THE IMPACT OF THE GOVERNANCE CODE ON THE MANAGEMENT OF RESULTS OF LISTED COMPANIES IN THE EMERGING MARKET

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Abstract

Good governance should contribute to improving the company’s performance by providing the board of directors with the opportunity to ensure that it acts in the best interests of the shareholders (Fan, Radhakrishnan, & Zhang, 2021). Governance codes, composed of a set of voluntary recommendations, have been developed throughout the world. To date, the question of their effectiveness remains largely open and debated in the international context, and in Morocco in particular.

The objective of this paper is to study the influence of compliance with a governance code on performance management practices in Morocco. In particular, it explores whether there is an impact of the corporate governance code via a compliance score on performance management (sales manipulation, abnormal production costs and discretionary expenditure manipulation).

This paper uses a panel of data from 54 listed Moroccan non-financial firms from 2013 to 2020. The results of the study show that listed firms have gradually increased their compliance with the code. It appears that some of the code’s recommendations are more effective in managing results. Furthermore, code compliance and the evolution of code compliance are negatively associated with accounting management and actual earnings management. The code’s provisions on the management board and specialised committees seem to limit the management of results. These results seem to confirm the positive impact of the governance code on the quality of accounting results.

Keywords: Corporate Governance, Management Accounting, Listed Companies, Governance Codes


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1. INTRODUCTION

Good corporate governance ensures that an organisation’s human resources, processes, values, procedures and structures are well controlled and oriented towards its purpose and vision or objectives. But to ensure its objectives, a company still needs to fully engage with the principles of fairness, transparency, accountability and responsibility (Rosenstein & Thomison, 2015). In Morocco, the publication of governance codes, in the form of corporate governance recommendations, began in 2008 with the publication of the first Moroccan Code of Good Corporate Governance Practices in 2015, in order to reduce the gap between international principles and the national corporate governance framework. A new version of the code has been published by the Moroccan Capital Markets Authority (AMMC, previously CDVM). One of the expected benefits of compliance with a governance code is an improvement in the quality of accounting information produced by firms. This benefit is explained by the disciplinary nature of the code’s recommendations, which relate in particular to the composition of the board of directors, its specialised committees and information on the functioning of governance bodies. In particular, compliance with the code is likely to influence managerial practices in managing results (Ntim, Opong, Danbolt, & Thomas, 2012; Terchoune & Thomison, 2021). Several recommendations of the governance code can indirectly or directly affect results management. Firstly, the presence of independent directors on the board of directors and specialised committees is able to limit the management of results (Ghosh, Marra, & Moon, 2010; Bulathsinhalage & Pathirawasam, 2017). The proportion of women on the board is also a constraint to results management (Meah, 2019). Secondly, the frequency of board and audit committee meetings is likely to mitigate results management, as shown by Vafeas (2005), Lin and Hwang (2010) and Franzoi, Mietzner, and Thelemann (2021). The implementation of the governance code recommendations is, therefore, likely to limit performance management.

However, the question of the effectiveness of the governance code arises in the Moroccan context, where reference to a code is not explicitly provided for by law. Moreover, as in countries with codified law, Morocco is known to be less protective of shareholders than countries with common law. The problem, therefore, arises as to whether the Moroccan market is able to ensure a sufficient level of efficiency of compliance declared by the company, likely to influence the management of results.

The objective of this research is to study the impact of compliance with the governance code on the governance practices and earnings management of listed Moroccan companies after 12 years of its publication.

This study, therefore, aims to answer the following research question: Does compliance with a governance code have an impact on the earnings management of listed Moroccan companies?

The empirical study is conducted on a sample of 54 Moroccan companies listed on the Casablanca Stock Exchange (BVC) over the period from 2013 to 2020. We construct a compliance measure based on the recommendations of the 2008 code of good governance practices. The results of the study show that compliance with the governance code improved after 2016. Furthermore, we find that the code compliance score and the evolution of this score are negatively associated with results management. Finally, the analyses show the significant effect of two categories of recommendations related to specialist committees and boards of directors.

This research contributes to the study of the impact of a governance code on earnings management in three respects. First, to the best of our knowledge, there is no work analysing the link between code compliance and earnings management in the Moroccan context, which has several specific features. On the one hand, Morocco is a codified law country where the institutional environment is perceived as less protective for investors than in common law countries. This factor may limit the effectiveness of the implementation of governance codes (Zattoni & Cuomo, 2008; Ponomareva, Federo, Aguilera, & Collin, 2021).

Second, as most of the literature has focused on the study of accounting management (Safari, Ponomareva, Federo, Aguilera, & Collin, 2021), in this study we analyse both accounting management and actual earnings management, in order to study the impact of changing governance practices on these two modalities of earnings management. It seems to us that changes in corporate governance can have an effective impact on managerial decisions such as discretionary spending.

Finally, the results of this research seem to confirm the benefits of compliance with the code in the Moroccan context, in terms of improving governance practices and the quality of accounting information. It also suggests that some of the code’s recommendations have a particular impact on earnings management, which contributes to the current debate on the effectiveness of the code’s recommendations.

To answer the above research question, the study is structured as follows: Section 2 reviews previous studies on the relationship between corporate governance mechanisms and earnings management preceded by a presentation of the corporate governance code in Morocco. In this section, we also develop the hypotheses of the study. Section 3 is devoted to the research methodology guiding the data collection and analysis, Section 4 provides the results, while Section 5 presents discussion. Finally, the conclusion and suggestions for future work are presented in Section 6.
2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1. The historical development of governance codes in Morocco

Morocco published its first corporate governance code in March 2008 under the name “Moroccan Code of Good Corporate Governance Practices”. This report was created by a national committee called “Corporate Governance” in partnership with the most active actors of the Casablanca Stock Exchange, such as the Ministry of Finance, the management company, the Moroccan Central Bank, etc. and with the help of the Organisation for Economic Co-operation and Development (OECD) and the Global Corporate Governance Forum (GCGF).

The main objective of the first introduction of corporate governance was to protect the interests of minority shareholders and to improve the capital market.

The code provides a set of standards for good corporate governance practices. For example, listed Moroccan companies should add a specific chapter entitled “Governance” where the company must specify all the characteristics related to its governance and systemic risk management.

