Received 23 November 2020
Revised 30 January 2021
10 March 2021
27 April 2021
Accepted 9 May 2021

The effect of audit committee quality on the conventional and Islamic banks' financial performance between subprime and Corona crises

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Abstract

Purpose – This study aims to test empirically the differences between Islamic and conventional banks in terms of impacts of the audit committees' quality on financial performance between Subprime and Corona crises.
Design/methodology/approach – The variables are articulated in four hypotheses tested by the GLS analysis. The data were collected via DATASTREAM and from banks' annual reports. The collected data covered four continents: America, Asia, Africa and Europe. The financial performance measures and audit committee's determinants of the conventional and Islamic banks concerned 112 banks of each type after the Subprime crisis and before the Corona crisis (2010–2019).
Findings – 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, the authors noticed that the audit committee had a positive impact for the conventional banks' liquidity, while the

JEL Classification — F39, G1, G20, G21, G30, G33.

The authors would like to express their gratitude to the editor and the reviewers who have significantly contributed to the improvement of the research quality thanks to their recommendations and helpful comments.

Erratum: It has come to the attention of the publisher that the article Haddad, A., El Ammari, A. and Bouri, A. (2022), "The effect of audit committee quality on the conventional and Islamic banks' financial performance between subprime and Corona crises", *Asian Journal of Accounting Research*, Vol. 7 No. 3, pp. 230-251. https://doi.org/10.1108/AJAR-11-2020-0121 was originally published with the tables/figures presented as supplementary material via external links that do not meet Emerald's latest repository requirements; these have now been amended and the supplementary material hosted here to ensure that it remains accessible in perpetuity: https://doi.org/10.1108/AJAR-11-2020-0121

Asian Journal of Accounting Research
Vol. 7 No. 3, 2022
pp. 230-251
Emerald Publishing Limited
2443-4175
DOI 10.1108/AJAR-11-2020-0121

same effect was apparently ambiguous on the Islamic banks' liquidity. For solvency, the audit committee positively influenced conventional banks, while it affected that of Islamic banks.

Research limitations/implications – Empirically, the authors' results can serve as a reference for decision-makers allowing to clarify the data on the financial competitiveness of two bank types to facilitate the planning of strategic performance programs based on the audit committee quality. Theoretically, researchers found that the differences between the results are due to the audit committee quality of each bank type or to the financial performance evaluation method. However, there are further factors that are related to the research peculiarities, the methodology, the data and the interpretation.

Originality/value – Based on the comparative literature review between conventional and Islamic banks, this study is the first conditional and comparative research between the audit committee quality and the financial performance of conventional and Islamic banks in a specific period (after Subprime and before Corona crises).

Keywords Conventional banks (CBs), Islamic banks (IBs), Audit committee quality (ACQ), Financial performance (FP), Comparative study, Financial stability period

Paper type Research paper

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 law (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 (Moses *et al.*, 2016; Zalata *et al.*, 2018), while in others, the empirical results agree on the effect of ACs on FP (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 does not improve the auditor's perception of independence. Besides that, Vienot (1995) and Bouton (2002) 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 the financial statements transparency (Dinu and Nedelcu, 2015; Bouaine and Hrichi, 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 (Alzoubi and Selamat, 2012). Indeed, corporate oversight by a high-quality committee can reduce the financial statements' falsification and earnings' management (Beasley, 1996). Other studies discussed the role of the AC in reducing agency costs between the CEO [1] 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 have 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, 2013b).

The choice of this period is justified, given that this decade was characterized by a 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). We synthesized the third contribution to the effective constitution and management of the AC to maintain the FP of the conventional or Islamic banks 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 AC's structure guarantees 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.

2. Literature review and hypothesis development

Stakeholder theory considers ethics through the integration of human values into operational management, 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 institutions' performance that benefits from the return via the exploitation of human and financial resources, namely shareholders, managers, creditors, employees, customers, suppliers and the government (Himaj, 2014). 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, because these characteristics related directly to the ACs' auditors. Second, because 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; Dinu and Nedelcu; 2015; Tarek and Mohamed, 2016). The first set of studies observed a positive association between the AC size and the FP (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, Wan *et al.* (2010) 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 (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). 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 improved income smoothing practices due to lower supervision in the financial reporting process.

