic) curve in the context of an analysis, where the positive level is determined by obtaining PRFNC = ‘1’ funding. The ROC curve is commonly used to evaluate the performance of a classification model, particularly in binary classification problems.

The probability of obtaining PRFNC=‘1’ to be the positive level: This means that the positive class (1) has been defined using PRFNC=‘1’. This can have an impact on how the results are interpreted in terms of the sensitivity and specificity of the model. Area under the curve (AUC): 0.928: The AUC is an important measure in ROC analysis. It assesses the model’s ability to distinguish between the two classes. The AUC varies from 0 to 1, where a higher value indicates better discrimination performance. In this case, the AUC is 0.928, which suggests that the model has a very good ability to distinguish between the positive and negative classes. An AUC greater than 0.5 generally indicates a classification performance better than chance. The results indicate that the model has a strong performance in terms of discriminating between positive and negative classes, with a high AUC. This suggests that the model is able to discriminate well between the two classes, which is a positive indication of its classification performance.

The VIF (Variance Inflation Factor) statistics in Table 3 indicate the level of multicollinearity be-





Note: Area under the curve (AUC)=0,92844.

Figure 1. ROC curve

tween the independent variables in the nominal logistic regression model. A high VIF suggests a high correlation between an independent variable and the other independent variables, which can cause problems in interpreting the coefficients.

Table 3. Variance Inflation Factor (VIF)

Source: Authors.

Term	VIF
AMTCRT	1,0177518
PRF	1,0124558
IDTP	1,0089003
RPCAP	1,0082925
SIZE	1,0129183
MNSH	1,0155115
DMM	1,0140226
GRVCG	1,0156488

The VIF values for each independent variable are all close to 1. This indicates that there is little multicollinearity between these variables. A VIF close to 1 suggests that the variable is not highly correlated with the other independent variables, which is a good indicator for interpreting the coefficients.

The results of the logistic regression are summarized in Table 4. The coefficient corresponding to “Amount of credit requested” is very close to zero, and its high p-value (0.88) suggests that the size of the credit requested has no significant effect on the probability of obtaining financing. Consequently, hypothesis *H1* is invalidated. With regard to “Profitability”, its coefficient is positive (0.18), and

the associated p-value is less than 0.0001, thus indicating a substantial and favorable impact on the probability of obtaining financing. This confirms hypothesis *H2*. For “Total debt”, the coefficient is negative and has a p-value (0.059) that is significant at 10%, suggesting that total debt has a negative effect on the probability of obtaining financing. Consequently, hypothesis *H3* is accepted.

The coefficient associated with “Repayment capacity” is positive, and the associated p-value is 0.0176, suggesting a significant influence at the 5% level on the probability of obtaining financing. This supports hypothesis *H4*. Size of business is characterized by a positive coefficient, and a p-value of 0.0006, revealing a consistent and positive impact on the probability of obtaining finance. This finding supports hypothesis *H5*.

With regard to the “Manager’s stake in the company’s capital”, although its coefficient is negative, its p-value (0.12) exceeding 0.1 indicates that this stake does not have a significant impact on the probability of obtaining financing. This leads to reject hypothesis *H6*. The coefficient associated with “Decision maturity” is positive, and the associated p-value is less than 0.0001, indicating a favorable impact at a level of 1% on the probability of obtaining financing. This confirms hypothesis *H7*. The coefficient associated with the “government credit guarantee” is positive (1.32), and the associated p-value is less than 0.0001, highlighting a consider-

**Table 4.** Logistic regression coefficient estimates

Source: Authors.

Term	Estimate	Standard error	Chi-square	Prob. > chi-square
Constant	-7,2289953	14,700136	0,24	0,6229
AMTCRT	-8,4407e-9	5,5917e-8	0,02	0,8800
PRF	0,18109299	0,0310294	34,06	<,0001***
IDTP	-1,1064806	0,5863284	3,56	0,0591*
RPCAP	0,18402606	0,0775348	5,63	0,0176**
SIZE	6,98022e-8	2,0431e-8	11,67	0,0006***
MNSH	-0,7434628	0,4805615	2,39	0,1218
DMM	0,17632571	0,0161137	119,74	<,0001***
GRVCG	1,32723919	0,2949159	20,25	<,0001***

Note: \*\*\* significant at 1%; \*\* significant at 5%; \* significant at 10%.

ably positive effect on the probability of obtaining financing in the presence of such a guarantee. This observation reinforces hypothesis *H8*. In summary, the results indicate that profitability, repayment capacity, company size, decision-making maturity and the presence of government credit guarantee have a significant and positive impact on the probability of obtaining financing. The other variables have no significant impact. The results validate hypotheses *H2*, *H3*, *H4*, *H5*, *H7* and *H8*.