The code has introduced for the first time in Morocco the principle of “comply or explain”, which means that any non-compliance must be explained (SAHA, 2021). This new principle offers companies listed on the Moroccan market a great deal of flexibility, as it does not harm their governance image if they can explain the reasons for not disclosing the governance section in their annual report (Daidai & Tannine, 2021).

In March 2012, an update of the Moroccan Code of Good Corporate Governance Practices was published by the Ministry of Economy and Finance. The recommendations of this code are based on five guiding principles: the role of the state (strategist, controller, shareholder); the role and responsibilities of the governance body; the rights of shareholders and their equitable treatment; transparency and dissemination of information; and relations with stakeholders and their equitable treatment.

In addition to these reforms, and in order to reduce the gap between the Moroccan corporate governance framework and the international principles of corporate governance, Law No. 17-95 on public limited companies was amended and supplemented by a series of amendments, notably No. 20-05, 78-12 and 20-19. Indeed, this reform has strengthened the power of the general manager by moving from the role of simple assistance to the board of directors to a body with power and autonomy. This law also announced that the chairman of the board must be a shareholder in the company, unlike the general manager.

The Law No. 78-12 was amended and completed in August 2015 with the aim of reinforcing transparency in Moroccan companies listed on the stock exchange, by introducing new standards through the establishment of dematerialisation of filing procedures and an internal audit committee, not forgetting that even the appointment of a vice-chairman of the supervisory board becomes optional in this amendment.

2.2. The effectiveness of the governance code in Morocco

The disciplinary nature of the recommendations adopted in the code of good governance practices in Morocco and the legislative framework for the application of these codes, based on the “comply or explain” principle, are the two foundations common to the majority of codes worldwide, and in particular in Africa and Europe (Harnay et al., 2018).

Indeed, the code proposes recommendations, which aim to discipline managers, limit their discretionary power and provide solutions to the problems of information asymmetry between managers and shareholders. Moreover, according to Desender, Aguilera, Crespi, and García-Cestona (2013), the implementation of a set of governance mechanisms is supposed to be more effective than a single one.

In the Moroccan context, the public debate on the effectiveness and content of the governance code remains a hot topic. The Moroccan code has three particularities that may call into question its effectiveness. Firstly, the Moroccan Code of Good Corporate Governance Practices is the result of the participation of various stakeholders unlike the French code, for example, which was set up by private associations representing issuers. Secondly, contrary to the majority of European countries, the Moroccan code is built around a single type of rule “recommendations” which all have the same scope. In other European countries, the code is structured around a hierarchy of rules of distinct scope: “principles/recommendations/suggestions”.

Third, the Moroccan code has some limitations related to executive compensation, compared to codes in several European countries.

Despite the importance of the issues associated with the publication of the governance code and the wealth of literature on the impact of these codes in different contexts, empirical studies dealing with the Moroccan context do not provide sufficient answers to several fundamental questions related to the effectiveness of the codes, in particular their effect on managerial practices of performance management. These developments lead us to the following problem: After 12 years since the publication of the first governance code of good governance practices in Morocco, has the code succeeded in improving managerial practices in results management?

2.3. Governance code and management of accounting results: Hypotheses development

This section highlights the literature review through, on the one hand, the link between compliance with the governance code and earnings management (subsection 2.3.1) and, on the other hand, the differentiated impact of code mechanisms on earnings management (subsection 2.3.2).
2.3.1. The influence of compliance with the governance code on the management of the results of listed Moroccan companies

It has been assumed that when the number of independent board members increases, the board is more likely to contribute to the smooth and efficient management of the company (Susanto, Pradipita, & Djashan, 2017). The code’s recommendations are disciplinary in nature and relate in particular to the balance between executive and independent directors, the need for timely and quality information on the composition and operation of the board of directors and specialised committees. Accordingly, one of the expected objectives of compliance with the code’s recommendations is to limit discretionary practices of executives, in particular managerial practices of earnings management (Madhar, 2016). However, we have presented several factors that may limit the effectiveness of governance codes, such as the simplistic nature of the recommendations and the flexibility of the “comply or explain” principle. Therefore, the question of the effectiveness of governance codes in constraining performance management is not obvious a priori. In response to this question, empirical research does not provide convergent results.

Price, Román, and Rountree (2011) study the implementation of the Mexican governance code and its impact on the performance and quality of accounting results. They find that compliance with the code increased significantly during the period 2000-2004. However, this compliance does not translate into increased performance and quality of accounting results. According to these authors, the ineffectiveness of the implementation of the governance code in Mexico can be explained by the inadequacies of the Mexican governance and institutional environment, characterised by a high concentration of shareholding, a lack of real independence of boards, and weak protection of minority shareholders.

In the UK context, a study confirms the positive effect of the implementation of the 2010 Combined Code on accounting quality as measured by discretionary accruals (Banseh & Kanshler, 2016). In addition, Safari et al. (2015) find a negative relationship between the level of code compliance and earnings management in the Australian context, measured by discretionary accruals.

The effectiveness of the implementation of a governance code thus seems to depend on the institutional context. In the Moroccan context, the concentration of shareholders and multiple voting rights tend to reinforce the power of majority shareholders to the detriment of minorities. La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998) consider that a less protective legal environment for shareholders is associated with this ownership concentration. According to these authors, in customary law countries, such as Morocco, investor protection is higher than in codified law countries. The latter countries are also more exposed to earnings management than common law countries, such as the United Kingdom or the United States (Leuz, Nanda, & Wysocki, 2003). The characteristics of the Moroccan institutional environment could, therefore, be a hindrance to the effective implementation of governance codes, as Price et al. (2011) found in Mexico.

However, in Morocco, several actors, such as the AMMC and Bank AL-MAGHRIB, help to ensure that the law is effectively applied and that truly effective governance mechanisms are put in place. For example, the reports published by the AMMC on the corporate governance practices of listed companies detail governance practices and breaches of the code. Financial market participants can act as enforcement mechanisms and ensure the effectiveness of the law. These developments lead us to assume that the development of governance codes in Morocco has had a positive impact on the quality of financial reporting, by reducing the management of accounting results:

H1: Compliance with a governance code limits the earnings management of listed Moroccan companies.