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

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 socio-psychological process and the personal and professional qualification of the members. In particular, the AC effectiveness also depends on stakeholder groups that have influential interactions, exchangers 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 who 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) 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. 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. 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' expertise and the detection of discretionary accruals. AC expertise has a negative and significant impact on non-audit fees (Chaudhry, 2013).

Indeed, Krishnan (2005) confirmed that ACs whose members have financial expertise, are more likely to be exposed to the impacts of internal control problems. Empirically, he

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) found that the proportion of experts within ACs decreased the FRQ. According to them, the AC members' financial expertise could enhance their intentions and vigilance to bring a more sophisticated financial control. 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:

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:

Many studies revealed the existence of a positive impact between the percentage of independent members on the AC and FP (Dinu and Nedelcu, 2015; Aminul *et al.*, 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

Source	Degree of independence
Treadway Commission (1987)[a]	All members should be independent
Vienot (1995)	At least two-thirds of the independent directors and no corporate officer
Blue Ribbon Committee (1999)[b, c]	All members should be independent
Sarbanes–Oxley Act (2002)	All members should be independent (301)
Saucier (2001)[d]	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)[e]	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)

Note(s): [a]Treadway Commission. (1987). Report of the national commission on fraudulent financial reporting. Treadway Commission

[b]Blue Ribbon Committee (BRC). (1999). Report and recommendations of the blue ribbon committee on improving the effectiveness of corporate audit committee. New York stock exchange and national association of securities dealers

[c]Millstein, I.M. (1999). Report of the blue ribbon committee on improving the effectiveness of corporate audit committees. Business Lawyer, 54 (3), 1057–1066

[d]Saucier, G. (2001). Beyond compliance, governance. The institute of chartered accountants and Toronto stock exchange. Final report Joint committee on corporate governance

[e]The 8th European Directive. (2006). https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32006L0043&rid=3

Source(s): Authors' own work

Table 1. Literature review of the proposed proportion of independent directors in the AC

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 of engaging 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 facilitates 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 (Mangena and Tauringana, 2007) and negatively related to the propensity to manage the outcome (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 (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:

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 Number of meetings held by the audit committee

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 (Dinu and Nedelcu; 2015; 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 of 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; Awinbugri and Prince, 2019). In this line of research, Cornett *et al.* (2009) 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). It revealed the existence of a negative impact between the number of AC meetings and the FP effectiveness. 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:

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

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 the 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 2 and 3), 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 following plan was observed: we started with the presentation of data, then we stated our study variables, and finally, we exhibited our models.

3.1.1 Data collection. From two independent populations, two independent samples consisting of 683 Islamic financial institutions and 2,974 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, samples equality) until each IB had a similar CB in the same country. Finally, we obtained two equal samples, each containing 1,120 observations (bank/year). The banks are 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), United Arab Emirates (5), United Kingdom (5), and USA (2). Since we worked with a conditional method, we extended the field of selection of observations to four continents, firstly to aggravate the samples' sizes and secondly to obtain representative and suitable results for the generalization.

3.1.2 Modeling variables. 3.1.2.1 Variables to explain. 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 4 summarizes the measures' characteristics.

3.1.2.2 Explanatory variables. The FPs of conventional and Islamic banks were explained by four AC determinants. Table 5 provides a detailed description of each variable.

Table 2. Autocorrelation tests of the CBs/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

Source(s): Authors' own work

Table 3. Autocorrelation tests of the IBs/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

Source(s): Authors' own work

3.1.2.3 Control variables. In order to control the partial effects of the basic variables, we added four control variables to our models. Table 6 defines the targeted variables that we saw based on the literature review, that could have an impact on the banks' FP.

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.

