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CONTRIBUTION TO THE STUDY OF THE DETERMINANTS OF FINANCIAL COMMUNICATION: CASE OF THE MOROCCAN BANKING SECTOR

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Abstract
This article aims to examine financial communication in Morocco, with a particular focus on the banking sector during the period 2017–2021. The main objective is to identify the key determinants of financial communication within this sector. To this end, an index was developed based on a list of items selected through a review of empirical studies dedicated to this theme. The results reveal significant relationships, both positive and negative, between certain variables and the quality of financial communication in Moroccan banks. These findings indicate that enhancing the quality of financial communication in banks' annual reports can be achieved through, among other measures, a larger board size and a higher proportion of independent directors. Recommendations to achieve this include standardizing banks' publications and categorizing their information effectively.
Keywords: Determinants, Financial Communication, Financial disclosure, Financial Information, Banking sector, Morocco

INTRODUCTION

In a globalized context characterized by the rise of new technologies and complex financial operations (mergers, acquisitions, tender offers, exchange offers), companies are constantly seeking new sources of financing and opportunities to open their capital, with transactions often crossing national borders. This evolution has heightened the importance of financial information, necessitating adaptation to international standards. Furthermore, a series of

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financial scandals since the beginning of millennium has exposed practices of financial information manipulation, underscoring the critical need for transparency and reliability in such data.

A low level of transparency in financial disclosures, the concealment of a bank's actual situation, and unequal access to information for investors can lead to bankruptcies, stock price declines, and damage to the organization's reputation. These issues undermine stakeholder trust, which has driven the motivation for this empirical study focusing on the banking sector in Morocco. Beyond its academic contribution, this study also holds practical and managerial significance, providing leaders and investors with insights to better understand and improve their financial communication practices.

In the Moroccan academic context, research on financial communication remains mostly theoretical, as shown by the works of (El Gnaoui, 2017), (Habbouch, 2017), (Aouina & Moussamir, 2019), (Soudi & Guermatha, 2019) and (Tajedine & Derfoufi, 2021). Although these studies address relevant themes such as audit, governance, risk, voluntary communication, and digitalization, they often suffer from a lack of empirical approaches to deepen their analyses.

Based on the above, and to examine the current state of financial information of banks, we decided to follow in the footsteps of (Htay, Ridzwana, & Salman, 2013), (Dhouibi & Mamoghli, 2013), (Mahboub, 2017) and (Assili, 2017)... by continuing research on the quality determinants of banks' financial communication, raising the following question: What are the determinants of quality financial communication in the Moroccan banking sector?

The main objective of our research is to evaluate the quality of financial communication of banks in Morocco for the period 2017-2021. We chose to focus our analysis on this period because it can offer more reliable data, not biased by the effects of the COVID-19 pandemic. Moreover, conducting a study over a subsequent period, especially over five years and after the pandemic, would be more complex due to major disruptions in the availability and consistency of information.

To address this issue and conduct the empirical study, this article will be structured into three main sections. The first section will be dedicated to the literature review and the formulation of hypotheses. The second section will detail the methodology adopted, while the third will present and analyze the results obtained.

LITERATURE REVIEW

The measurement of the variable "quality of financial information" has been undertaken for over 60 years. Among the first works that addressed it is the study by (Cerf, 1961), one of the pioneers in studying the amount of financial information in correlation with three specific variables: the importance of assets, the number of shareholders, and profitability.

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Other empirical works, including ours, have examined the level of information dissemination in a single country, namely (Nejjar, 2011), (Barako, 2007), or in a single company like (Chekkar, 2007). A smaller number of studies, such as those by (Meek, Roberts, & Gray, 1995), (Ahmed & Courtis, 1999) and (Street & Gray, 2002), have been conducted on a sample spanning several countries. However, what will interest us most in this review of empirical studies are those focused on the banking sector to study the determinants and the level of financial communication, notably (Al-Khadash, 2001), (Majid & Ismail, 2008), (Htay, Ridzwana, & Salman, 2013), (Adebayo & Adebiyi, 2016), (Mahboub, 2017) and (Oraka, Okoye, & Raymond, 2019)...