2.3.2. The differentiated impact of the mechanisms provided for in the governance code on the management of accounting results

The Moroccan Code of Good Corporate Governance Practices, which serves as a reference for listed Moroccan companies, includes two sets of mechanisms relating to the management board and specialised committees. In order to enrich the debate on the content and effectiveness of the code’s recommendations, we examine the effect of each of these categories of governance mechanisms on earnings management. The code’s recommendations are on the board of directors and specialised committees.

The characteristics of the board and specialised committees are likely to influence performance management practices. According to Boateng, Cai, Borgia, Bi, and Ngwu (2017), independent directors on boards are more effective in exercising control over management decisions and help limit asset misappropriation. Meah (2019) sees the audit committee as a means of resolving conflicts between management and external auditors. The independence of the audit committee provides independent oversight of the effectiveness of internal control, the quality of financial reporting and the work performed by the external auditors (BulathsinhaIage & Pathirawasam, 2017; Meah, 2019).

Similarly, Dasilas and Papasyriopoulos (2015) show that the reduction of research and development expenditure is identified and constrained by independent directors, the latter being motivated by short-term earnings pressure. In the Moroccan context, Terchoune and Bouchikhi (2015) observe that listed Moroccan companies are very vigilant in applying audit recommendations but do not find any effect of audit committee independence on earnings management. On the other hand, according to Zalata, Tauringana, and Tingbani (2018) and Meah (2019), the presence of women on the board can decrease earnings management and improve governance quality. Finally, the frequency of board and audit committee meetings is a measure of the effectiveness of these governance bodies, which may limit outcome management (Lin & Hwang, 2010).

This work deals with the impact of individual governance mechanisms on outcome management,
without studying the effect of a set of mechanisms. Our analysis aims to address this gap. In view of the potentially important role of mechanisms related to the board of directors and specialised committees, we formulate the following two hypotheses:

H2a: Compliance with the governance code’s mechanisms related to the board of directors or supervisory board constrains the earnings management of Moroccan listed companies.

H2b: Compliance with the mechanisms of the governance code relating to the specialised committees limits the management of the results of Moroccan listed companies.

3. RESEARCH METHODOLOGY

The methodology is presented in four steps. First, the sample selection and study period (subsection 3.1), then the construction of the governance code compliance score (subsection 3.2), then the outcome management measures (subsection 3.3), and finally the research designs (subsection 3.4).

3.1. Study period and samples

3.1.1. The choice of study period

Our study of the relationship between code compliance and outcome management covers the period from 2013 to 2020. We have separated the study period into two sub-periods (2013 to 2016) and (2017 to 2020), in order to analyse the evolution of compliance following Laws No. 17-95 (2015) and 20-19 (2019). The choice of 2017 as the beginning of the second period is based on the various reports on corporate governance of listed companies issued in 2013, 2015 and 2020 by the AMMC and/or the IMA (Moroccan Directors’ Institution). These reports have shown that the effective implementation of the regulation started as early as 2013 but that the strongest compliance evolution is observed in 2017.

3.1.2. The study and estimation samples

The sample for this study included all companies that were listed on the Casablanca Stock Exchange during the period from 2013 to 2020. The starting sample is composed of 75 companies. Due to their particular accounting characteristics, banking and insurance companies were removed from the sample. In addition, we excluded companies with missing financial data or data on governance structures. We eliminated all companies with more than three missing values. In the end, the study sample consists of 54 companies.

The data on governance structure were obtained by examining several sources of information, mainly notices of general meetings, environmental, social, and governance (ESG) reports, registration documents, press releases and minutes of governance bodies. We also used the Decypha database to fill in the missing data.

3.2. Assessment of the governance code compliance score

The previous literature identifies two methodologies for calculating the compliance score, the first is defined and operationalized with respect to the criteria used by the rating agencies (Doidge, Karolyi, & Stulz, 2004), and the second is based on the compliance of the score with the country’s code of good governance practices. In this study first, and based on previous studies (Price et al., 2009; Safari et al., 2015; Braendle, 2019; Dissanayake, Dissabandara, & Ajward, 2021) in order to assess the compliance of the company’s governance structure with the governance code, we opted for the method of compliance analysis, it is the calculation of the compliance score to the governance code from the governance code and the CDVM report of 2015 (CDVM, 2015).

We classified the recommendations into two categories relating to the board of directors and the specialised committees. Within these two categories, we retained the recommendations likely to influence the effectiveness of companies’ governance structures, and whose level of compliance was below 80 per cent in 2013. Finally, the score used in our research is composed of a set of 12 recommendations. The score assesses compliance with the code with regard to different aspects of the governance structure.

Following Lajmi (2018), a company is awarded 1 point per fulfilled requirement and 0 otherwise. A company’s compliance score for a given year is the sum of these points, and potentially varies between 0 and 12. In the empirical tests, we also calculated the score per cent, by dividing the total score by 12.

In a second step, in order to deepen our analysis of the relationship between compliance and performance management, we separated the 12 recommendations into two sub-categories according to their nature:

- board-related requirements (6 recommendations);
- specialised committee requirements (6 recommendations).

Each sub-group of recommendations leads to the calculation of a sub-score, which can vary from 0 to 1 in relative value.

3.3. Measures of results management

In this research, we study two main modalities of results management: accounting management and actual management. On the one hand, managers have room for manoeuvre in terms of accounting and valuation options. Governance mechanisms provided for in the governance code, such as the audit committee, may influence the accounting management of results.

On the other hand, managers can make management decisions that have an impact on the result. The scope of management discretion extends from operational decisions to financing and investment. As with management accounting, one can note the potential role of governance mechanisms in controlling managers’ decisions and
limiting the actual management of results (Peasnell, Pope, & Young, 2005).

The measures of management accounting used in our study are based on the analysis of firms’ accruals. The real management measures, as in Wilson, Pelham, and Duffield (2010), focus on the management of sales, discretionary spending and overproduction.

