



Article

Impact of Audit Committee Quality on the Financial Performance of Conventional and Islamic Banks

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Abstract: A lot of previous research studied the relationship between audit committee quality and the financial performance of conventional banks before and during the subprime crisis, whereas some other investigations analyzed the same association in the framework of Islamic banks. However, no study has compared these two correlations either before, during, or after the subprime crisis. Several reasons explain the differences, such as the audit committee quality of each bank type, the evaluation method of the financial performance, the research peculiarities, the methodology, the data, and the interpretation. This research aims to compare the impacts of the audit committees' quality on the financial performance of Islamic and conventional banks between 2010 and 2019. The financial performance measures and audit committees' determinants of the conventional and Islamic banks concerned 112 banks of each type. The collected data covered four continents: America, Asia, Africa, and Europe. Impacts were compared by using the Generalized Least Squares analysis. The results showed that the audit committee reduced the profitability of two bank types. Moreover, it harmed the conventional banks' efficiency but reported an unclear effect within Islamic banks. Even so, we noticed that the audit committee had a positive impact on the conventional banks' liquidity, while the same effect was apparently ambiguous for the Islamic banks' liquidity. For solvency, the audit committee positively influenced conventional banks while it affected that of Islamic banks.

Keywords: Islamic banks (IBs); conventional banks (CBs); audit committee (AC); audit committee quality (ACQ); financial performance (FP); financial stability period; comparative study

JEL Classification: F39; G1; G20; G21; G30; G33



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1. Introduction

As a mechanism of governance, the audit committee (AC) was defined by the US Financial Security Act (Sarbanes-Oxley) as being "an independent advisory body established by and within the board of directors, primarily responsible for overseeing the accounting process, control the financial information and auditing the financial statements. Thus, it is engaged in the services of the board, the remuneration and the control of the auditors' works". Referring to the Sarbanes-Oxley Act (2002), the AC is a body responsible for appointing, remunerating, retaining, and supervising the work of internal and external auditors. It is responsible for strengthening the independence of audit functions through the review of financial statements and the assessment of risks and vulnerabilities.

In the literature, the ACs' effectiveness has been the subject of various studies. Some highlighted the impact of audit committee quality (ACQ) on the governance quality (Rahman and Ali 2006; Mohd et al. 2009; Moses et al. 2016; Zalata et al. 2018), while

in others, the empirical results agreed on the effect of ACs on financial performance (FP) (Amer et al. 2014; Lidya et al. 2017; Bilal et al. 2018; Aminul et al. 2018). Given its role in monitoring and controlling management activities, the AC applies the necessary corrective actions in the case of fraud. However, Gul (1989) indicated that the existence of an AC did not improve the auditor's perception of independence. Besides that, Vienot (1995), Bouton (2002), Lin et al. (2006), and Baxter and Cotter (2009) criticized the presence of an AC within companies and confirmed that the AC had no effective activities within the company.

Several studies have tested the relationship between the presence of an AC, the financial reporting quality, and financial statement transparency (Guo and Yeh 2014; Dinu and Nedelcu 2015; AlMatrooshi et al. 2016; Gurusamy 2017; Mohammed 2018; Bouaine and Hrichi 2019; Oroud 2019). In other words, AC research produced senior management financial information quality, and it showed a positive impact on the governance quality before, during, and after the subprime crisis (Zain and Subramaniam 2007; Alzoubi and Selamat 2012). Indeed, corporate oversight by a high-quality committee can reduce the financial statement falsification and earnings' management (Beasley 1996). Other studies discussed the role of the AC in reducing agency costs between the chief executive officer and the chairman to solve conflicts of interest as a priority to achieve the objective of improving the governance quality (Collier and Gregory 1999). The primary function of the AC is to monitor information related to FP (Xie et al. 2003). In the same vein, Chen et al. (2015) revealed that companies that had established ACs without considering shareholders' primacy had more advantages to improve their benefits' quality. However, in favor of agency theory, if the number of auditors was large, the company would realize a poor FP.

The AC within banks plays a dual role. On the one hand, members are responsible for monitoring the creation of monetary value, protecting the wealth of banks, ensuring the effectiveness of governance practices, and managing banks' potential conflicts of interest. On the other hand, it also serves as a governance mechanism that aligns the interests of executives with those of shareholders. The interest of the AC effectiveness in a financial environment is not stable and suffers from a governance crisis. Therefore, the need to set up this body within banks has increased dramatically, especially after the subprime crisis. The existence of an AC is mandatory for listed companies and banks (Darmadi 2013).

The choice of this period is justified, given that this decade was characterized by stability of the world banking system, allowing us to provide more effective comparative results that better reflect the real differences of the ACs' impacts on one bank type compared to the other. Thus, this period shows the added value of each AC on the FP compared to the same impacts for the other bank types. The first target of our explanatory research is to study the reached relationship between a set of FP measures and some ACQ determinants for both conventional and Islamic banks. The second purpose is to select the best AC model based on the comparison between the AC's effects as a governance mechanism on the profitability, efficiency, liquidity, and solvency of each bank type.

Since there are no comparative studies conducted in this area specifically among banks on the international scale, this study will broaden the scope by providing theoretical and empirical evidence of the relationship between various AC characteristics and FP in a specific period. Our second contribution is directing the choice of the preferred AC based on, among various factors, all functions, activities, tasks, and managers. The basis for sorting and channeling data is based on historical information (accounting data, audit reports, bank structure, and other information), giving priority to forecasts and objectives fixed in advance. We synthesized the third contribution to the effective constitution and management of the AC to maintain the FP of the conventional or Islamic banks (IBs) and facilitate their introductions into a new market, the expansion of their activities, the launch of a new banking product, and FP improvement. In the fourth contribution, we showed that the good structure of the AC guaranteed not only the supervision of banks' FPs, but also mitigated the agency conflict concerning FP between stakeholders and all types of incoming and outgoing governance flows related to all aspects of financial, accounting, audit, and

control information, whatever the operational, technical, or behavioral differences between the supervisors and managers may be.

The remainder of this study is structured as follows. First, a literature review will be presented, aimed at developing testable hypotheses, in Section 2, followed by a section outlining the methodology of the research. In Section 4, the results are presented and discussed. In the end, we conclude our study.

2. Conceptual Framework of the Audit Committees' Determinants

The Organization for Economic Co-operation and Development principles cover the basics of effective governance, the role of stakeholders in governance, shareholder rights, and the main functions of ownership, board responsibilities, and transparency of the disclosure process. In fact, the partnership governance theory is a broad view of the contractual financial approach. It has garnered a lot of attention and support since its initial formulation. According to the stakeholder theory, all institutions need the complementary support of all their stakeholders in order to ensure the continuity of their activities in the long term (Smith and Pierce 2005). This theory attempts to develop an alternative to the shareholder model in order to reduce agency relationships, fill in its shortcomings, and balance a lot of conflicts of interest.

Stakeholder theory takes ethics into account through the integration of human values into operational management and addresses the ethics of the banks' functions, directions, regulations, and control. This theory encompasses the relationship between all stakeholders threatened by the opportunism of some of them. This can affect the performance of the institution that benefits from the return via the exploitation of human and financial resources; namely shareholders, managers, creditors, employees, customers, suppliers, and the government (Crowther and Jatana 2005; Himaj 2014). As a result, agency problems in conventional and Islamic financial institutions involve several groups of stakeholders, taking into consideration all the intermediaries and those involved in the organizations' management and control. Therefore, within the framework of this theory, all individuals or groups that could affect or be affected by the FP are responsible to avoid conflicts of interest (Freeman 1984).

In the case of conventional banks (CBs), the most common agency problems involve at least two stakeholders. Managers may have confusion with other stakeholders or have limited skill in assessing the risks associated with their decisions, and yet have a great deal of freedom of action due to the lack of adequate control systems that can solve agency problems. Likewise, Iqbal and Mirakhor (2004) stated that the IBs' governance can be described as a system of social control, the essential objective of which is to preserve stakeholders' rights. This system can be exposed to all types of IBs within an Islamic contractual framework. Their main arguments justifying the classification of Islamic governance as a stakeholder-driven model is based on two Islamic principles, namely the principle of property rights and the principle of commitment to explicit and implicit contractual agreements governing individuals' economic and social behavior.

The development of restrictions persistently favors the interests of one party (the shareholders) over the strengthening of another party (the rulers) and is not adaptable to conventional or Islamic banks. In contrast, financial institutions operate in dynamic and regularly moving financial markets that operate in a changing institutional environment. Whatever their type, banks carry out exchanges through the intermediaries (stakeholders) responsible for the conduct of their operational management, which are controlled by an impeded governance system. The theory of bank governance must broaden the supervision definition by reaching out better to all stakeholders and by adapting more to the banks' reality so that it will become more developed and more appropriate.