The methods used in the review of empirical studies are particularly varied. This diversity has led authors to adopt different approaches to evaluate the level of financial communication in their works. The most frequently mentioned approaches in accounting and financial literature at the time of our study are grouped into three main categories. These are the simple dichotomous approach (or unweighted), the weighted dichotomous approach, as well as other approaches, including mixed approaches (weighted and equally weighted). The majority of empirical studies adopting these different dichotomous approaches to measure the determinants of financial communication are summarized in the table below:

Table 1: Review of Dichotomous Approaches Adopted in the Field of Financial Communication

Adopted approach	Authors	Year
Simple dichotomous approach (Equally weighted)	Spero	1979
	Wallace	1988
	Cooke	1988
	Raffournier	1991
	Ahmed & Nicholls	1994
	Meek, Roberts, & Gray	1995
	Inchausti	1997
	Zhou	1997
	Owusu-Ansah	1998
	Depoers	2000
	Ho & Wong	2001
	Street & Gray	2002
	Ferguson, Lam, & Lee	2002
	Chau & Gray	2002
	Haniffa & Cooke	2002
	Chalmers & Godfrey	2004
	Oliveira, Lima Rodrigues & Craig	2006
	Hossain	2008
	Beest, Braam, & Boelens	2009
	Nejjar W. N.	2011

Table 1…

	Uyar, Kilic, & Bayyurt	2013
	Dhouibi & Mamoghli	2013
	Mahboub R.	2017
	Assili I.	2017
	Assili I.	2019
Weighted dichotomous approach	Cerf	1961
	Singhvi & Desai	1971
	Choi	1973
	Buzby	1974
	Stanga	1976
	Barrett	1976
	Belkaoui & Kahl	1978
	Firth	1979
	Chow & Wong-Boren	1987
	Malone, Fries, & Jones	1993
	Zhou	1997
	Eng, Hong, & Ho	2001
	Eng & Mak	2003
	Barako, Hancock, & Izan	2006
	Wen	2011
Other approaches	Joyce & Libby	1981
	Ashton	1982
	Chow & Wong-Boren	1987
	Zarzeski	1996

Source: Compiled by the author

HYPOTHESES DEVELOPMENT

We have examined all the works conducted to date, as well as the methodologies employed, to identify a suitable method for evaluating the quality of financial communication in our context, through annual reports and various financial publications of banks. The hypotheses retained for our empirical study revolve around: the size of the board of directors, the independence of the board of directors, government ownership, age, size, leverage, deposits, profitability, and the reputation of the bank's audit firm.

Size of the Board of Directors

The variable "size of the board of directors" has been retained in almost all research works dealing with dissemination and/or quality of financial communication. Some studies have confirmed that the size of the board has a negative impact on the quality of financial communication, notably (Beasley, 1996), (Dechow, Sloan, & Sweeney, 1996), (Pope, Peasnell, & Steven, 1998), (Bédard, Chtourou, & Couteau, 2001), (Abbott, Parker, & Peters, 2004), (Klein, 2002) and (Xie, Davidson III, & DaDalt, 2003).

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Contrary to other studies like (Bennett, Bradbury, & Prangnell, 2006), (Fathi, 2013), (Fathi, 2013), (Htay, Ridzwana, & Salman, 2013), (Ahmed Haji & Ghazali, 2013), (Chakroun & Hussainey, 2014), (Asegdew, 2016), (Uwuigbe, Amiolemen, & Uwuigbe, 2017), (Akeju & Babatunde, 2017) and (Uwuigbe, Felix, & Uwuigbe, 2018) who found a positive relationship between this variable and the quality of financial communication, although (Nejjar, 2011) did not find results confirming this hypothesis.

We regret the absence of a sufficient number of empirical works entirely focused on the banking sector in the review. Nevertheless, relying on the various sources mentioned above, we reformulate the following hypothesis:

H1: The size of the board of directors positively impacts the quality of financial communication of Moroccan banks.