3.3.1. Measures of management accounting

For the study of management accounting, the measurement based on discretionary accruals is the most commonly used in the literature. The first model used in this research, which is based on the model developed by Kothari, Leone, and Wasley (2005). This model is as follows:

Model A

\[
\text{Accruals totals}_t = \alpha_0 + \alpha_1 \text{VarCA}_t + \alpha_2 \text{ICB}_t + \alpha_3 \text{ROA}_t^{(-1)} + \varepsilon_1
\]  

where,
- \( \text{VarCA}_t \) — the change in turnover between t-1 and t;
- \( \text{ICB}_t \) — the amount of gross fixed assets in t;
- \( \text{ROA}_t^{(-1)} \) — the profitability of the asset in t-1;
- the parameters (0 to 3) are parameters to be estimated;
- \( \varepsilon_1 \) — the error term, equal to the difference between total accruals and the estimate of non-discretionary accruals (discretionary accruals).

The first outcome management measure (estimated from the Kothari et al. (2005) model), denoted GRK, is the absolute value of discretionary accruals.

Based on short-term accruals, our second model is measured by the change in working capital requirement (\( \text{VarBFR} \)). We have chosen the McNichols (2002) model, which explains short-term accruals from operating cash flows:

Model B

\[
\text{VarBFR}_t = \beta_0 + \beta_1 \text{FTE}_t + \beta_2 \text{FTE}_{t-1} + \beta_3 \text{VarCA}_t + \varepsilon_2
\]

where,
- the \( \beta \)-coefficients from 0 to 4 are parameters to be estimated;
- \( \text{FTE} \) — operating cash flow in t;
- \( \varepsilon_2 \) — the error term, corresponds to the fraction of short-term accruals that can be managed by managers.

The second earnings management measure, denoted as \( \text{GRD} \) in the following, is measured by the absolute value of discretionary accruals estimated from the Dechow and Dichev (2002) model.

To estimate the parameters of the models, the firms in the estimation sample were grouped by sector of activity, in accordance with the work of Martinez and Serve (2011). This sectoral estimation of the model’s coefficients allows us to take into account the sectoral specificities of the accruals. This led us to group sectors of activity together, to finally retain a sectoral classification of six sectors (Table 1). The results management models were estimated for each year-sector of activity pair, which led to 6 sectors.

### Table 1. Constitution of the study sample by sector of activity

<table>
<thead>
<tr>
<th>Sector of activity</th>
<th>Number of companies</th>
<th>The sector of activity grouped</th>
<th>Number of companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agri-food</td>
<td>8</td>
<td>Agri-food</td>
<td>8</td>
</tr>
<tr>
<td>Trade and transport</td>
<td>10</td>
<td>Trade and transport</td>
<td>10</td>
</tr>
<tr>
<td>Electrical industry</td>
<td>3</td>
<td>Industrial</td>
<td>14</td>
</tr>
<tr>
<td>Metal industry</td>
<td>2</td>
<td>Oil, gas and lubricant</td>
<td>4</td>
</tr>
<tr>
<td>Building materials</td>
<td>6</td>
<td>Telecommunications and new tech.</td>
<td>8</td>
</tr>
<tr>
<td>Mining</td>
<td>3</td>
<td>Holding company</td>
<td>1</td>
</tr>
<tr>
<td>Oil, gas and lubricant</td>
<td>4</td>
<td>Pharmaceuticals</td>
<td>2</td>
</tr>
<tr>
<td>Telecommunications and new tech.</td>
<td>8</td>
<td>Others</td>
<td>9</td>
</tr>
</tbody>
</table>

Source: Author’s elaboration using AMMC website: https://www.ammc.ma/

3.3.2. Measurement of actual management

In order to measure the real management of the results, following Wilson et al. (2010), we have used three modalities of real activity manipulation:
- Sales manipulation: this is measured by the difference between the actual cash flow and the cash flow estimated from observed sales (Model C).
- Abnormal production costs: total production costs are calculated by adding the change in inventories to the costs of goods sold. Abnormal production costs are measured as the difference between total observed production costs and estimated output from sales, changes in sales in the same year and the previous year (Model D).
- Discretionary expenditure manipulation: Discretionary expenditure includes administrative, R&D, marketing and advertising expenditure. Abnormal discretionary spending is calculated from the level of normal discretionary spending estimated from sales and sales change (Model E). The models are:

Model C

\[
\text{FTE}_t = \alpha_0 + \alpha_1 \text{CA}_t + \alpha_2 \text{VarCA}_t + \varepsilon_3
\]

Model D

\[
\text{CPV}_t = \beta_0 + \beta_1 \text{CA}_t + \beta_2 \text{VarCA}_t + \beta_3 \text{VarCA}_{t-1} + \varepsilon_4
\]
Model E
\[ DDA_t = c_0 + c_1CA_t + c_2VarCA_t + \varepsilon_5 \] (5)

where,
- \( FTE_t \) — operating cash flow in \( t \);
- \( CPV_t \) — the sum of the cost of goods sold and the change in inventories in \( t \);
- \( DDA \) — the sum of advertising, research and development and administrative and general expenses in \( t \);
- \( CA_t \) — turnover in \( t \);
- \( VarCA_{t-1} \) the change in turnover between \( t-1 \) and \( t \);
- \( VarCA_{t-2} \) the change in turnover between \( t-2 \) and \( t-1 \).

As before, Models C, D and E allow us to estimate the coefficients \( a_0 \) to \( c_2 \) for each year-sector of activity pair, and to measure the management of the results as the difference between actual and estimated values (error terms \( \varepsilon_3, \varepsilon_4 \) and \( \varepsilon_5 \)).

3.4. Research designs

In the step, two research models were used to test the HI of the study. The first model tests the relationship between the SC compliance score and the different outcome management measures over the period 2013 to 2020. The control variables are those used in previous studies as having an impact on earnings management: firm size, leverage, growth opportunities (Zalata et al., 2018), ownership structure, and audit quality (Meah, 2019). Given the specificity of the Moroccan context, we added a control variable that represents the impact of the major shareholder (MS). The AP variable is measured by the voting rights of the major shareholder (Zhengwei, 2013).