As a control mechanism, ACs are able to establish an interface between management and the statutory audit, oversee the audit process, as well as resolve any disagreement that may arise between auditors and managers and reduce conflicts of interest or agency costs between them. The AC has many other roles, the most important of which are to control the

finance function, to meet regularly with decision-makers and external auditors to evaluate the financial statements, and to supervise the management of financial resources and the governance of financial information. This would help the bank to manage and monitor its FP and independence, appoint external auditors, and ensure that management has put in place sufficient procedures to provide financial information that could jeopardize the bank's financial strength (Klein 2002; Bryan et al. 2004). In this regard, to better underline the monitoring and control of the AC function, we emphasized the most important characteristics related to the members who formed this mechanism.

In the literature, there is strong opacity, as well as behavioral conflicts which caused the emergence of agency relations and conflicts of interest between shareholders, managers, and third parties within banks. The ambiguous relationship essentially results from the asymmetric behavior between bank stakeholders. Indeed, the governance of conventional and Islamic banks revolves around two key concepts, namely ownership and decision. The separation between them has created conflicting relationships between shareholders, managers, and other stakeholders. Thus, the managers' decisions do not necessarily match the shareholders' interests. Most of the time, they diverge. Stakeholder theory has shown, until now, several limits in the recognition of the institutional context, in the behavioral description of operators, as well as in the resolution of conflicting relationships. The banks' institutional context is extremely dynamic and very complicated. Hence, it is not useful to impose a fixed, stable, and permanent governance model on stakeholders regardless of their peculiarities, types, ages, sizes, or property structures, among other factors.

Several characteristics related to ACs were addressed and tackled by the finance, accounting, and governance literature. Despite increased attention to the ACs' responsibilities, this study provides evidence of the ACs' associated impacts on FP and other indicators. The presence of an AC causes the reliability of financial reports to improve FP. In the following, our choice of the AC's determinants focuses on the impact of the AC size, the expertise of its members, their degree of independence, and the number of annual meetings held by the AC (Bryan et al. 2004) on the FP of conventional and Islamic banks. This choice was justified by three reasons. First, these characteristics related directly to the ACs' auditors. Second, these measures were the most readily available compared with the other criteria. Finally, the impacts of these determinants on the FP were quantifiable and visible; therefore, we could maximize the number of significant impacts.

2.1. Audit Committee Size

Several previous studies highlighted the effect of the AC size on FP (Krishnan 2005; Zhang et al. 2007; Ghosh et al. 2010; Amer et al. 2014; Dinu and Nedelcu 2015; Gebba and Aboelmaged 2016). The first set of studies observed a positive association between the AC size and FP (Al-Matari et al. 2014; Chou and Buchdadi 2017; Awinbugri and Prince 2019; Sattar et al. 2020; Ashari and Krismiaji 2020). In this sense, Anderson et al. (2004) and Krishnan and Lee (2009) showed that the presence of a large AC provided strong oversight, improved the governance quality, and promoted the disclosure and the transparency degree. Along the same lines, Anderson et al. (2003) and Wan et al. (2014) found that the larger the ACs' sizes, the more information on the governance quality would be available to the users of financial statements. Hence, this positively and directly influenced profits. Other studies stated that the larger the ACs' sizes, the less adjusted the results would be (Yang and Krishnan 2005; Lin et al. 2006; Cornett et al. 2009).

However, the second set of studies found a negative association between the governance issues and the AC size (Krishnan 2005). Based on the stakeholder theory, a large AC generates more delegation of power among members. Nevertheless, this habit creates neglect and delay of duty, which causes more opportunistic behavior within the AC. For example, Anderson et al. (2004) revealed that the AC size and the number of AC meetings were negatively correlated and associated with the performance gaps. Another study found that the AC size systematically influenced the downward management of revenues (Cornett et al. 2009). Similarly, Pincus et al. (1989) found that institutions which had

large ACs were expected to devote very significant resources and costs to overseeing the financial and accounting reporting process. Furthermore, Eichenseher and Shields (1985) found that large ACs have become less participatory than small ACs, since they lost their concentrations on secondary spots. Likewise, Xie et al. (2003) reported that small ACs tend to be more participatory, since they are characterized by a higher oversight capacity than larger ACs. Furthermore, Indrawan et al. (2018) and Baiden (2020) revealed that a company with a smaller AC size tended to improve income smoothing practices due to lower supervision in the financial reporting process. On the contrary, the larger the AC size, the smaller the practice of income smoothing. This situation occurs because the AC's oversight function on financial reporting is effectively performed.

Based on the previous studies dealing with the relationship between the variables mentioned, our testable proposition is as follows:

Hypothesis 1 (H1): There is a negative correlation between the AC size and the FP of conventional and Islamic banks.

2.2. Presence of an Accountant, a Financier, or an Auditor in the Audit Committee

The effectiveness of an AC is one of the main criteria for audit quality. It is highly dependent on a sociopsychological process and the personal and professional qualifications of the members. In particular, the AC effectiveness also depends on stakeholder groups that have influential interactions, exchanges of information, and interactions with AC members and internal or external auditors. The behavioral and technical competence of directors directly influences the audit quality, as the most competent directors and experienced directors invest more in professional development. According to the Sarbanes-Oxley Act (2002), all AC members must have knowledge of financial reports, answers to audit questions, and internal control experience. At least one member among the AC should be a financial expert with ongoing experience in accounting. The experience includes covering accounting estimates, accruals, provisions, preparation of financial statements, and auditing financial information. Yet, Bilal et al. (2018) gave the implication of the need to have at least two financial experts within the AC and the obligation of its strengthening.

However, Tanyi and Smith (2015) examined the effect of the financial expertise of AC members and directors on their ability to oversee the financial reporting process. They concluded that the excessive engagement of AC members had a negative and significant impact on the supervision quality and the financial information quality. Companies that have experienced members on their ACs and abnormally high profit accumulation levels are more likely to exceed performance benchmarks. In the same vein, Krishnan (2005) discovered the presence of four factors indirectly associated with the AC that may have an impact on internal control: managers' work experience, the tendency of management to commit fraud, the permanence of auditors, and financial stress. To minimize these effects, they monitored the influence of other governance bodies to influence the internal control quality and the ACQ, including the internal and external audit function, the board of directors, and the management quality. AC members also have the right to act on a number of imbalances and changes in the financial situation, namely financial stress and financial growth. As a result, the AC characteristics are associated with internal control only after the control of other governance bodies. Thus, the AC contribution to internal control extends beyond other organizations.

In the same research line, Abbott et al. (2004) revealed the presence of a negative relationship between AC expertise and errors detected in the financial statements. This role of ACs has provided a new research line on the relationship between the AC and internal control. Confirming the same idea with the Malaysian perspective, (Saad et al. 2007) affirmed the presence of a negative association between the AC members' degree of expertise and the detection of discretionary accruals. AC expertise has a negative and significant impact on non-audit fees (Chaudhry 2013).

Indeed, Krishnan (2005) tested the association between the ACQ and the internal control quality of a listed company's sample. The ACQ is measured by three parameters: size, independence, and expertise. He confirmed that there was a negative association between the presence of internal control problems and the AC's independence. ACs whose members have financial expertise are more likely to be exposed to the impacts of internal control problems. He noted the concentration of internal control problems at two centers of gravity: working conditions and material weaknesses. Empirically, Krishnan concluded that after the change of auditors, there were companies that had disclosed all the internal control problems while they had intentionally kept other problems.

Similarly, Carrera et al. (2017) examined the correlation between ACs and financial reporting quality in the USA. They found that the proportion of experts within ACs decreased the financial reporting quality. According to them, the AC members' financial expertise could enhance their intentions and vigilance to bring more sophisticated financial control. Furthermore, Singhvi et al. (2013) examined the market reaction following the departure of a new AC's directors. They found that after the accounting experts' departures, the market reacted negatively and significantly. However, the departures of other types of experts or non-expert directors the same association reported a different relationship (Davidson et al. 2004; DeFond et al. 2005; Krishnan and Viswanathan 2008; Krishnan and Lee 2009; Dhaliwal et al. 2010). In all sectors and particularly banking institutions, the AC members' competence, irrespective of whether they are in accounting or finance, is a dependent ingredient for improving the ACQ and for establishing a system of dynamic auditing. The moderating effect comes mainly from the intelligence of its members.

Therefore, such formatting provides additional creation of the banks' FP. Given its results, we make the following assumption:

Hypothesis 2 (H2): There is a negative correlation between the number of experts within the AC and the FP of conventional and Islamic banks.