Independence of the Board of Directors

To link the presence of external directors and the quality of financial communication, we have reviewed several studies and noticed that many researchers have examined the correlation between the independence of the board and financial communication, but the results have been mixed. On one hand, studies conducted by (Williamson, 1983), (Ho & Wong, 2001), (Haniffa & Cooke, 2002), (Gul & Leung, 2004), (Nasir & Abdullah, 2004), (Arcay & Vázquez, 2005), (Byard, Li, & Weintrop, 2006), (Cheng & Courtenay, 2006), (Ben Ali, 2008), (Katmun, 2012), (Htay, Rashid, Aung, & Adnan, 2012), (Hassan & Bello, 2013), (Soheilyfar, Tamimi, Ahmadi, & Takhtaei, 2014), and (Monday & Nancy, 2016) have demonstrated a positive relationship between board independence and financial communication.

These findings suggest that continuous monitoring by independent directors makes boards more responsive to investors and improves the company's compliance with various requirements. This will inevitably lead to an improvement in the extent and quality of disclosed information. Based on these empirical insights, our hypothesis will be:

H2: The percentage of independence on the board of directors positively influences the quality of financial communication of Moroccan banks.

Government Ownership

Government ownership has not been sufficiently studied in previous research, especially in the banking sector, unlike other ownership structures. In Morocco, some banks are characterized by the presence of state participation as a shareholder. In this context, state shareholders may focus on wealth redistribution and maintaining social order (Xu & Wang, 1999). In other words, improving shareholder value is not often the main objective of state-

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owned banks. Therefore, there may be less disclosure of information in companies with a higher proportion of state ownership. However, it should be noted that (Huafang & Jianguo, 2007) found that government ownership is not directly related to disclosure. This leads us to formulate the following hypothesis:

H3: Government ownership positively impacts the quality of financial communication.

Age

Studying the impact of the variable "age" is among the least addressed in the theme of financial information dissemination. Older companies have acquired over time expertise, skills, capacities, and knowledge that make them more comfortable, legitimate, and effective regarding financial communication (Assili, 2019). The extent of a company's disclosure can be influenced by its age, that is, its stage of development and growth. (Owusu-Ansah, 1998) highlighted three determining factors that, according to him, can explain this phenomenon. First, younger companies may suffer from competition; second, the cost and ease of collecting, processing, and disseminating the required information can be contributing factors; and finally, younger companies may lack a history to rely on for public disclosure. On the other hand, (Akhtaruddin, 2005) sees that the age of the company is a decisive factor in its level of disclosure. Therefore, we have decided to formulate the following hypothesis:

H4: Age positively impacts the quality of financial communication of Moroccan banks.

Size of the Bank

Some studies show that company size is significantly related to the level of disclosure, such as (Cooke, 1989), (Lang & Lundholm, 1993), (Owusu-Ansah, 1998) and (Hossain M. , 2000). These studies have considered different criteria to measure the company size, such as turnover, total assets (or log of total assets), number of employees, and number of shareholders.

Regarding empirical results, some authors, such as (Kahl & Belkaoui, 1981), (Chow & Wong-Boren, 1987), (Cooke, 1989), (Cooke, 1991), (Lang & Lundholm, 1993), (Ahmed & Nicholls, 1994), (Botosan, 1997), (Naser & Al-Khatib, 2000), (Street & Bryant, 2000), (Alsaeed, 2006), (Barako, 2007), (Mangena & Tauringana, 2007), (Ahmed Haji & Ghazali, 2013), (Agyei-Mensah, 2013), (Ebrahimabadi & Asadi, 2016) and (Monday & Nancy, 2016) have found a positive relationship between the size of the company and the quality of financial communication. (Uyar, Kilic, & Bayyurt, 2013) have demonstrated that large companies tend to disclose high-quality information because they are subject to a higher level of scrutiny. We thus formulate the following hypothesis:

H5: Size positively impacts the quality of financial communication of Moroccan banks.

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Leverage

Although leverage has been studied very rarely in the banking context, some researchers have calculated it using the ratio of debts to total liabilities (total debts/total liabilities), others have calculated it using the classic debt ratio (debts/equity).