This first model can be written as:

Model 1
\[ Earnings \ management = a_1SC + a_2LTA + a_3RET + a_4RVB + a_5AP + a_6Big4 + a_7Sec_i + a_8An_j + \varepsilon \] (6)

where,
- \( SC \) — the code compliance score (in per cent); 
- \( LTA \) — the logarithm of the amount of assets in thousands of euros; 
- \( RET \) — the ratio of debt to total assets; 
- \( RVB \) — the ratio of stock market value to the book value of the company’s equity; 
- \( AP \) — the voting rights of the main shareholder (in per cent); 
- \( Big4 \) — 1 if the company has two Big 4 auditors, 0 otherwise; 
- \( Sec_i \) — 1 if the company belongs to sector \( i \) (\( j = 1 \) to 6), 0 otherwise; 
- \( An_j \) — 1 in year 200\( j \) (\( j = 13 \) to 20), 0 otherwise.

The second model tests the relationship between the evolution of the compliance score (\( VarSC \)) over the study period from 2013 to 2020 and the average values of the different outcome management measures over the period from 2017 to 2020. We also include the governance score at the beginning of the period in 2013 (\( SC_{13} \)) as an explanatory factor for results management after Law No. 78-12. This second model can be written as:

Model 2
\[ Earnings \ management = \beta_1VarSC + \beta_2SC_{13} + \beta_3MLTA + \beta_4MRET + \beta_5MRVB + \beta_6MAP + \beta_7Big4 + \beta_8Sec_i + \varepsilon \] (7)

where,
- \( VarSC \) the difference in relative value between the average compliance score over the period 2013 to 2016 and the average compliance score over the period 2017 to 2020; 
- \( SC_{13} \) — the compliance score of the company in relative value in 2013; 
- \( MLTA \) — the average of the logarithm of the amount of assets over the period 2017 to 2020; 
- \( MRET \) — the average of the debt to total assets ratio over the period 2017 to 2020; 
- \( MRVB \) the average of the ratios (market value/book value) of equity over the period 2017 to 2020; 
- \( MAP \) — the average voting rights of the largest shareholder (in per cent) over the period 2017 to 2020.

In order to further analyse the relationship between compliance and earnings management, we test the relationship between the sub-scores and earnings management by a third model:

Model 3
\[ Earnings \ management = \gamma_1sub – score(SC \times CA \text{ and } SC \times CS) + \gamma_2LTA + \gamma_3RET + \gamma_4RVB + \gamma_5AP + \gamma_6Big4 + \gamma_7Sec_i + \gamma_8An_j + \varepsilon \] (8)

where,
- \( SC \times CA \) the sub-score for compliance with the code requirements related to the board of directors (in per cent); 
- \( SC \times CS \) the compliance sub-score for code requirements related to specialised committees (in per cent).

4. RESULTS

We first present the descriptive statistics and univariate tests (subsection 4.1), then the multivariate tests (subsection 4.2), and the robustness tests (subsection 4.3).

4.1. Descriptive statistics and univariate tests

4.1.1. Descriptive statistics

Tables 2 and 3 present the descriptive statistics for the study variables. Table 3 provides annual data over the period 2013 to 2020 and Table 4 provides average data over the period 2017 to 2020. The five outcome management measures vary on average from 2.9 per cent to 6.4 per cent of assets across the models.

Over the entire study period, the compliance score averages 5.9, or 48.8 per cent. It varies from a low of 1.46 (12.2 per cent) to a high of 8.87 (78.3 per cent), showing a wide disparity in code compliance.
4.1.2 Univariate test of the effect of compliance on performance management

The results presented in Table 4 compare the means and medians of the results management measures for companies with the highest level of compliance (score above the median) and those with the lowest level of compliance (score below the median).

Over the whole period, it can be seen that companies with a high level of compliance have a lower level of results management than those with a low level of compliance. This difference is significant, except for the actual earnings management measure related to discretionary spending.

This trend is confirmed in both sub-periods, except for the actual management models of sales manipulation (FTE) and production costs (CPV) in the first period. Overall, the results of this test are consistent with H1 on the impact of compliance on results management.

Table 4. Tests to compare the management of results according to the level of compliance

<table>
<thead>
<tr>
<th>Variable</th>
<th>Period</th>
<th>High compliance</th>
<th>Low compliance</th>
<th>Test-student (p-value)</th>
<th>Test-wilcoxon</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRD</td>
<td>2013-2020</td>
<td>0.018</td>
<td>0.031</td>
<td>0.010</td>
<td>0.021</td>
<td>432</td>
</tr>
<tr>
<td></td>
<td>2013-2016</td>
<td>0.019</td>
<td>0.035</td>
<td>0.052</td>
<td>0.067</td>
<td>216</td>
</tr>
<tr>
<td></td>
<td>2017-2020</td>
<td>0.024</td>
<td>0.034</td>
<td>0.005</td>
<td>0.011</td>
<td>216</td>
</tr>
<tr>
<td>GRK</td>
<td>2013-2016</td>
<td>0.033</td>
<td>0.041</td>
<td>0.033</td>
<td>0.079</td>
<td>216</td>
</tr>
<tr>
<td></td>
<td>2017-2020</td>
<td>0.030</td>
<td>0.039</td>
<td>0.002</td>
<td>0.005</td>
<td>216</td>
</tr>
<tr>
<td>FTE</td>
<td>2013-2020</td>
<td>0.036</td>
<td>0.039</td>
<td>0.044</td>
<td>0.041</td>
<td>432</td>
</tr>
<tr>
<td></td>
<td>2013-2016</td>
<td>0.038</td>
<td>0.040</td>
<td>0.155</td>
<td>0.152</td>
<td>216</td>
</tr>
<tr>
<td></td>
<td>2017-2020</td>
<td>0.029</td>
<td>0.038</td>
<td>0.004</td>
<td>0.006</td>
<td>216</td>
</tr>
<tr>
<td>CPV</td>
<td>2013-2020</td>
<td>0.048</td>
<td>0.061</td>
<td>0.072</td>
<td>0.459</td>
<td>432</td>
</tr>
<tr>
<td></td>
<td>2013-2016</td>
<td>0.059</td>
<td>0.072</td>
<td>0.188</td>
<td>0.002</td>
<td>216</td>
</tr>
<tr>
<td></td>
<td>2017-2020</td>
<td>0.039</td>
<td>0.058</td>
<td>0.001</td>
<td>0.045</td>
<td>216</td>
</tr>
<tr>
<td>DDA</td>
<td>2013-2020</td>
<td>0.053</td>
<td>0.058</td>
<td>0.298</td>
<td>0.412</td>
<td>432</td>
</tr>
<tr>
<td></td>
<td>2013-2016</td>
<td>0.057</td>
<td>0.059</td>
<td>0.001</td>
<td>0.000</td>
<td>216</td>
</tr>
<tr>
<td></td>
<td>2017-2020</td>
<td>0.036</td>
<td>0.048</td>
<td>0.033</td>
<td>0.050</td>
<td>216</td>
</tr>
</tbody>
</table>

Source: Author’s elaboration using Stata 14.