2.3. Presence of Independent Directors in the Audit Committee

From the foregoing, the exploitation of the degree of independence was measured in the literature by two methods, either by the percentage of newly recruited external and independent directors or by the attendance rate of former directors in the AC (independent or non-independent). The last replaced the proportion of new independent directors to the extent that any extension of the mandate was aimed at rooting the director, regardless of their type. As revealed in Table 1, previous studies put forward different proposals on the proportion of independent directors.

Source	Degree of Independence
Treadway Commission (1987)	All members should be independent.
Vienot (1995)	At least two-thirds of the independent directors and no corporate officer.
Blue Ribbon Committee (1999)	All members should be independent.
Sarbanes-Oxley Act (2002)	All members should be independent (301).
Saucier et al. (2001)	100% of the non-real members (independent but able to benefit from a stock option).
Bouton (2002)	At least two-thirds of the independent directors and no corporate officer (p. 12).
The 8th European Directive (2006)	At least one member must be independent. Member states are free to lay down other rules concerning the composition of the AC (Article 41-1).

Table 1. Literature review of the proposed proportion of independent directors in the audit committee (AC).

An AC is considered independent if it is composed mainly and compulsorily of non-executive auditors responsible for detecting bad financial management tricks and responsible for internal control and regulatory compliance aimed at mitigating the risk of fraud and misrepresentation of financial information to achieve good results. ACs with a majority of non-executive auditors are considered to be less independent than those with more executive auditors (Mohd et al. 2009). They are less exposed to financial fraud (Abdullah et al. 2008).

Many studies revealed the existence of a positive impact between the percentage of independent members on the AC and FP (Klein 2002; Abbott et al. 2004; Dey 2008; Nuryanah and Islam 2011; Amer et al. 2014; Dinu and Nedelcu; 2015; Aminul et al. 2018; Mohammad and Ahmed 2018; Ashari and Krismiaji 2020). Independent experts give ACs significant potential to provide effective oversight (Beasley et al. 2009). Independence provides auditors with the necessary autonomy to detect errors, reveal challenges without pressure, and make the right decisions in a timely and unrestricted manner. The number of external directors is directly related to the level of profit sharing and investment of the AC members in the governance expertise. They are more capable to engage in effective oversight activities than internal administrators. The ACs' responsibilities provide shareholders with the control process and provide sufficient assurance of independent auditing (Deloitte 2007). Besides that, a significant number of external auditors facilitate the dispersal of administrators' attention during the discussion of missions and tasks (Krishnan 2005). Some researchers expect that the proportion of independent directors on the AC allows the latter to improve the quality of the preparation process of the financial statements of conventional and Islamic banks. As a result, this policy of selecting auditors stimulates increased reliability of the financial statements. Another current showed that the level of AC independence was positively associated with the financial information quality (Beasley et al. 2000; Mangena and Tauringana 2007) and negatively related to the propensity to manage the outcome (Klein 2002; Abbott et al. 2004).

Other studies concluded that the ACs' independence had a positive influence on accounting restatements, abnormal regularizations of their profits, and the interests of owners against management conflicts (Al-Rassas and Kamardin 2016; Guo and Huang 2016; Assenga et al. 2018). Recently and similarly, Poretti et al. (2018) stated that higher AC independence increased the autonomy of their declarations and encouraged market reactions to the announcements of results.

After the variant exposure of the results found in the governance literature, we tested the proposition of the following hypothesis:

Hypothesis 3 (H3): *There is a positive correlation between the percentage of independent directors within the AC and the FP of conventional and Islamic banks.*

2.4. The Number of Meetings Held by the Audit Committee

The previous studies exploring the usefulness of the number of AC meetings on different institutional variables showed that the results of these studies were always dependent on the variable types to be explained and the results of the confrontation with other variables, like the category (economic variable, financial variable, accounting variable, and governance variable), number (one or many variables), class (quantitative or qualitative variable), and measurement (number, ratio, and binary variable). The number of meetings as a determinant of the ACQ showed that it was the best indicator of the effectiveness of this governance body (Abbott et al. 2004; Gendron and Bedard 2006). Many studies focused on the effect of the number of meetings on the FP (Hsu and Petchsakulwong 2010; Amer et al. 2014; Dinu and Nedelcu 2015; Al-Matari et al. 2016; Shahkaraiah and Amiri 2017). This association gives more importance to the effect of this determinant in the precision of the ACQ and questions the impact of the number of meetings held by the ACs the conventional and Islamic banks on their FPs.

Several previous studies concluded that there was a negative correlation between the number of meetings held and FP (Aminul et al. 2018; Ahlulbaitulaah 2018; Awinbugri and Prince 2019). In this line of research, Cornett et al. (2009) and Hsu and Petchsakulwong (2010) tested the association between the number of AC meetings and the performance effectiveness of Thai non-life insurance companies for the period of 2000–2007. The FP

was measured by technical efficiency, resource allocation, profitability, and costs. This study used the truncated bootstrap regression method. It revealed the existence of a negative impact between the number of AC meetings and the FP effectiveness. Additionally, Al-Matari et al. (2014) studied the association between the number of meetings held by the ACs of a sample of Omani non-financial companies and their FPs between 2011 and 2012. The empirical results showed that the AC meetings had a negative impact on the FP, but this impact was not significant. Moreover, Aminul et al. (2018) examined the effect of board characteristics on the quality of earnings, moderated by the audit quality and the ownership concentration. In this study, the board of directors' effectiveness was measured by the AC's determinants. They considered the AC to be complementary to the board's role in monitoring the profit report. They revealed that the number of AC meetings had a negative impact on the results' quality (Awinbugri and Prince 2019).

From what is already stated in the literature, our hypothesis is as follows:

Hypothesis 4 (H4): The number of meetings held by the AC has a negative impact on the FP of conventional and Islamic banks.

After having exposed some interesting literature, we wanted to summarize the development path of theoretical foundations and the formulation of our hypotheses in Table 2.

Table 2. Summary of hypotheses by the AC's determinant.										
AC's Determinant	Hypothesis	Previous Studies								
The number of auditors within the AC	H1: There is a negative correlation between the AC size and the FP of conventional and Islamic banks.	Eichenseher and Shields (1985); Pincus et al. (1989); Xie et al. (2003); Anderson et al. (2004); Krishnan (2005); Cornett et al. (2009); Indrawan et al. (2018); Baiden (2020).								

The number of auditors within the AC	H1: There is a negative correlation between the AC size and the FP of conventional and Islamic banks.	Eichenseher and Shields (1985); Pincus et al. (1989); Xie et al. (2003); Anderson et al. (2004); Krishnan (2005); Cornett et al. (2009); Indrawan et al. (2018); Baiden (2020).
The number of experts within the AC	H2: There is a negative correlation between the number of experts within the AC and the FP of conventional and Islamic banks.	Abbott et al. (2004); Krishnan (2005); Krishnan and Lee (2009); Dhaliwal et al. (2010); Saad et al. (2007); Chaudhry (2013); Singhvi et al. (2013); Tanyi and Smith (2015); Carrera et al. (2017); Bilal et al. (2018).
The number of independent directors within the AC	H3: There is a positive correlation between the percentage of independent directors within the AC and the FP of conventional and Islamic banks.	Nuryanah and Islam (2011); Amer et al. (2014); Dinu and Nedelcu (2015); Al-Rassas and Kamardin (2016); Guo and Huang (2016); Aminul et al. (2018); Assenga et al. (2018); Poretti et al. (2018); Ashari and Krismiaji (2020).
The number of meetings of the AC	H4: The number of meetings held by the AC has a negative impact on the FP of conventional and Islamic banks.	Hsu and Petchsakulwong (2010); Amer et al. (2014); Al-Matari et al. (2014); Dinu and Nedelcu (2015); Al-Matari et al. (2016); Shahkaraiah and Amiri (2017); Aminul et al. (2018); Ahlulbaitulaah (2018); Awinbugri and Prince (2019).

3. Empirical Method

To choose the bank model that had the most qualified AC for improving FP, we used the conditional method of collecting and filtering samples. For that, we selected only full observations, which allowed us to generalize the new results. Because of the existence of autocorrections in three conventional models and two Islamic models (Tables A1 and A2 in Appendix A), to embody this comparison, we used the GLS technique, which was the most convenient method to obtain the best comparison between the impacts, allowing us to overcome the constraints between the variables.

3.1. Methodological Aspects

To answer the questions already posed in our hypotheses, the plan of our research observed the following approach: we started with the presentation of data, then stated our study variables, and finally exhibited our models.