In terms of results, studies like (Chow & Wong-Boren, 1987), (Hossain, Tan, & Adams, 1994), (Hossain & Adams, 1995) (Meek, Roberts, & Gray, 1995) (Raffournier, 1995), (Depoers, 2000), (Marrakchi, Bedard, & Courteau, 2001), (Camfferman & Cooke, 2002), (Debreceny, Gray, & Rahman, 2002), (Park & Shin, 2004), (Chau & Gray, 2010), (Hasan, Hossain, & Swieringa, 2013), (Al-Asiry, 2017) and (Assili, 2019) did not find a significant relationship between leverage and the quality of financial communication. This motivated us to formulate the following hypothesis:

H6: The leverage has no significant impact on the quality of financial communication of Moroccan banks.

Deposits

Despite the importance of deposits for a bank, this variable has been mentioned in hypothesis tests very rarely. (El-Bannany, 2007) notes that a significant positive correlation has also been established between the size of the bank and its clients' deposits. According to several other empirical studies already conducted, this correlation highlights the fact that large banks generally attract a larger number of clients and manage larger volumes of deposits than small banks.

It should be noted that other studies had included the variable "deposits" in empirical studies, notably (Hossain M. , 2008), (Bhasin, Makarov, & Orazalin, 2012) (Hossain & Reaz, 2007), (Dhouibi & Mamoghli, 2013), (Assili, 2017), (Owusu-Ansah, 1998), (Owusu-Ansah, 1998) and many other articles, as an item but few studies have developed and treated it as a hypothesis. To this effect, we thus formulate the following hypothesis:

H7: Deposits have no significant impact on the quality of financial communication of Moroccan banks.

Profitability

Some researchers, such as (Cerf, 1961), (Singhvi S. , 1968), (Singhvi & Desai, 1971), (Kahl & Belkaoui, 1981), (Wallace, Naser, & Mora, 1994), (Raffournier, 1995), (Wallace & Naser, 1995), (Inchausti, 1997), (Hossain M. , 2000), (Hossain M. , 2001), (Haniffa & Cooke, 2002), (Raffournier, 2006), (Ghazali & Weetman, 2006), (Dedman, Stephen, Prakash, & Chang,

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2008), (Fathi, 2013), (Uyar, Kilic, & Bayyurt, 2013), (Takhtaei, Mousavi, Tamimi, & Farahbakh, 2014), (Al-Asiry, 2017) and (Assili, 2019) have found a significant positive relationship between profitability and the disclosure of financial information.

As for banks, their profitability depends on their ability to effectively conduct lending and borrowing activities. In this context, increased disclosure of financial information can be perceived as a signal of solid performance and effective management of lending and borrowing activities. When banks communicate more information about their financial results, risk management, credit policies, etc., they can strengthen the confidence of investors, creditors, and other stakeholders. This can also help banks attract deposits and capital, maintain good relations with regulators, and enhance their reputation in the market. We thus formulate, as a hypothesis:

H8: Profitability positively impacts the quality of financial communication of Moroccan banks.

Reputation of the Audit Firm

Literature has shown that statutory auditors play a very important role in the disclosure process of companies' financial information. Their experience and expertise allow them to influence disclosure decisions and help management and the board of directors cope with the uncertainty associated with this process.

Several studies suggest that there may be a relationship between the type of statutory auditor and the content of annual reports. Specifically, the four largest audit firms (commonly called the Big 4) are generally distinguished from other firms. (Murcia & Santos, 2012) and (Chalmers & Godfrey, 2004) have estimated that the presence of large audit firms such as KPMG, PricewaterhouseCoopers, Deloitte, and Ernst & Young as auditors allowed companies to achieve a higher level of financial information dissemination. This obliges us to ask, by formulating the following hypothesis:

H9: The reputation of the audit firm positively impacts the quality of financial communication of Moroccan banks.

METHODOLOGY

The methodology adopted is based on a hypothetico-deductive approach. To answer our research question, we first undertook a theoretical analysis aiming to explore financial communication from different angles. Then, we examined its current state to better understand the various dimensions of this theme.

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Construction of the Sample and Data Collection

Our sample includes 18 Moroccan banks. These banks were selected based on two criteria: the availability of electronic websites and the regular publication of annual reports and other official publications over a period of five accounting years, from 2017 to 2021. These criteria allow us to obtain complete coverage of the financial information published by the selected banks.