Before proceeding to the regression analysis stage, we will first present the results of the skewness (normality) and kurtosis (kurtosis) tests. As mentioned in Table 5, the probability of skewness is 0.6656, implying that skewness is normally distributed (p-value of skewness > 0.05). As well, Pr (kurtosis) shows that kurtosis is also normally distributed (p-value of kurtosis > 0.05). Finally, the chi² is 0.1077, which is more than 0.05 and implies its significance at the 5% level. As a result, the null hypothesis cannot be rejected. Consequently, based on the skewness normality test, the residuals show a normal distribution.
Table 5. Result of skewness and kurtosis test for normality in Stata

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs.</th>
<th>Pr (skewness)</th>
<th>Pr (kurtosis)</th>
<th>Adj chi²</th>
<th>Prob &gt; chi²</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC</td>
<td>432</td>
<td>0.0656</td>
<td>0.0670</td>
<td>3.18</td>
<td>0.1077</td>
</tr>
</tbody>
</table>

Source: Author's elaboration using Stata 14.

4.2. Descriptive statistics and univariate tests

4.2.1 Regression test of the compliance score on outcome management

Table 6 presents the relationship between the compliance score and the different outcome management measures over the whole period. The regressions are globally significant and explain, depending on the measure, between 23 per cent and 40 per cent of the variance in outcome management. As expected, the compliance score is negatively and significantly associated with the level of outcome management.

Table 6. Link between results management and compliance score

<table>
<thead>
<tr>
<th>Variable</th>
<th>GRD</th>
<th>GRK</th>
<th>FTE</th>
<th>CPV</th>
<th>DDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC</td>
<td>-3.51%**</td>
<td>-3.59%**</td>
<td>-2.67%***</td>
<td>-4.28%***</td>
<td>-5.30%***</td>
</tr>
<tr>
<td>(2.109)</td>
<td>(-2.381)</td>
<td>(-1.322)</td>
<td>(-2.190)</td>
<td>(-2.729)</td>
<td></td>
</tr>
<tr>
<td>LTA</td>
<td>-0.49%*</td>
<td>-0.35%**</td>
<td>-0.39%</td>
<td>-0.29%**</td>
<td>-1.19%**</td>
</tr>
<tr>
<td>(-4.269)</td>
<td>(-3.678)</td>
<td>(-1.325)</td>
<td>(-2.362)</td>
<td>(-1.672)</td>
<td></td>
</tr>
<tr>
<td>RET</td>
<td>-0.18%</td>
<td>-0.25%</td>
<td>-0.11%</td>
<td>1.14%</td>
<td>-0.91%</td>
</tr>
<tr>
<td>(0.288)</td>
<td>(-0.412)</td>
<td>(-0.150)</td>
<td>(0.729)</td>
<td>(-4.142)</td>
<td></td>
</tr>
<tr>
<td>RVB</td>
<td>0.11%</td>
<td>0.47%**</td>
<td>1.12%***</td>
<td>0.48%**</td>
<td>0.76%</td>
</tr>
<tr>
<td>(0.837)</td>
<td>(2.281)</td>
<td>(2.100)</td>
<td>(2.291)</td>
<td>(0.721)</td>
<td></td>
</tr>
<tr>
<td>AP</td>
<td>0.38%</td>
<td>0.41%</td>
<td>1.19%</td>
<td>5.59%</td>
<td>0.60%</td>
</tr>
<tr>
<td>(1.014)</td>
<td>(0.940)</td>
<td>(1.217)</td>
<td>(3.529)</td>
<td>(0.838)</td>
<td></td>
</tr>
<tr>
<td>Big4</td>
<td>-0.20%**</td>
<td>0.39%</td>
<td>-0.55%</td>
<td>-0.70%***</td>
<td>-4.41%**</td>
</tr>
<tr>
<td>(-2.391)</td>
<td>(0.730)</td>
<td>(-0.211)</td>
<td>(-2.022)</td>
<td>(-4.621)</td>
<td></td>
</tr>
<tr>
<td>Sec</td>
<td>Controlled</td>
<td>Controlled</td>
<td>Controlled</td>
<td>Controlled</td>
<td>Controlled</td>
</tr>
<tr>
<td>An</td>
<td>Controlled</td>
<td>Controlled</td>
<td>Controlled</td>
<td>Controlled</td>
<td>Controlled</td>
</tr>
<tr>
<td>C (t-statistic)</td>
<td>4.41%**</td>
<td>4.81%**</td>
<td>6.21%***</td>
<td>6.00%**</td>
<td>6.12%**</td>
</tr>
<tr>
<td>(4.038)</td>
<td>(6.702)</td>
<td>(2.021)</td>
<td>(2.922)</td>
<td>(4.183)</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>432</td>
<td>432</td>
<td>432</td>
<td>432</td>
<td>432</td>
</tr>
</tbody>
</table>

Notes: The signs *, **, *** indicate significance at the 10%, 5% and 1% thresholds respectively.

Source: Author's elaboration using Stata 14.

With regard to the control variables, a negative and significant effect for four outcome management measures and size, showing that outcome management is negatively associated with size which is consistent with previous studies. On the other hand, growth opportunities are positively associated with the different outcome management measures with a significant effect for three measures. On the other hand, the major shareholder concentration variable is not significant, which suggests that code compliance retains its effectiveness, even after controlling for the influence of the major shareholder, which is likely to play an important role in the Moroccan context. Finally, the presence of Big4 auditors is negatively associated with earnings management, with statistically significant coefficients for three of the five measures.