3.1.1. Data Collection

From two independent populations, two independent samples consisting of 683 Islamic financial institutions and 2974 conventional financial institutions were taken. Samples were collected from 30 countries between 2010 and 2019, but we ignored all financial institutions guided by specific standards. The selected samples contained only fully conventional or Islamic banks. In addition, we shut out all observations containing missing data, as well as banks with various typical statuses. Although our objective was to obtain two equal samples, we proceeded to filter several of them based on qualitative and quantitative criteria (e.g., activity type, bank width, similarity of home country, and sample equality) until each IB had a similar CB in the same country. Finally, we obtained two equal samples, each containing 1120 observations (bank/year). The banks were located in Algeria (3), Bahrain (6), Bangladesh (4), Canada (1), Egypt (4), France (2), India (2), Indonesia (4), Jordan (4), Kazakhstan (3), Kuwait (6), Lebanon (2), Luxembourg (2), Malaysia (7), Nigeria (2), Oman (3), Pakistan (8), Qatar (6), Saudi Arabia (9), Senegal (3), Singapore (4), South Africa (1), Sri Lanka (1), Sudan (5), Thailand (1), Tunisia (2), Turkey (5), the United Arab Emirates (5), the United Kingdom (5), and the United States of America (2). Since we worked with a conditional method, we extended the field of selection of observations to four continents, first to aggravate the samples' sizes and secondly to obtain representative and suitable results for the generalization.

3.1.2. Modeling Variables

Main Variables

As we have already mentioned, the variable we wanted to explain was FP. This variable was symbolized by four measurable parameters which were profitability, efficiency, liquidity, and solvency. Table 3 summarizes the measures' characteristics.

FP Measurement	P Measurement CBs' Rating IBs' Rating		Measurement	Previous Studies	
Profitability ratio	rofitability ratio Proc Proi		Marginal Profit/Total Revenues	Tandelilin et al. (2007); Ogbeide and Akanji (2018); Haddad et a (2019b)	
Liquidity ratio	ty ratio Liqc Liqi		Net Loans/Total Assets	Elsiefy (2013); Simoens and Vennet (2020); Haddad et al. (2020)	
Efficiency ratio	Effc	Effi	Operating Result/Average Total Assets	Emilia and Judit (2013); Ghecham and Salih (2019); Haddad et al. (2019a)	
Solvency ratio	Solc	Soli	Total Loans/Total Deposits	Bougatef (2011); Haddad et al. (2019c); Wang et al. (2021)	

Table 3. Main variables' descriptions.

Reciprocal Variables

The FPs of conventional and Islamic banks were explained by four AC determinants. Table 4 provides a detailed description of each variable.

Cornett et al. (2009);

Amer et al. (2014)

The Internal Governance CBs' Rating IBs' Rating Measurement **Previous Studies** Mechanism Cornett et al. (2009); Size of CB's AC Size of the IB's AC Number of directors or Amer et al. (2014); (TCOMc) (TCOMi) auditors in the AC Thu et al. (2016) Binary variable: 1 if there is an accountant, Dhaliwal et al. (2010); Competence of the Competence of the IB's a financier or an Amer et al. (2014); CB's AC (PRESEXPc) AC (PRESEXPi) Bilal et al. (2018) auditor on the AC or 0 if not Audit Committee Mangena and Number of Independence of the Independence of the Tauringana (2007); independent directors CB's AC (INDCOMc) IB's AC (INDCOMi) Amer et al. (2014); in the AC Bilal et al. (2018) Number of meetings Beasley et al. (2000); AC meetings' number Number of AC

meetings (REUCOMi)

Table 4. Reciprocal variables' descriptions.

Secondary Variables

(REUCOMc)

In order to control the partial effects of the basic variables, we added four control variables to our models. Table 5 defines the targeted variables that we saw, based on the literature review, that could have an impact on the banks' FPs.

held by the AC during

a year

Control Variable	CBs' Rating	IBs' Rating	Measurement	Previous Studies
Bank Type	TYc	TYi	A qualitative variable that takes three modalities: 1 if the bank is commercial 2 if the bank is investment 3 if the bank is universal	Cornett et al. (2009); Subika et al. (2011); Thomi (2014)
Bank Age	AGc	AGi	Age of the Islamic or conventional bank in the concerned year	Jeff et al. (2010); Filip et al. (2014); Arif et al. (2017)
Bank Size	TAc	TAi	Logarithm of the total assets of the Islamic or conventional bank	Muhammad et al. (2011); Saha et al. (2015); Rashid et al. (2020)
Inflation	INFc	INFi	The inflation rate in the country of origin of the Islamic or conventional bank	Pan and Pan (2014); Alharthi (2016); Nahar and Sarker (2016)

Table 5. Secondary variables' descriptions.

3.1.3. Models to Estimate

In accordance with the objective of our research, this tool gave us partial impacts from each submodel of each FP measure. We then compared the effects of each submodel and each bank type with the same determinants' impacts of their counterparts. In what follows, we expose the complete models to be estimated.

The conventional bank multiple regressions are as follows:

Model 1: Association between CBs' profitability and AC quality:

Model 2: Association between CBs' efficiency and ACQ:

$$Effc_{it} = \alpha_0 + \alpha_1 LnTCOMc_{it} + \alpha_2 LnPRESEXPc_{it} + \alpha_3 LnINDCOMc_{it} + \alpha_4 LnREUCOMc_{it} + \alpha_5 TYc_{it} + \alpha_6 LnAGc_{it} + \alpha_7 LnTAc_{it} + \alpha_8 LnINFc_{it} + \epsilon_{it}$$
(2)

Model 3: Association between CBs' liquidity and ACQ:

$$\begin{array}{lll} \text{Liqc}_{it} = & \alpha_0 \ + \ \alpha_1 \text{LnTCOMc}_{it} \ + \ \alpha_2 \text{LnPRESEXPc}_{it} \ + \ \alpha_3 \text{LnINDCOMc}_{it} \ + \ \alpha_4 \text{LnREUCOMc}_{it} \ + \\ & \alpha_5 \text{TYc}_{it} \ + \ \alpha_6 \text{LnAGc}_{it} \ + \ \alpha_7 \text{LnTAc}_{it} \ + \ \alpha_8 \text{LnINFc}_{it} \ + \ \epsilon_{it} \end{array} \tag{3}$$

Model 4: Association between CBs' solvency and ACQ:

$$LnSolc_{it} = \alpha_0 + \alpha_1 LnTCOMc_{it} + \alpha_2 LnPRESEXPc_{it} + \alpha_3 LnINDCOMc_{it} + \alpha_4 LnREUCOMc_{it} + \alpha_5 TYc_{it} + \alpha_6 LnAGc_{it} + \alpha_7 LnTAc_{it} + \alpha_8 LnINFc_{it} + \epsilon_{it}$$

$$(4)$$

The Islamic bank multiple regressions are as follows:

Model 5: Association between IBs' profitability and ACQ:

$$LnProi_{it} = \beta_0 + \beta_1 LnTCOMi_{it} + \beta_2 LnPRESEXPi_{it} + \beta_3 LnINDCOMi_{it} + \beta_4 LnREUCOMi_{it} + \beta_5 TYi_{it} + \beta_6 LnAGi_{it} + \beta_7 LnTAi_{it} + \beta_8 LnINFi_{it} + \epsilon_{it}$$
(5)

Model 6: Association between IBs' efficiency and ACQ:

$$Effi_{it} = \beta_0 + \beta_1 LnTCOMi_{it} + \beta_2 LnPRESEXPi_{it} + \beta_3 LnINDCOMi_{it} + \beta_4 LnREUCOMi_{it} + \beta_5 TYi_{it} + \beta_6 LnAGi_{it} + \beta_7 LnTAi_{it} + \beta_8 LnINFi_{it} + \varepsilon_{it}$$
(6)

Model 7: Association between IBs' liquidity and ACQ:

Model 8: Association between IBs' solvency and ACQ:

3.2. Multivariate Analysis: Regressions Stability Test (Chow Test)

The Chow test was used to test the coefficient stability of the regression on two independent samples through the comparison between the coefficients of two sets of linearly distributed data. The purpose of this test was to detect the presence of structural changes from breaks in data concentrations (Chow 1960). The application of this test consisted firstly of estimating the two samples' regressions together in a single model, then evaluating the two models separately for each of the two samples, and finally checking whether the coefficients of the two models were statistically different.

The steps of this test are outlined as follows:

Step 1: Collect the residual sum of squares (RSS) after estimation of the whole RSS mother population.

Step 2: Collect the residual sum of squares RSS1 and RSS2 on the basis of two samples of conventional and Islamic banks.