It is important to note that at the time of the study, among the 19 banks present in Morocco, one bank was excluded: *Union Marocaine des Banques* (UMB). This exclusion is explained by the absence of an active website where the bank regularly publishes its annual reports and other official documents, both at the date of the study and thereafter. Consequently, no annual report, management document, or other official publication could be found either on the bank's site or via other search engines. This situation led to its exclusion from the study, thus reducing our sample to 18 banks meeting the previously defined selection criteria.

Table 2: Banks in the Study Sample

Bank	Main activity
Al Barid Bank	Banking – Finance
Arab Bank PLC	Banking – Finance
Attijariwafa Bank	Finance and insurance
Banco Sabadell	Corporate banking – Finance
Bank Al-Amal	Finance
Banque Centrale Populaire – BCP	Finance and insurance
Bank Of Africa – BOA (Ex BMCE)	Finance and insurance
Bank Marocaine pour le Commerce et l'Industrie – BMCI	Banking – Finance
Caixa Bank	Corporate banking – Finance
CDG Capital	Investment banking
CFG Group	Banking – Finance
CitiBank Maghreb	Corporate banking
Crédit Agricole du Maroc – CAM	Banking (Agricultural sector)
Crédit du Maroc – CDM	Banking – Finance
Crédit Immobilier et Hôtelier – CIH	Banking – Finance – Real estate
Fonds d'Équipement Communal – FEC	Development bank
BCP Securities Services	Finance
Société Générale Maroc	Banking – Finance

Source: Compiled by the author

Measurement of Variables and Definition of Independent Variables

In our study, we use a financial communication quality score that we calculated based on 74 items to capture as broadly as possible the information on the quality of financial communication of Moroccan banks. The selection of items, being often subjective, considered

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the specificities of the banking sector and the Moroccan context when constructing the financial communication quality score. For this purpose, 74 items were selected and grouped into six categories (General information about the bank, strategic information about the bank, information on the bank's governance, financial information about the bank, main extra-financial information, and other information specific to the banking sector) to study the statistical relationship between these categories and the quality of financial communication.

Furthermore, it was crucial to quantify and determine how all variables related to this study will be measured and calculated in our model. This was done to confirm the existence or absence of significant associations between the quality of financial communication and the main variables, which are listed and explained in the table below:

Table 3: Definitions and Explanations of Independent Variables

Definition	**Variable**	**Explanation and Calculation**
Size of the Board of Directors	Board Size	Number of directors on the bank's board
Percentage of Independence of the Board	*Percentage Independence of Board*	Percentage of independent directors on the bank's board
Government Ownership	*Government Ownership*	If the bank is wholly or partially owned by the State
Age of the Bank	*Age of the Bank*	Age of the bank (in years)
Size of the Bank	*Size of the Bank*	Calculated based on the log of the bank's total assets
Leverage	*Leverage*	Level of bank's leverage, calculated by: (Debts / Total Liabilities) * 100
Deposits	*Deposits*	Total deposits of the bank
Profitability	*Profitability*	Level of bank's profitability, calculated by: (Net Income / Equity) * 100
Reputation of Audit Firm	*Reputation of Audit Firm*	If the bank's external audit is performed by one of the Big 4 firms

Source: Compiled by the author

We used a simple dichotomous approach, where the value of each item is set to 1 if the bank appears to have the available and communicated information regarding that item, and zero otherwise. Then, an average financial communication quality score is calculated for each bank during the study period. In other words, the evaluation of the degree of information dissemination for each bank is carried out by calculating the ratio between the sum of points obtained during the analysis of its annual report and the maximum score it could achieve. This maximum score is obtained by excluding items not relevant to the bank's specific activity or sector.

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The formula used is written as follows:

$$Score = \frac{1}{74}\sum_{\{i=1\}}^{\{n\}} Item_{(i)}$$

Where,

- $\sum$: indicates the sum.
- $Score$: level of information dissemination of the bank.
- n : number of items used for calculating the financial communication quality score.