## 4. DISCUSSION

The results of the study reveal that the size of the amount of credit requested does not have a significant impact on the probability of obtaining financing. This finding differs from the work of Erel et al. (2015) and Aysan and Disli (2019), who suggested that the amount of credit requested plays an important role in obtaining financing. On the other hand, the results confirm that high profitability of an SME is associated with a higher probability of obtaining financing, corroborating the findings of Beck and Demirguc-Kunt (2006) and Antoniou et al. (2006). Furthermore, the results confirm that SMEs with high debt are less likely to obtain financing, supporting previous research by Rajan (1992) and Acharya et al. (2013). Firms with strong repayment capacity are also more likely to obtain finance, in line with the work of Petersen

and Rajan (1995) and others. Similarly, larger SME size is associated with a higher probability of obtaining financing, confirming the findings of Beck and Demirguc-Kunt (2006) and others. However, the results do not confirm the significant impact of the manager's stake in the company's capital on the probability of obtaining financing, diverging from the ideas of Bates (1990) and Berger and Udell (2002).

Another important finding is that the maturity of the SME and the manager has a significant impact on the probability of obtaining finance, in line with the work of Eisenhardt (1989) and others. Crucially, the results support the hypothesis that the presence of government credit guarantee increases the chances of obtaining finance, thus confirming the positive role of credit guarantee schemes in access to finance, as emphasized by Beck and Demirguc-Kunt (2006) and other researchers. In short, the results indicate that for an SME to obtain financing, it is advantageous to have solid profitability, a minimum size requirement, reasonable indebtedness, and adequate repayment capacity. These internal characteristics strengthen the SME's credibility in the eyes of lenders and investors. The presence of government credit guarantee also improves access to finance for SMEs by reducing the risks perceived by lenders. However, it is essential to bear in mind that other external factors can also have an influence on obtaining finance.

## CONCLUSION

The aim of this study was to analyze the factors that determine SMEs' access to finance in Morocco. Using a quantitative approach, the study explored how various elements influence the likelihood of a Moroccan SME accessing finance. To this end, datasets from a representative sample of Moroccan

SMEs were compiled and statistical methods were used to identify relationships between the variables under investigation. The variables examined included the amount of credit requested, the profitability of the SME, its level of indebtedness, its repayment capacity, its size, the shareholding of the manager, the maturity of the SME and its manager, and the presence of a government credit guarantee. Based on previous research, hypotheses were formulated as to the potential impact of these elements on the ability of Moroccan SMEs to obtain financing. The results shed significant light on the main factors influencing access to finance for SMEs in Morocco, and have practical implications for entrepreneurs, lenders, and policymakers.

High profitability demonstrates a company's ability to generate profits and meet its financial obligations, which boosts lenders' confidence and increases the likelihood of obtaining finance. In addition, a minimum size requirement can signify operational stability and an ability to absorb risk, which is also attractive to lenders. A reasonable level of debt suggests that the company is balancing its sources of finance with the risks associated with excessive debt. Sufficient repayment capacity means that the company has adequate cash flow to cover debt payments, reducing lenders' concerns about the risk of default. With these elements in place, an SME presents a favorable image to lenders, strengthening its position when seeking finance. However, it is crucial to note that obtaining finance can also be influenced by external factors such as economic conditions, government policies and financial market trends. While these conditions may play a role, the combination of internal SME characteristics described in this study creates an environment that is conducive to attracting finance. The credit guarantee schemes for SMEs improves their access to finance by reducing the risks perceived by lenders, increasing confidence, and widening access to credit. This encourages the participation of financial institutions and allows a wider range of SMEs to benefit from financing, even when strict lending criteria are in place.

## AUTHOR CONTRIBUTIONS

Conceptualization: Oussouadi Kamal, Cherkaoui Kenza.

Data curation: Oussouadi Kamal, Cherkaoui Kenza.

Formal analysis: Oussouadi Kamal, Cherkaoui Kenza.

Funding acquisition: Oussouadi Kamal, Cherkaoui Kenza.

Investigation: Oussouadi Kamal, Cherkaoui Kenza.

Methodology: Oussouadi Kamal, Cherkaoui Kenza.

Project administration: Oussouadi Kamal, Cherkaoui Kenza.

Resources: Oussouadi Kamal, Cherkaoui Kenza.

Software: Oussouadi Kamal, Cherkaoui Kenza.

Supervision: Oussouadi Kamal, Cherkaoui Kenza.

Validation: Oussouadi Kamal, Cherkaoui Kenza.

Visualization: Oussouadi Kamal, Cherkaoui Kenza.

Writing – original draft: Oussouadi Kamal, Cherkaoui Kenza.

Writing – review & editing: Oussouadi Kamal, Cherkaoui Kenza.

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