Step 3: Calculate the statistics of the test, following the Fisher law:

$$F \; = \; \frac{RSS - (RSS1 + RSS2)}{RSS1 + RSS2} * \; \frac{N - 2k}{k} \; = \; \frac{\frac{RSS - (RSS1 + RSS2)}{k}}{\frac{RSS1 + RSS2}{N - 2k}}; \; F \; \rightarrow (k; \; N - 2k)$$

The statistics of the test follow Fisher's law of degrees of freedom ν_1 = k and ν_2 = $N_1 + N_2 - 2k$, where k is the number of explanatory variables including the constant and N is the sum of the observations of two samples N = (N1 + N2), where N1 is the total number of observations of the first sample and N2 is the total number of observations of the second sample.

Step 4: This test is based on Fisher's law, where if the calculated statistics (F) are lower than the tabulated statistics, we reject the hypothesis of the stability of the coefficients. In this case, we conclude that there is a structural change and vice versa.

Table 6 shows the results of the Chow test for each FP measurement, as well as the results of the two unique models from each sample.

Table 6. Analysis of variance (ANOVA) tests of all models per sample and per financial performance measure.

	ANOV	'A Test of the Overall S	ample Profitability			Interpretation
Source	Degree of Freedom	Sum of Squares	Average Squares	F	Sig Prob > F	
Model LnPro _{it}	8	54.16	6.77	8.56	0.00	_
Residuals	2002	277.63	0.79	-	-	N = 2224 and $k = 9p = Fp \rightarrow (9; 2206)$
Total	2010	331.80	0.92		-	F calculated of the profitability = $\frac{RSS - (RSS1 + RSS2)}{RSS1 + RSS2}$ ×
	A	ANOVA test of the CBs'	profitabilities			$\frac{N-2k}{k} = \frac{277.637 - (152.442 + 100.248)}{(152.442 + 100.248)} \times \frac{2224 - (2 \times 9)}{9} = 24.19$
Model LnProc _{it}	8	42.81	5.35	6.57	0.00	> 1.59 From the analysis of variance test, we retained tha
Residuals	994	152.44	0.81	-	-	the calculated Fisher statistics were greater than
Total	1004	195.25	1.00	-	-	 the tabulated statistics, so we accepted the stability hypothesis. As a result, we concluded that the AC
	1	ANOVA test of the IBs'	profitabilities			coefficients relating to the profitability-specific
Model LnProi _{it}	8	32.73	4.09	6.33	0.00	 models of the conventional and Islamic banks were unalterable.
Residuals	885	100.24	0.64	-	-	_
Total	993	132.98	0.81	-	-	_
	ANG	OVA test of the overall	sample efficiency			Interpretation
Model Eff _{it}	8	65.13	8.14	6.94	0.00	
Residuals	1996	402.39	1.17		-	N = 2224 and k = 9
Total	2004	467.52	1.33	-	-	Fe→(9: 2206)
		ANOVA test of the CBs	s' efficiencies			F calculated of the efficiency = $\frac{RSS - (RSS1 + RSS2)}{RSS1 + RSS2} \times \frac{432.399}{RSS1 + RSS2}$
Model Effc _{it}	8	74.29	9.28	7.40	0.00	$ \frac{N-2k}{k} = \frac{402.399 - (227.230 + 0.234)}{(227.230 + 0.234)} \times \frac{2224 - (2\times9)}{9} = 188.50 > $ $ 1.59 $
Residuals	994	227.23	1.25		-	The analysis of variance test indicated that the
Total	1002	301.52	1.59	-	-	 calculated Fisher statistics were greater than the tabulated statistics, for which we accepted the null
		ANOVA test of the IBs	' efficiencies			hypothesis. From the results of the Fisher test, we
Model Effi _{it}	8	0.04	0.00	4.38	0.00	 approved that the AC coefficients relating to the efficiency-specific models of conventional and
Residuals	999	0.23	0.00	-	-	Islamic banks were stable.
Total	1007	0.27	0.00	-	-	_
	AN	OVA test of the overall	sample liquidity			Interpretation
Model Liq _{it}	8	1.83	0.22	6.22	0.00	
Residuals	1997	14.90	0.03	-	-	_
Total	2005	16.73	0.04	-	-	N = 2224 and $k = 9$
		ANOVA test of the CB	s' liquidities			Fl \rightarrow (9; 2206) F calculated of the liquidity = $\frac{RSS - (RSS1 + RSS2)}{RSS1 + RSS2} \times$
Model Liqc _{it}	8	1.15	0.14	5.18	0.00	
Residuals	888	5.91	0.02	-	-	Analysis of variance showed that the calculated
Total	996	7.06	0.03	-	-	Fisher statistics were greater than the tabulated statistics, in which case we adopted the null
		ANOVA test of the IBs	s' liquidities			hypothesis. Based on the established calculation,
Model Liqi _{it}	8	1.54	0.19	4.63	0.00	 we confirmed that the AC coefficients relative to the liquidity-specific models of the conventional
Residuals	998	7.68	0.04	-	-	and Islamic banks were stable.
Total	1006	9.22	0.04	-	-	

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	ANOV	Interpretation				
	ANG	OVA test of the overall s	ample solvency			Interpretation
Model LnSol _{it}	8	275.52	14.50	2.08	0.03	
Residuals	1991	1034.58	2.89	-	-	
Total	1999	1310.11	3.48	-	-	
		ANOVA test of the CBs	' solvencies		F calculated of the solvency = $\frac{RSS - (RSS1 + RSS2)}{RSS1 + RSS2}$ ×	
Model LnSolc _{it}	8	6.97	0.87	3.15	0.00	$\frac{N-2k}{k} = \frac{1034.584 - (58.779 + 1132.028)}{(58.779 + 1132.028)} \times \frac{2224 - (2 \times 9)}{9} =$
Residuals	996	58.77	0.27	-	-	-32.15 < 1.59 The solvency model variances revealed that the
Total	1004	65.75	0.29	-	-	calculated Fisher statistics were weaker than the
		ANOVA test of the IBs'	solvencies			tabulated statistics. That is why we immediately rejected the stability hypothesis for these models.
Model LnSoli _{it}	8	110.67	13.83	2.25	0.02	Therefore, we concluded that the AC coefficients relating to the solvency-specific models of the
Residuals	992	1132.02	6.15	-	-	conventional and Islamic banks were not stable.
Total	1000	1242.70	6.47	-	-	

4. Empirical Results

Although the statistical results allowed for clarifying the complicated econometric calculations before studying the impacts of ACs on FP, we began our analysis by making a comparison between conventional and Islamic banks with a simplified interpretation of the descriptive statistics of the different variables of the study. Table 7 summarizes the statistics of the dependent, independent, and control variables related to our samples of conventional and Islamic banks.

Table 7. Descriptive statistics of conventional and Islamic bank samples.

	CB San	nple N1 = 1	120 Observ	ations		IB Sample N2 = 1120 Observations					
Variable	Obs	Mean	Std. Dev.	Min	Max	Variable	Obs	Mean	Std. Dev.	Min	Max
LnProc	1120	3.27	0.99	-1.96	7.05	LnProi	1120	2.93	0.98	-0.59	6.66
Effc	1120	0.42	0.95	-8.88	3.04	Effi	1120	0.03	0.06	-0.29	0.23
Liqc	1120	0.56	0.40	0.53	1.15	Liqi	1120	0.99	0.36	0.74	1.32
LnSolc	1120	-0.16	0.84	-13.81	4.84	LnSoli	1120	-0.62	0.99	-21.07	6.95
LnTCOMc	1120	1.61	0.72	1.09	2.63	LnTCOMi	1120	1.63	0.59	0.69	2.30
LnPRESEXPc	1120	1.77	0.65	0	2.30	LnPRESEXPi	1120	1.52	0.69	0	1.94
LnINDCOMc	1120	1.31	0.55	0	1.60	LnINDCOMi	1120	1.16	0.57	0	1.38
LnREUCOMc	1120	1.84	0.46	0	2.99	LnREUCOMi	1120	1.75	0.44	0	3.46
TYc	1120	1.52	0.72	1	3	TYi	1120	1.58	0.66	1	3
LnAGc	1120	3.83	0.69	0.69	4.53	LnAGi	1120	3.14	0.92	0	4.15
LnTAc	1120	2.26	0.37	0.67	3.02	LnTAi	1120	2.14	0.31	0.39	2.83
LnINFc	1120	1.64	0.76	-1.49	3.24	LnINFi	1120	1.64	0.75	-1.49	3.24

According to the results gathered in the table above, for the FP measures we noticed that CBs generated a profitability of 3.27, while their Islamic counterparts showed a slightly lower profitability equal to 2.93. Both models recorded similar standard deviations. By analogy, the CBs revealed a positive efficiency of 0.42 with a variance equal to 0.95, which varied between a minimum of -8.88 and a maximum of 3.04. On the other hand, the IBs showed a slightly negative efficiency equal to 0.03. The IBs' efficiencies varied within a less narrow range between a minimum of -0.29 and a maximum of 0.23 with a much lower variance of 0.06. Moreover, on average, the IBs had more liquidity (0.79) compared to their conventional analogues (0.53). Notwithstanding that, the observed variance of the CBs' liquidity was more dynamic (0.40) compared with that of the IBs (0.36). Finally, both types recorded negative credit worthiness. The CBs were insolvent at the mean of 0.16 with a

standard deviation of 0.84, whereas the IBs were insolvent at the 0.62 mean with a higher standard deviation of 0.99.