Construction of the Financial Communication Quality Measurement Index

To construct and validate the financial communication quality measurement index to study the influences of explanatory variables on this quality, we decided to use a multiple regression model. Our multiple regression model to estimate is presented as follows:

$$\boldsymbol{S}core_{it} = \beta_0 + \beta_1 * Board\ Size_{it} + \beta_2 * \ Percentage\ Independence\ of\ Board_{it} + \beta_3 * Age\ of\ the\ Bank_{it} + \beta_4 * Size\ of\ the\ Bank_{it} + \beta_5 * Leverage_{it} + \beta_6 * Deposits_{it} + \beta_7 * Profitability_{it} + \ \beta_8 * Reputation\ of\ Audit\ Firm_{it} + \beta_9 * Government\ Ownership_{it} + \mu_{it}$$

Where,

- $\boldsymbol{\beta_j}$: Correspond to the regression coefficients.
- $\boldsymbol{i}$: Corresponds to a specific bank.
- $\boldsymbol{\mu_{it}}$: The error term in the model.
- $\boldsymbol{t}$: Corresponds to the time index.
- $\boldsymbol{Score_{it}}$: The quality, in the form of a score, of the bank's financial communication;
- $Board\ Size_{it}$: The size of the bank's board of directors;
- $Percentage\ Independence\ of\ Board_{it}$: The percentage of independent directors on the bank's board;
- $Government\ Ownership_{it}$: Government ownership present in the bank's shareholder structure;
- $Age\ of\ the\ Bank_{it}$: The age of the bank;
- $Size\ of\ the\ Bank_{it}$: The size of the bank;
- $Leverage_{it}$: The bank's leverage (indebtedness);
- $Deposits_{it}$: The bank's deposits;
- $Profitability_{it}$: The bank's profitability;
- $Reputation\ of\ Audit\ Firm_{it}$: The reputation of the bank's audit firm.

ANALYSES AND RESULTS

Univariate Descriptive Statistics

The table below summarizes the descriptive statistics of the quantitative variables. According to the table, we observe that the average size of the board of directors (*Board Size*) is approximately 10. The average percentage of independence of the bank's board of directors (*Percentage Independence of Board*) is around 0.21%. We note that the average age of the banks (*Age of the Bank*) is 46.44 years. The average size of the banks (*Size of the Bank*) is approximately 1.35. Leverage (*Leverage*) averages 23.99%. As for deposits (*Deposits*), the average is 41.615 billion Dirhams. On average, the profitability rate (*Profitability*) of the considered banks is around 6.93%. The average financial communication quality score of banks in Morocco is approximately 0.54.

We observe that the standard deviations of all the quantitative variables considered are not zero. This means that these variables show variabilities during the period of this study for these banks.

Table 4: Univariate Descriptive Statistics
of Quantitative Variables

Variable	N	Minimum	Maximum	Mean	Standard Deviation
Board Size	90	5	15	10,16	2,332
Percentage Independence of Board	90	0	0,583333	0,206948	0,145449646
Age of the Bank	90	5	108	46,44	32,082
Size of the Bank	90	-0,13018	2,587374	1,350893	0,806667701
Leverage	90	0	82,8579	23,98817	23,01118355
Deposits	89	0	261,097	41,61594	57,474713
Profitability	90	-17,231	35,01773	6,933655	7,79561946
Score	90	0,148649	0,864865	0,53964	0,239029535
Valid N (listwise)	89				

Table 5: Descriptive Statistics of the Categorical Variable
(Reputation of Audit Firm)

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	0	13	14,4	14,4	14,4
	1	77	85,6	85,6	100,0
	Total	90	100,0	100,0	

We also notice from the table below that in 50% of the banks, the State holds a majority or minority shareholding in these banks.

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Table 6: Descriptive Statistics of the Categorical Variable (Government Ownership)

		Frequency	Percentage	Valid percentage	Cumulative percentage
Valid	0	45	50,0	50,0	50,0
	1	45	50,0	50,0	100,0
	Total	90	100,0	100,0	

Multivariate Descriptive Statistics (Study of the Correlation Matrix of Variables)

After viewing the table of the correlation matrix study, it turned out that it contains different correlations between the study variables. We observed that there is:

- A positive and significant correlation between the financial communication quality score and the average size of the board of directors (Board Size).
- A positive and significant correlation between the financial communication quality score and the age of the bank (Age of the Bank).
- A positive and significant correlation between the financial communication quality score and the size of the bank (Size of the Bank).
- A positive and significant correlation between the financial communication quality score and deposits (Deposits).