FP measurement	CBs' rating	IBs' rating	Measurement	References
Profitability ratio	Proc	Proi	Marginal profit/total revenues	Ogbeide and Akanji (2018)
Liquidity ratio	Liqc	Liqi	Net loans/total assets	Elsiefy (2013)
Efficiency ratio	Effc	Effi	Operating result/average total assets	Emilia and Judit (2012)
Solvency ratio	Solc	Soli	Total loans/total deposits	Norhidayah *et al.* (2011)

Source(s): Authors' own work

Table 4. Description of the variables to explain

The internal governance mechanism	CBs' rating	IBs' rating	Measurement	References
Audit committee	Size of the CB's AC (TCOMc)	Size of the IB's AC (TCOMi)	Number of directors or auditors in the AC	Thu *et al.* (2016)
	Competence of the CB's AC (PRESEXPc)	Competence of the IB's AC (PRESEXPi)	Binary variable 1: if there is an accountant, a financier or an auditor on the AC 0: if not	Bilal *et al.* (2018)
	Independence of the CB's AC (INDCOMc)	Independence of the IB's AC (INDCOMi)	Number of independent directors in the AC	Bilal *et al.* (2018)
	Number of the AC meetings of the CB (REUCOMc)	Number of the AC meetings of the IB (REUCOMi)	Number of meetings held by the AC during a year	Cornett *et al.* (2009)

Source(s): Authors' own work

Table 5. Description of the explanatory variables

Control variable	CBs' rating	IBs' rating	Measurement	References
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	Thomi (2014)
Bank age	AGc	AGi	Age of the Islamic or conventional bank for each year	Arif *et al.* (2017)
Bank size	TAc	TAi	Logarithm of the total assets of Islamic or conventional bank	Rashid *et al.* (2020)
Inflation	INFc	INFi	The inflation rate in the country of origin of the Islamic or conventional bank	Nahar and Sarker (2016)

Source(s): Authors' own work

Table 6. Description of control variables

Conventional multiple regression is:
Association between FP measures of CBs and ACQ:

$$Yc_{it} = \alpha_0 + \alpha_1 \text{LnTCOMc}_{it} + \alpha_2 \text{LnPRESEXPc}_{it} + \alpha_3 \text{LnINDCOMc}_{it} + \alpha_4 \text{LnREUCOMc}_{it} + \alpha_5 \text{TYc}_{it} + \alpha_6 \text{LnAGc}_{it} + \alpha_8 \text{LnINFc}_{it} + \varepsilon_{it}$$

Yc_{it} can be (LnProc_{it}, Effc_{it}, Liqc_{it}, LnSolc_{it})
Islamic multiple regression is:
Association between FP measures of IBs and ACQ:

$$Yi_{it} = \beta_0 + \beta_1 \text{LnTCOMi}_{it} + \beta_2 \text{LnPRESEXPi}_{it} + \beta_3 \text{LnINDCOMi}_{it} + \beta_4 \text{LnREUCOMi}_{it} + \beta_5 \text{TYi}_{it} + \beta_6 \text{LnAGi}_{it} + \beta_8 \text{LnINFi}_{it} + \varepsilon_{it}$$

Yi_{it} can be (LnProi_{it}, Effi_{it}, Liqi_{it}, LnSoli_{it})

3.2 Multivariate analysis: regressions stability test (Chow test (Appendix) [2])
Tables 7–18 show the results of the Chow test for each FP measurement, as well as the results of the two unique models from each sample.

3.2.1 Model of the AC effects on the banks' profitability. From the analysis of variance test, we retained that the calculated Fisher statistics (CFS) was greater than the tabulated statistics,

Table 7.
ANOVA[a] test of the overall sample profitability

Source	Degree of freedom	Sum of squares	Average squares	*F*	Sig Prob > *F*
Model LnPro_{it}	8	54.1659753	6.77074691	8.56	0.0000
Residuals	2,002	277.63748	0.790989973	–	–
Total	2,010	331.803456	0.924243609	–	–

Note(s): [a]ANOVA = analysis of variance
Source(s): Authors' own work

Table 8.
ANOVA test of the CBs' profitabilities

Source	Degree of freedom	Sum of squares	Average squares	*F*	Sig Prob > *F*
Model LnProc_{it}	8	42.8148672	5.3518584	6.57	0.0000
Residuals	994	152.44223	0.815199089	–	–
Total	1,004	195.257097	1.00131845	–	–