Table 7 also shows the average aspects of the ACQ. First, the average number of AC auditors in banks was measured by the logarithm of the auditor number. Descriptive statistics have revealed that the average number of AC members in IBs varies between 0.69 and 2.30 with a variance of 0.59, while the AC size in their conventional counterparts varied within a narrower range between a minimum number of 0.69 and a maximum number of 2.63 with a higher rate of variance equal to 0.72. We also found that in IBs, the appointment variance of an accountant, a financial expert, or an auditor in their ACs was equal to 1.52 with a standard deviation of 0.69. However, 1.77 of the CBs had a chartered accountant, a finance expert, or an auditor in their ACs, with a lower standard deviation of 0.65. Then, we saw that the mean of independent auditors in the IB ACs was around 1.16 with an oscillation rate equal to 0.57, while the same statistic was equal to 1.31 in CBs, but its shake rate was lower, which was no more than 0.55. Finally, Table 7 also emphasizes that the number of meetings measured by the logarithm of the number of meetings held by the CBs' ACs was equal to 1.84 times, with a variance greater than the variance of their IB analogues 0.46, while the IB ACs only met 1.75 times, but with a lower stir rate equal to 0.44.

Table 7 also includes the sum of the descriptive statistics for the control variables. Beginning with the bank type, on average, among the three types of IBs highlighted (commercial, investment, and universal), 1.58 IBs monitored their FPs regardless of the bank type, with a variance of 0.66. However, in the case of CBs, only 1.52 of the three types were affected by their FPs with a top swing value of 0.72. Likewise, the inflation analysis showed that at a rate of 1.64, inflation could influence banking performance regardless of the bank type, with smaller variation for the IBs (0.75). Indeed, the analysis revealed that the average age of 3.83 could have an impact on the CBs' FPs. On the contrary, in the case of IBs, at a lower average of 3.14, the IBs' ages may have influenced their FPs, while taking into consideration that the variance of the IBs' ages was much higher (0.92) compared with the variance of their conventional analogues' ages (0.69). Moreover, the average bank size measured by the natural logarithm of the total assets in IBs was equal to 2.14 and varied with a standard deviation of 0.31, whereas the average size of their competitors in the market was smaller 2.26 and varied with a standard deviation of 0.37.

To value the impact of ACQ on the FP in each bank type, it was necessary to estimate the partial impacts provided by each AC variable in each model. To complete this work, we compared similar partial impacts across multiple linear models. Since the effects resulting from the models could be insignificant, positive, or negative, we insisted only on the significant variables which explained the impacts' quality in each model and consequently the quality of the AC's determinants. In what follows, Tables 8–11 illustrate the different effects of different AC's determinants on the different FP measures for each bank type.

- 4.1. Interpretation of the Comparative Results of the Audit Committee Determinants' Impacts on the Financial Performance Measures of the Conventional and Islamic Banks
- 4.1.1. Impacts of the Audit Committee Quality on the Profitability of Conventional and Islamic Banks

The results of the correlation between the CB profitability and the auditing system were most statistically significant. Table 8 illustrates the parameters of the effects between the profitability and the set of variables subject to the test. Based on the table below, the AC coefficients revealed two conclusions. LnTCOMc, LnINDCOMc, and LnREUCOMc negatively and significantly affected the CBs' profitability at the 5%, 5%, and 1% levels, respectively. Nonetheless, LnPRESEXPc reported a favorable and significant impact on the CBs' profitability at the 10% threshold. The results analysis for the control variables showed that LnINFc seriously affected the CBs' profitability at the 1% threshold, while LnAGc and LnTAc positively influenced profitability at significant levels of 1% and 5%, respectively. Hence, assumptions n°1 and n°4 were confirmed. However, assumptions n°2 and n°3 were ignored.

LnProc	Coef	Z	P > z	(95% Conf. Interval)		LnProi	LnProi Coef		P > z	(95% Con	. Interval)
LnTCOMc	-0.36	-1.18	0.019 **	-0.98	0.24	LnTCOMi	0.74	2.26	0.025 **	0.09	1.39
LnPRESEXPc	0.32	1.91	0.058 *	-0.01	0.66	LnPRESEXPi	-0.18	-1.04	0.006 ***	-0.54	0.16
LnINDCOMc	-0.20	-1.48	0.014 **	-0.46	0.06	LnINDCOMi	-0.33	-2.41	0.017 **	-0.60	-0.06
LnREUCOMc	-0.76	-5.57	0.000 ***	-1.04	-0.49	LnREUCOMi	-0.06	-0.46	0.645	-0.33	0.20
TYc	-0.04	-0.43	0.670	-0.16	0.25	TYi	0.27	2.63	0.010 ***	0.06	0.48
LnAGc	0.27	2.57	0.001 ***	0.06	0.47	LnAGi	0.17	1.92	0.000 ***	-0.00	0.36
LnTAc	0.16	0.77	0.023 **	-0.25	0.58	LnTAi	-0.75	-2.28	0.024 **	-1.40	-0.10
LnINFc	-0.31	-3.04	0.003 ***	-0.51	-0.10	LnINFi	-0.66	-5.59	0.000 ***	-0.90	-0.43
Constant	3.93	5.39	0.000	2.49	5.36	Constant	3.86	5.08	0.000	2.36	5.36

Table 8. Regression results of the AC's impacts on the profitability of CBs and IBs.

Note: * Correlation is significant at the 0.10 level. ** Correlation is significant at the 0.05 level. *** Correlation is significant at the 0.01 level.

According to Table 8, the correlation between the AC characteristics and the IBs' profitabilities indicated that most coefficients of this model were statistically significant. We found that there were only two AC determinants that had important significance at the 5% level. LnTCOMi revealed a positive effect on profitability, while LnINDCOMi negatively affected it. However, LnPRESEXPi negatively and significantly impacted the IBs' profitabilities at the 1% threshold. The other AC characteristic showed a negative and insignificant effect. In terms of the auxiliary variables, LnTAi and LnINFi negatively and significantly affected the IBs' profitabilities at the 5% and 1% levels, respectively. Nevertheless, the other control factors of TYi and LnAGi adopted positive and significant signs on profitability at the threshold of 1%. From the deliberate conclusions, we accepted only the second hypothesis. On the contrary, hypotheses n°1, n°3, and n°4 were rejected.

4.1.2. Impacts of the Audit Committee Quality on the Efficiency of Conventional and Islamic Banks

According to Table 9, the specific model of CB efficiency proved the presence of some statistically significant variables in the exhaustive list of the variables. Dealing with the effect of dependence between the AC's determinants and the CB efficiency concluded that three AC determinants generated significant and negative impacts on the effectiveness of the CBs' ACs at the 5% level (LnPRESEXPc and LnINDCOMc) and at the 1% level (LnREUCOMc). On the contrary, we recorded that LnTCOMc revealed a positive impact on the efficacy at the level of 10%. The empirical results also showed that TYc, LnAGc, and LnINFc generated a positive sign, notwithstanding these impacts, and only those that corresponded to LnAGc and LnINFc were significant at the 1% threshold. While LnTAc reported a negative impact on the CBs' efficiencies, it reached the level of 5% significance. Consequently, in the case of CBs, hypotheses n°2 and n°4 were accepted, but hypotheses n°1 and n°3 were rejected.