Multiple Regression Model Testing

In the model summary table, we find that the coefficient of determination R-squared is equal to 0.829. This means that 82.9% of the variability of the financial communication quality score variable is explained by all the considered explanatory variables.

Table 7: Model Summary

Model	R	R-squared	R-squared adjusted	standard error of estimate
1	(0,910)^a	0,829	0,809	0,1040885637

Research Hypotheses Testing Results

Based on the results of the estimated multiple regression model, we can deduce the following relationship between the financial communication quality score and the explanatory variables:

$$\begin{aligned} core_{it} = {} & 0.0594 + 0.0200 * Board\ Size_{it} + 0.2040 * Percentage\ Independence\ of\ Board_{it} \\ & + 0.0003 * Age\ of\ the\ Bank_{it} + 0.2602 * Size\ of\ the\ Bank_{it} + 0.0009 * Leverage_{it} \\ & - 0.0006 * Deposits_{it} - 0.0017 * Profitability_{it} - 0.0633 \\ & * Reputation\ of\ Audit\ Firm_{it} - 0.1205 * Government\ Ownership_{it} \end{aligned}$$

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We notice from the results of the multiple regression model after correcting the heteroscedasticity problem that:

- The size of the board of directors (*Board Size*) positively influences the financial communication quality of Moroccan banks. Indeed, the coefficient associated with this explanatory variable is equal to 0.0200, which is positive, and the p-value of the Student's t-test associated with this coefficient is 0.0034, which is less than the 1% error risk (i.e., 0.01). This means that this explanatory variable is significant at the 1% error risk level.
- The percentage of independence of the board of directors (*Percentage Independence of Board*) positively impacts the financial communication quality of Moroccan banks because the coefficient associated with this explanatory variable is 0.2040, which is positive, and the p-value of the Student's t-test associated with this coefficient is 0.0175, which is less than the 5% error risk (i.e., 0.05). This means that this explanatory variable is significant at the 5% error risk level.
- The size (*Size of the Bank*) positively impacts the financial communication quality of Moroccan banks. The coefficient associated with this explanatory variable is 0.2602, which is positive, while the p-value of the Student's t-test associated with this coefficient is 0.0000 (zero), which is less than the 1% error risk (i.e., 0.01). This means that this explanatory variable is significant at the 1% error risk level.
- Government ownership (*Government Ownership*) negatively influences financial communication quality. The coefficient associated with this explanatory variable is (-0.1205), which is negative, and the p-value of the Student's t-test associated with this coefficient is 0.0001, which is less than the 1% error risk (i.e., 0.01). This means that this explanatory variable is significant at the 1% error risk level.

However, based on the same results, we note the following:

- The age of the bank (*Age of the Bank*) has no influence on the financial communication quality of Moroccan banks since the p-value of the Student's t-test associated with this explanatory variable is 0.6628, which is greater than the 5% error risk (i.e., 0.05), leading to the rejection of the null hypothesis of the test.
- Leverage (*Leverage*) has no impact on the financial communication quality of Moroccan banks because the p-value of the Student's t-test associated with this explanatory variable is 0.1743, which is greater than the 5% error risk (i.e., 0.05).
- Deposits (*Deposits*) have no influence on the financial communication quality of Moroccan banks. Indeed, the p-value of the Student's t-test relative to this explanatory variable is 0.1397, which is greater than the 5% error risk (i.e., 0.05).

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- The profitability of the bank (*Profitability*) does not impact the financial communication quality of Moroccan banks because the p-value of the Student's t-test for this explanatory variable is 0.4004, which is much greater than the 5% error risk (i.e., 0.05).
- The reputation of the bank's audit firm (*Reputation of Audit Firm*) has no influence on the financial communication quality of Moroccan banks according to our results. Indeed, the p-value of the Student's t-test for this explanatory variable is 0.2108, which is much greater than the 5% error risk (i.e., 0.05).