4.2.2 Regression test of the evolution of the level of compliance on results management

We included the VarSC variable measuring the evolution of the compliance score between the two periods in order to test the HI dynamically. We also included the compliance score of companies at the beginning of the period (2013), in order to control for the effect of the initial governance structure.

The regressions, presented in Table 7, measure the influence of the evolution of the average compliance score between the two periods (2013 to 2016) and (2017 to 2020) on the earnings management observed on average over the period (2017, 2020) after Law No. 78-12. The results show that the coefficient on the VarSC Variable is negative, and significant at the 5 per cent level for both the accounting and actual management measures.

We also observe that the initial governance structure, as assessed by the 2013 compliance score, is negatively associated with four measures of outcome management. But this association is significant only at the 5 per cent level for one outcome management measure (MGRK). These analyses show that outcome management after the implementation of Law No. 78-12 depends more on the evolution of the level of compliance with the code than on the initial level of compliance. The low level of significance of the $SC_{13}$ variable could be explained by the low initial compliance.
score in our sample (47.1 per cent). The regression results are consistent with H1, according to which improved compliance with the governance code following the implementation of Law No. 78-12 is associated with less management of the results of Moroccan companies.

### Table 7. Link between results management and the evolution of the compliance score

<table>
<thead>
<tr>
<th>Variable</th>
<th>MGRD</th>
<th>MGRK</th>
<th>MTRF</th>
<th>MCPV</th>
<th>MDMA</th>
</tr>
</thead>
<tbody>
<tr>
<td>VarSC</td>
<td>-2.89%**</td>
<td>-2.66%**</td>
<td>-4.17%*</td>
<td>-4.79%*</td>
<td>-5.62%*</td>
</tr>
<tr>
<td>SC13</td>
<td>-2.881</td>
<td>(-1.720)</td>
<td>(-1.101)</td>
<td>(-1.221)</td>
<td>(-2.432)</td>
</tr>
<tr>
<td>MLTA</td>
<td>-4.71%</td>
<td>-2.09%**</td>
<td>-2.13%</td>
<td>8.88%</td>
<td>-8.91%</td>
</tr>
<tr>
<td>MRET</td>
<td>-2.7110</td>
<td>(-2.061)</td>
<td>(1.101)</td>
<td>(1.862)</td>
<td></td>
</tr>
<tr>
<td>MRVB</td>
<td>-0.196%**</td>
<td>-1.44%*</td>
<td>-0.71%</td>
<td>0.62%</td>
<td>-3.07%</td>
</tr>
<tr>
<td>Map</td>
<td>(-1.554)</td>
<td>(-2.980)</td>
<td>(-1.173)</td>
<td>(2.004)</td>
<td>(-0.116)</td>
</tr>
<tr>
<td>Big4</td>
<td>0.77%</td>
<td>-1.91%</td>
<td>-0.99%</td>
<td>-0.35%</td>
<td>-2.61%</td>
</tr>
<tr>
<td>Sec</td>
<td>(0.939)</td>
<td>(1.765)</td>
<td>(0.783)</td>
<td>(0.102)</td>
<td>(-0.589)</td>
</tr>
<tr>
<td>N</td>
<td>0.30%</td>
<td>0.30%</td>
<td>1.68%**</td>
<td>0.86%</td>
<td>-1.17%</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.29</td>
<td>0.34</td>
<td>0.421</td>
<td>0.38</td>
<td>0.522</td>
</tr>
</tbody>
</table>

**Notes:** The signs *, **, *** indicate significance at the 10%, 5% and 1% thresholds respectively. Source: Author’s elaboration using Stata 14.

### 4.2.3 Regression test of the compliance sub-score on results management

The objective of this test is to better understand the observed relationship between aggregate code compliance and performance management by analysing the relationship between the components of the code and accounting practices.

Using the two categories of mechanisms and the control variables used previously (sub-section 3.4), a panel data regression is conducted over the period 2013 to 2020 to relate earnings management to compliance sub-scores.

The results, presented in Table 8, show that the sub-scores for board and board committee requirements are negatively associated with all five outcome management measures, and significantly so for four of them. These results can be interpreted by the key role played by the board and board committees in governance and management control, specifically in accounting and financial reporting. For example, board-related requirements relate to the percentage of directors on the board, diversity and board attendance. These factors are likely to influence the quality of information disclosed by companies. Similarly, board committee requirements can limit the management of results.

### Table 8. Link between results management and compliance sub-scores

<table>
<thead>
<tr>
<th>Variable</th>
<th>GRD</th>
<th>GRK</th>
<th>FTE</th>
<th>CPV</th>
<th>DDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC × CA</td>
<td>-1.2%</td>
<td>-1.30%**</td>
<td>-0.93%*</td>
<td>-6.22%**</td>
<td>-9.82%**</td>
</tr>
<tr>
<td>SC × CS</td>
<td>-2.889</td>
<td>(-1.222)</td>
<td>(-1.191)</td>
<td>(-2.113)</td>
<td>(-2.001)</td>
</tr>
<tr>
<td>LTA</td>
<td>-2.10%</td>
<td>(-1.829)</td>
<td>(-2.92)</td>
<td>(-2.373)</td>
<td>(-2.227)</td>
</tr>
<tr>
<td>RET</td>
<td>-0.64%**</td>
<td>-0.46%**</td>
<td>-0.12%**</td>
<td>-1.37%</td>
<td>-6.8%**</td>
</tr>
<tr>
<td>RVE</td>
<td>(4.329)</td>
<td>(-2.383)</td>
<td>(-1.911)</td>
<td>(-2.901)</td>
<td>(-4.357)</td>
</tr>
<tr>
<td>AP</td>
<td>(2.103)</td>
<td>(1.166)</td>
<td>(1.373)</td>
<td>(2.035)</td>
<td>(1.229)</td>
</tr>
<tr>
<td>Big4</td>
<td>0.3%</td>
<td>0.4%</td>
<td>1.74%</td>
<td>6.89%**</td>
<td>1.0%</td>
</tr>
<tr>
<td>Sec</td>
<td>(2.746)</td>
<td>(3.109)</td>
<td>(7.371)</td>
<td>(0.276)</td>
<td>(2.731)</td>
</tr>
<tr>
<td>N</td>
<td>0.34%</td>
<td>0.41%</td>
<td>1.74%</td>
<td>6.89%**</td>
<td>1.0%</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.23</td>
<td>0.30</td>
<td>0.28</td>
<td>0.31</td>
<td>0.39</td>
</tr>
</tbody>
</table>

**Notes:** The signs *, **, *** indicate significance at the 10%, 5% and 1% thresholds respectively. Source: Author’s elaboration using Stata 14.