Referring to Table 9, this model supported some influential variables in valuing the ACQ in relation to IB efficiency. It revealed that all variables were significant. Similarly, the results specific to the impact of the AC determinants on the IB effectiveness showed that LnTCOMi and LnINDCOMi negatively and significantly affected the IB efficiency at the respective rates of 1% and 5%, whereas the other determinants positively and significantly influenced the IB efficiency. The impact of the LnPRESEXPi was significant at the level of 5%; however, LnREUCOMi was significant at the level of 10%. Regarding the control variables, all of them had a positive impact on the IB efficiency. Among these variables, the LnAGi and LnINFi had significant and influential effects at the 1% threshold, and LnTAi was significant at the 5% threshold, while TYi was significant at the 10% threshold. This illustration convinced us to validate hypothesis n°1 in the IB framework, while hypotheses n°2, n°3, and n°4 were rejected.

Effc	Coef	Z	P > z	(95% Conf. Interval)		Effi	Coef	Z	P > z	(95% Conf	. Interval)
LnTCOMc	0.56	1.46	0.095 *	-0.19	1.32	LnTCOMi	-0.56	-1.46	0.002 ***	-0.19	1.32
LnPRESEXPc	-0.50	-2.39	0.018 **	-0.92	-0.08	LnPRESEXPi	0.50	2.39	0.018 **	-0.92	-0.08
LnINDCOMc	-0.33	-1.99	0.048 **	-0.67	-0.00	LnINDCOMi	-0.33	-1.99	0.048 **	-0.67	-0.00
LnREUCOMc	-0.29	-1.69	0.003 ***	-0.63	0.04	LnREUCOMi	0.29	1.69	0.093 *	-0.63	0.04
TYc	0.02	0.15	0.877	-0.29	0.25	TYi	0.02	0.15	0.055 *	-0.29	0.25
LnAGc	0.35	2.65	0.009 ***	0.08	0.61	LnAGi	0.35	2.65	0.009 ***	0.08	0.61
LnTAc	-0.72	-2.50	0.013 **	-1.29	-0.15	LnTAi	0.72	2.50	0.013 **	-1.29	-0.15
LnINFc	0.45	3.57	0.000 ***	0.20	0.70	LnINFi	0.45	3.57	0.000 ***	0.20	0.70
Constant	-3.63	-3.82	0.000	-5.51	-1.75	Constant	-3.63	-3.82	0.000	-5.51	-1.75

Table 9. Regression results of the AC's impacts on the efficiency of CBs and IBs.

Note: * Correlation is significant at the 0.10 level. ** Correlation is significant at the 0.05 level. *** Correlation is significant at the 0.01 level.

4.1.3. Impacts of the Audit Committee Quality on the Liquidity of Conventional and Islamic Banks

Table 10 includes the results of the CB liquidity model. The provided coefficients indicated that only a few variables were statistically significant, given the probability attributed to them. The results underlined that this model was the least significant in the set of estimated regressions. The analysis showed that LnPRESEXPc and LnINDCOMc had negatively affected the CB liquidity, but these effects were not significant. Nonetheless, LnTCOMc and LnREUCOMc played a fundamental role in forcing the liquidity production cycle at the levels of 10% and 1%, respectively. Focusing on the impacts of the control variables on CBs' liquidity, we found that TYc, LnTAc, and LnINFc negatively affected the cash flow, though not necessarily significantly, except that the impacts received by LnTAc and LnINFc were significant at the 1% level. However, LnAGc's liquidity strength was positive and significant at the 1% rate. This is why we ignored all four of our hypotheses.

Liqc	Coef	Z	P > z	(95% Conf. Interval)		Liqi	Coef	Z	P > z	(95% Conf	. Interval)
LnTCOMc	0.02	1.75	0.064 *	-0.04	0.00	LnTCOMi	-0.01	-0.19	0.847	-0.11	0.09
LnPRESEXPc	-0.00	-0.39	0.693	-0.01	0.01	LnPRESEXPi	0.03	1.21	0.227	-0.02	0.09
LnINDCOMc	-0.00	-0.03	0.975	-0.01	0.01	LnINDCOMi	-0.00	-0.01	0.001 ***	-0.04	0.04
LnREUCOMc	0.00	0.93	0.006 ***	-0.00	0.01	LnREUCOMi	0.06	2.57	0.000 ***	0.01	0.10
TYc	-0.00	-0.05	0.963	-0.00	0.00	TYi	-0.01	-1.08	0.283	-0.05	0.016
LnAGc	0.00	3.09	0.002 ***	0.00	0.01	LnAGi	0.02	1.50	0.034 **	-0.00	0.06
LnTAc	-0.02	-2.46	0.000 ***	0.00	0.04	LnTAi	0.09	2.88	0.004 ***	-0.16	-0.03
LnINFc	-0.00	-1.06	0.001 ***	-0.00	0.01	LnINFi	-0.07	-4.46	0.000 ***	-0.11	-0.04
Constant	-0.06	-2.42	0.017	-0.11	-0.01	Constant	0.76	6.41	0.000	0.52	0.99

Table 10. Regression results of the AC's impacts on the liquidity of CBs and IBs.

Note: * Correlation is significant at the 0.10 level. ** Correlation is significant at the 0.05 level. *** Correlation is significant at the 0.10 level.

As shown in Table 10, the attributes of the IB liquidity model revealed that it was of globally fair quality, since there were only a few variables that were statistically significant given the probability that was attributed to them. The liquidity model gave rise to coefficients with positive signs just like LnPRESEXPi and LnREUCOMi, but only LnREUCOMi was significant at the rate of 1%. Nonetheless, the effects on LnTCOMi and LnINDCOMi were negative, but only LnINDCOMi effectively affected the IB liquidity at the 1% level. Regarding the effects of the additional variables on the IB liquidity, the combinatorial effect generated by LnAGi and LnTAi was a stimulator for the IB liquidity, even though LnAGi showed a significant impact at the level of 5%, while LnTAi recorded a significant impact at the level of 1%. However, TYi and LnINFi negatively affected the IB liquidity. By way of exception, only LnINFi deteriorated the available liquidity pool at a rate of 1%. For this

reason, we validated the first hypothesis in the case of IBs. After all, hypotheses $n^{\circ}2$, $n^{\circ}3$, and $n^{\circ}4$ were rejected.

4.1.4. Impacts of the Audit Committee Quality on the Solvency of Conventional and Islamic Banks

The results of the estimated model of CB solvency showed that most of the impacts were statistically significant given the probability attributed to them. This model was considered among the most significant models that remained. In the following, based on Table 11, the signs of an AC's determinants revealed that LnPRESEXPc and LnREUCOMc improved the CB solvency ratio at the level of significance of 1%. On the contrary, LnT-COMc and LnINDCOMc lowered the CB solvency, but only LnTCOMc was extremely significant at the 1% level. Focusing on the additional effects, the results revealed that all other control variables showed a worrisome impact on the continued CB solvency, but only the relative impacts of LnTAc and LnINFc were significant at the 1% threshold. As a result, we confirmed only hypothesis n°1 in the context of CBs, but we explicitly rejected hypotheses n°2, n°3, and n°4.

LnSolc	Coef	Z	P > z	(95% Conf	. Interval)	LnSoli	Coef	Z	P > z	(95% Conf	f. Interval)
LnTCOMc	-0.01	-0.25	0.00 ***	-0.13	0.16	LnTCOMi	0.25	1.52	0.00 ***	-0.59	0.07
LnPRESEXPc	0.00	0.04	0.00 ***	-0.07	0.07	LnPRESEXPi	-0.14	1.58	0.03 **	-0.03	0.32
LnINDCOMc	-0.07	-2.24	0.22	-0.13	-0.00	LnINDCOMi	-0.03	-0.42	0.01 **	-0.11	0.17
LnREUCOMc	0.03	1.08	0.00 ***	-0.02	0.10	LnREUCOMi	-0.15	-2.00	0.05 *	0.00	0.30
TYc	-0.00	-0.06	0.95	-0.04	0.04	TYi	0.13	2.38	0.01 **	-0.25	-0.02
LnAGc	-0.00	-0.31	0.75	-0.02	0.04	LnAGi	-0.01	-0.32	0.75	-0.13	0.09
LnTAc	-0.27	-4.24	0.00 ***	0.14	0.39	LnTAi	0.07	0.65	0.51	-0.28	0.14
LnINFc	-0.03	-1.34	0.00 ***	-0.09	0.01	LnINFi	-0.17	-3.06	0.00 ***	-0.28	-0.06
Constant	-0.02	-0.14	0.88	-0.30	0.26	Constant	0.50	1.35	0.18	-0.23	1.24

Table 11. Regression results of the AC's impacts on the solvency of CBs and IBs.

Note: * Correlation is significant at the 0.10 level. ** Correlation is significant at the 0.05 level. *** Correlation is significant at the 0.10 level.