SUMMARY AND DISCUSSION OF RESULTS

The results allow us to confirm the previous observations. In other words, an increase in one of the following variables: the size of the board of directors (*Board Size*), the percentage of independence of the board of directors (*Percentage Independence of Board*), or the size of the bank (*Size of the Bank*), is associated with an improvement in the bank's financial communication. In contrast, variables related to Leverage (*Leverage*) and the bank's deposits (*Deposits*) do not seem to exert any influence on the quality or level of dissemination of financial information.

However, other hypotheses do not allow us to obtain absolute confirmations, unlike those previously validated. However, they offer the possibility of ruling out certain assumptions, notably the impact of state ownership (*Government Ownership*), the age of the bank (*Age*), its profitability (*Profitability*), or even the reputation of its audit firm (*Reputation of Audit Firm*). These impacts have not been demonstrated by our results, and the hypotheses associated with these variables could not be confirmed. Therefore, these hypotheses must be rejected.

We initially assumed that (*government ownership*), (*age*), (*profitability*), and (*reputation of the audit firm*) positively influenced banks' financial communication. However, empirical results did not confirm all these hypotheses. Only (*government ownership*) showed a significant but negative impact, thus contradicting our initial hypothesis. In other words, (*government ownership*) negatively impacts the bank's financial communication.

Table 8: Summary of Results

Variables	Influence of Variables
Size of the Board of Directors	Positive Impact
Independence of the Board of Directors	Positive Impact
Government Ownership	Negative Impact
Age of the Bank	No Impact Verified
Size of the Bank	Positive Impact
Leverage	No Impact Verified
Deposits	No Impact Verified
Profitability	No Impact Verified
Reputation of the Audit Firm	No Impact Verified

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CONCLUSION

Our study presents a notable contribution to understanding the quality of financial communication in the Moroccan banking sector. Based on a sample of 18 banks, it relies on the analysis of annual reports and official financial publications accessible online for the period 2017-2021. The choice of this period stems from a desire to exclude the impact of the COVID-19 pandemic on the results. The study aimed to explore in-depth financial communication in this strategic sector, with the ambition of conducting targeted empirical research. To do this, we followed a rigorous approach including the selection of a representative sample, the formulation of relevant hypotheses, and the development of a structured methodology for data collection and analysis. This approach allowed us to accurately grasp the dynamics at work in the financial communication of Moroccan banks.

The results reveal a significant positive relationship between the quality of financial communication and variables such as the size of the board of directors, the percentage of its independent members, as well as the size of the bank. Conversely, a significant negative relationship was observed between government ownership and the financial communication of banks in Morocco. In contrast, no significant correlation was established with other studied variables, notably the age of the bank, its level of leverage, the volume of its deposits, profitability, or even the reputation of its audit firm.

Like any research, our work has certain limitations that should be highlighted. Four main ones can be identified:

- The reduced size of the sample (18 banks instead of 19 presents in Morocco),
- The use of the annual report as the main communication medium, although key information is sometimes disseminated in other publications, access to which remains difficult.
- The impossibility of weighting items to adopt a weighted dichotomous approach, due to the lack of collaboration from Moroccan banks, despite numerous solicitations.

Finally, to improve the quality of financial communication in the Moroccan banking sector, we propose the following recommendations:

- Standardize the title and format of reports to facilitate their access and consultation.
- Establish a common template specifying the layout and organization of publications to make them more comparable.
- Publish documents separately by category (financial, strategic, social) to avoid bulky and difficult-to-exploit files.
- Offer reports in Arabic and/or English, in addition to French, to reach new markets and investors.
- Require banks to have dynamic websites on which to publish all the bank's news.

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Finally, to the best of our knowledge, this work represents the first attempt to measure the quality of financial communication among banks in Morocco. It also proposes an evaluation framework comprising several elements to analyze the quality of financial information, not only in the banking sector but also in other economic sectors. Furthermore, the results achieved represent a significant advancement in this field. However, further studies could refine this approach and broaden certain conclusions, particularly by weighting the model's items to yield more meaningful results. Additionally, future research could analyze the quality of financial communication in non-financial and/or industrial institutions, family-owned structures, or investigate the impact of major events (such as COVID-19) on financial communication practices within banks or companies.

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