### 5. DISCUSSION

The results, presented in Table 8, show that the board and board committee requirements sub-scores are negatively associated with all five outcome management measures, and significantly so for four of them. These results can be interpreted by the key role played by the board and board committees in governance and management control, specifically in accounting and financial reporting.
For example, board-related requirements relate to the percentage of directors on the board, diversity and board attendance. These factors are likely to influence the quality of information disclosed by companies. Similarly, board committee requirements can limit the management of results.

The analysis shows that board and committee mechanisms influence both accounting and actual management. This result confirms the ability of the code’s recommendations to strengthen these governance bodies and to influence management decisions in the interest of stakeholders. In particular, strengthening governance bodies can limit the ability of managers to make sub-optimal management decisions solely for the purpose of managing the accounting result.

This study used a quantitative analysis approach and hypothesized that higher levels of compliance with corporate governance principles and recommendations would be associated with lower levels of discretionary accruals, which in our study represent the explained variables. The results suggest that there is a negative relationship between the level of compliance with the governance code and earnings management. This relationship demonstrates that the governance code acts in an effective way on the management decisions of the firm. However, these results support those of Safari et al. (2015). This is due to the power of the governance code to limit managerial discretionary behavior. This finding supports the idea that code compliance influences both accounting and actual earnings management. This demonstrates the code’s ability to effectively influence not only accounting decisions, but also management decisions, such as discretionary spending and production costs. The implementation of demanding governance mechanisms seems to be able to positively influence the quality of financial information, without leading to an increased reliance by managers on actual earnings management. The analysis thus illustrates the effectiveness of compliance with the code of good governance practices in the Moroccan context. These findings are consistent with H1, which seeks to highlight the impact of compliance with the governance code on earnings management.

Finally, the analysis shows that board and committee mechanisms influence both accounting and actual management. This result confirms the ability of the code’s recommendations to strengthen these governance bodies and influence management decisions in the interest of stakeholders. In particular, strengthening governance bodies can limit the ability of managers to make suboptimal management decisions for the sole purpose of managing the accounting result.

In general, the study shows that listed companies have progressively strengthened their compliance with the code. Furthermore, compliance with the code and the evolution of such compliance is negatively associated with accounting and actual earnings management. The code’s provisions on the board of directors and specialized committees seem to limit earnings management. These findings are consistent with our hypotheses (H2a and H2b). These results seem to confirm the favorable impact of the governance code on the quality of accounting results.

The results thus translate the capacity of the law to produce an improvement in compliance with the code likely to influence managerial practices, illustrating the effectiveness of the governance mechanisms put in place by listed Moroccan companies following the Law No. 78-12. The beneficial effect in the Moroccan context could be explained by the ability of economic actors in the market to guarantee a certain level of efficiency associated with this compliance. The law leads not only to an improvement in compliance with the governance code but also to a strengthening of the effectiveness of the mechanisms implemented by firms. In our study, this translates into a negative and significant impact on earnings management.

6. CONCLUSION

The present work aims to study the impact of the corporate governance code on earnings management in the context of emerging countries. The results of the study over the period from 2013 to 2020 show that listed companies have increased their compliance with the code from 2016.

Furthermore, the analyses show a negative and significant link between the compliance score and the level of earnings management. The link concerns the code’s requirements related to the board of directors and its specialist committees. It also appears that results management is negatively and significantly influenced by the improvement of the compliance score between the two periods (2013-2016) and (2017-2020).

Our work has several theoretical and practical implications. First, the study shows, in the Moroccan context, the benefit of compliance with a governance code in terms of financial reporting quality. The study confirms the importance of setting up a set of governance mechanisms that can effectively influence managerial practices, and results in management in particular.

Our results seem close to the results of the studies by Safari et al. (2015) in Australia and Bansheh and Kanshler (2016) in England and differ from those obtained in the Mexican context by Price et al. (2011). The effectiveness of mechanisms based on agency theory, as provided for in the codes, seems to be linked to the institutional context in which they are applied (Lubatkin, Lane, Collin, & Very, 2007). In the case of Morocco, the negative effect observed could be explained by the capacity of market players to ensure the effectiveness of the governance mechanisms implemented. This conclusion is interesting in the Moroccan context, where the weight of major shareholders and the lesser protection of minority shareholders could limit the impact of code compliance on managerial practices.

Secondly, it appears that some of the code’s recommendations have a more effective impact on results management. In this case, we observe that the recommendations related to the board of directors and specialized committees exert pressure on earnings management, whereas the recommendations related to executives and their remuneration do not seem to have an effect on accounting practices. This result can be explained by the nature of these recommendations, which aim to increase transparency and disclosure of
compensation, without imposing any real constraints on compensation policies.

The quest for good governance, therefore, seems to us to require renewed reflection, not only on the aims of governance but also on its tools. Such a renewal could consist, among other things, of a modification of the ways in which governance codes are drawn up. As corporate governance has effects far beyond the shareholders, it could be envisaged to involve other stakeholders in the elaboration of such codes. The quest for effectiveness also requires the establishment of a body to monitor the implementation of codes, for example, an independent administrative authority.

Finally, this work presents several avenues for improvement and research. First of all, the size of the sample is a limit to the generalisation of the results of the study to the whole Moroccan market. It would be interesting to study the effect of regulation on small and medium-sized firms, which represent more than 95% of the national economic environment, including only 13 listed companies, which may benefit even more from improved governance practices. Second, from a methodological point of view, the use of governance scores has been criticized by several authors (Armstrong, Guay, & Weber, 2010; Fan, Radhakrishnan, & Zhang, 2021). However, in our study, the construction of the score was largely dictated by the very nature of the code, one of the specificities of which is to give the same importance to all recommendations. Finally, the research confirms the positive impact of compliance with the code under the "comply or explain" principle. This invites us to study the effect of the "explain" choice on managerial practices in a second phase.

REFERENCES