The results of the IB solvency model revealed that there was an average number of variables whose impacts were statistically significant given the probability attributed to them. Table 11 illustrates that three AC determinants exerted pressure to deteriorate the IB solvency, such as LnPRESEXPi, LnINDCOMi, and LnREUCOMi. Nonetheless, the effects related to LnPRESEXPi and LnINDCOMi were significant at the 5% level, but the LnREUCOMi impact was significant just at the level of 10%, whereas LnTCOMi protected the IB solvency significantly at the 1% threshold. Symmetrically, we appreciated that TYi and LnTAi informed us about their favorable effects on solvency, but also, we indicated that only the impact of TYi was significant at the limit of 5%. However, we reported that LnAGi and LnINFi recorded prodigious negative effects, but only inflation reported a significant impact on solvency at the 1% level. Referring to Table 11, these results allowed us to validate hypotheses n°2 and n°4. On the contrary, assumptions n°1 and n°3 were rejected.

Before concluding, it is important to note that the mono-analysis showed confusion for confirming or infirming our hypotheses from a single FP measure. Furthermore, not all tested variables revealed significant impacts on FP measures. The existence of the various signs allowed us to think differently about a new AC model, allowing us to overcome the problem of signs ambiguity, give us standard effects for each bank type, eliminate the signs' diversity, and constitute an effective and feasible solution to implement, whatever the bank type.

4.2. Analogical Study Between the Significant Impacts of the Audit Committee Quality on the Financial Performance Measures

Based on the above, we retained that whatever the FP measure, the significant impacts of the AC's determinants were not identical between measures of the same bank type and between equivalent models' effects for each bank type, and not all the AC determinants revealed significant impacts on FP measures for each bank type. Thus, it is impossible to compare the incomparable. To overcome the constraints of mono-analysis which prevented us from making a final decision on the assumptions due to the diversity of impacts from each determinant on each FP measure, we created a new method called the decisive choice method (MCD) to make a final comparative decision. Moreover, this method made it easier for us to choose the right ACQ and the right bank model through FP. To exceed the diversity of individual effects, we counted only the variables revealing significant impacts. Table 12 shows the ranking of the significant effects of two bank types according to their signs.

As illustrated in the table below, before comparing the similar impacts, this method consisted of ruling out the insignificant impacts and considered only the significant impacts at the limit of 10%. Then, we classified the common determinants of ACs that revealed significant impacts according to the signs between the two bank types. Based on the main results, bringing all the AC impacts on FP together showed that the ACQ in both bank types weakened a part of their profitability, their efficiency, their liquidity, and their solvency, although their ACs protected some part of the same FP measures. However, the number of positive impacts of the ACs on the different CB FP measures were greater than those relating to the IBs. Furthermore, the ACs' negative impacts corresponding to the CBs' FP measures were lower than those relating to IBs. Therefore, we concluded that the CBs better governed their FPs thanks to the ACs more than their Islamic counterparts. Within the IBs, this result was explained by the decline in the importance of this governance mechanism in favor of other mechanisms, such as the Charia committee and its weaknesses, in ensuring their role in monitoring FP. Unlike IBs, within the CBs, the negative impacts outweighed the positive impacts. This indicates the failure of this mechanism to overhaul, manage, and perfect the CBs' FPs. According to the literature, we did not find any comparative studies that exactly studied the AC's impact on the FPs of two bank types. In contrast, Salem et al. (2021) examined the impact of ACs on earnings management through loan loss provisions among both conventional and Islamic banks operating in Middle East and North Africa countries. They found that the AC size and independence restrained the earnings management practices of IBs' managers more than those of CBs' managers.

Table 12. Summary of the significant impacts of the AC's determinants on FP measurements between conventional and Islamic banks.

Bank Type	CBs	1	II	Bs
Model	Positive Impact	Negative Impact	Positive Impact	Negative Impact
Pro _{it}	LnPRESEXPc	LnTCOMc LnINDCOMc LnREUCOMc	LnTCOMi	LnPRESEXPi LnINDCOMi
Eff _{it}	LnTCOMc	LnPRESEXPc LnINDCOMc LnREUCOMc	LnPRESEXPi LnREUCOMi	LnTCOMi LnINDCOMi
Liq _{it}	LnTCOMc LnREUCOMc	-	LnREUCOMi	LnINDCOMi
Sol _{it}	LnPRESEXPc LnREUCOMc	LnTCOMc	LnTCOMi	LnPRESEXPi LnINDCOMi LnREUCOMi
Reconciliation of Similar Impacts	6/16	7/16	5/16	8/16

5. Conclusions

Based on an analysis of partial effects, our study showed that whatever the bank type, it was not obvious that listed banks which controlled their ACs' compositions would necessarily improve their FPs. Moreover, our results indicated that large banks were neither exempted nor protected against practices of diversion and methods of devaluing FP, whether by acting on its measures or by playing on the ACs' determinants. Although within conventional and Islamic banks everything is proportional, the presence of inadequacies in the governance systems of this bank category always causes variability in their FPs. Furthermore, the volume and complexity of listed bank transactions require a shift in vision toward the role and location of ACs. From our results, we discovered that the real role of ACs was to bear an additional responsibility for improving FP, not only as a governance and control mechanism, but also as a continuous monitoring mechanism of the whole process of creation of the FP. By giving an additional task integrated into the ACs' accounts, they will become more responsible to bear the challenges of the ACs' weaknesses (Nkegbe and Ustarz 2015; Saani 2017).

From the outputs of our study and, more precisely, based on the percentage of positive and negative impacts, we noticed that the IB ACs contributed more to the improvement of their FPs compared with the CBs. However, in the two bank types, the number of determinants which have negatively influenced FP is very close to that of determinants which have recorded positive impacts. The negative impacts can be explained in proportion to the bank type. Implicitly, the percentage of non-significant partial impacts in each bank type is equal to 18.75% of the total number of impacts from ACs on all FP measures. The presence of non-significant partial impacts on the banking FP provides the failure of these determinants or mechanisms, staging their roles in an effective behavioral attitude, especially those which are directly associated with decision centers. Regardless of the bank type, an AC is responsible for planning policies and making the best decisions. It is required to improve the FP and maximize the bank's profits. However, the lack of FP affects the credibility and feasibility of implementing a quality governance system. This embodies two conclusions: there are many substitutable mechanisms behind the ambiguous effect, and there is a complete failure of the actual governance system that requires a revision.

Empirically, our results can serve as a reference for decision-makers, allowing clarification of the data on the financial competitiveness of two bank types to facilitate the planning of strategic performance programs based on the ACQ. Theoretically, the researchers found that the differences between the results were due to the ACQ of each bank type or the FP evaluation method. However, there are further factors related to the research peculiarities, the methodology, the data, and the interpretation.

Like all research studies, there are a few limitations to note. First, we compared only the ACs' effects on conventional and Islamic banks. In future research, we may broaden the scope of our study through the integration of other types of conventional and Islamic financial institutions so that it is possible to generalize the results to related financial sectors. Indeed, this study only dealt with the impact of a few ACs' determinants on a few FP measures. As a new research perspective, future studies could test the impact of several other determinants on a more exhaustive list of FP measures. It is also possible to open a new research axis that compares the importance of a female presence in the ACs of conventional and Islamic banks on their FPs in terms of staff, added value, impact type, and influence degree. In this case, the comparative analysis can be done either by continent, region, or country. Moreover, we can compare the impacts of banks' ACs on FP monitoring within the framework of other theories such as the agency theory and the scenario theory by adding new variables to our models that measure AC risk and FP risk.

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Appendix A

Table A1. Autocorrelation tests of the CBs per model.

Model Type	Wooldridge Test	Durbin Watson Test	F	Pr	Decision	
LnProc _{it}	Wooldridge Test	-	12.097	0.0014 < 5%	Presence of autocorrelation	
Effc _{it}	-	Durbin Watson Test	50.482	0.0000 < 5%	Presence of autocorrelation	
Liqc _{it}	Wooldridge Test	-	21.187	0.0001 < 5%	Presence of autocorrelation	
LnSolc _{it}	Wooldridge Test	-	1.709	0.1988 > 5%	Absence of autocorrelation	

Table A2. Autocorrelation tests of the IBs per model.

Model Type	Wooldridge Test	Durbin Watson Test	F	Pr	Decision
LnProi _{it}	-	Durbin Watson Test	58.695	0.0000 < 5%	Presence of autocorrelation
Effi _{it}	-	Durbin Watson Test	1.302	0.2609 > 5%	Absence of autocorrelation
Liqi _{it}	Wooldridge Test	-	0.096	0.7577 > 5%	Absence of autocorrelation
LnSoli _{it}	Wooldridge Test	-	87.514	0.0000 < 5%	Presence of autocorrelation

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