Source(s): Authors' own work

Table 9.
ANOVA test of the IBs' profitabilities

Source	Degree of freedom	Sum of squares	Average squares	*F*	Sig Prob > *F*
Model LnProi_{it}	8	32.7361929	4.09202411	6.33	0.0000
Residuals	885	100.248411	0.646763944	–	–
Total	993	132.984604	0.815856467	–	–

Note(s): $N = 2{,}224$ and $k = 9$
$\text{Fp} \rightarrow (9; 2{,}206)$
$\text{Fcp} = \frac{\text{RSS} - (\text{RSS1}+\text{RSS2})}{\text{RSS1}+\text{RSS2}} * \frac{N-2k}{k} = \frac{277.637 - (152.442+100.248)}{(152.442+100.248)} * \frac{2224-(2*9)}{9} = 24.198 > 1.59$
where Fcp: *F* calculated of the profitability
Source(s): Authors' own work

so we accepted the stability hypothesis. We concluded that the AC coefficients relating to the profitability-specific models of the conventional and Islamic banks were unalterable.

3.2.2 Model of the AC effects on the banks' efficiency. The analysis of variance test indicated that the CFS was greater than the tabulated statistics, for which we accepted the null hypothesis. We approved that the AC coefficients relating to the efficiency-specific models of conventional and Islamic banks were stable.

3.2.3 Model of the AC effects on the banks' liquidity. Analysis of variance showed that the CFS was greater than the tabulated statistics, in which case we adopted the null hypothesis. We confirmed that the AC coefficients relative to the liquidity-specific models of the conventional and Islamic banks were stable.

Source	Degree of freedom	Sum of squares	Average squares	F	Sig Prob > F
Model Eff_{it}	8	65.1302574	8.14128217	6.94	0.0000
Residuals	1,996	402.399295	1.17317579	–	–
Total	2,004	467.529553	1.33199303	–	–

Source(s): Authors' own work

Table 10. ANOVA test of the overall sample efficiency

Source	Degree of freedom	Sum of squares	Average squares	F	Sig Prob > F
Model $Effc_{it}$	8	74.2900002	9.28625002	7.40	0.0000
Residuals	994	227.230502	1.25541714	–	–
Total	1,002	301.520503	1.59534657	–	–

Source(s): Authors' own work

Table 11. ANOVA test of the CBs' efficiencies

Source	Degree of freedom	Sum of squares	Average squares	F	Sig Prob > F
Model $Effi_{it}$	8	0.044575637	0.005571955	4.38	0.0001
Residuals	999	0.234211487	0.001272889	–	–
Total	1,007	0.278787124	0.001452016	–	–

Note(s): $N = 2{,}224$ and $k = 9$

$Fe \rightarrow (9; 2{,}206)$

$$Fce = \frac{RSS - (RSS1 + RSS2)}{RSS1 + RSS2} * \frac{N - 2k}{k} = \frac{402.399 - (227.230 + 0.234)}{(227.230 + 0.234)} * \frac{2224 - (2*9)}{9} = 188.506 > 1.59$$

where $Fce = F$ calculated of the efficiency

Source(s): Authors' own work

Table 12. ANOVA test of the IBs' efficiencies

Source	Degree of freedom	Sum of squares	Average squares	F	Sig Prob > F
Model Liq_{it}	8	1.83051405	0.228814256	6.22	0.0000
Residuals	1,997	14.9053291	0.036803282	–	–
Total	2,005	16.7358431	0.040522623	–	–

Source(s): Authors' own work

Table 13. ANOVA test of the overall sample liquidity

3.2.4 Model of the AC effects on the banks' solvency. The solvency model variances revealed that the CFS was weaker than the tabulated statistics. That is why we immediately rejected the stability hypothesis for these models. Therefore, we concluded that the AC coefficients relating to the solvency-specific models of the conventional and Islamic banks were not stable.

4. Empirical results

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

Table 14. ANOVA test of the CBs' liquidities

Source	Degree of freedom	Sum of squares	Average squares	F	Sig Prob > F
Model $Liqc_{it}$	8	1.15631667	0.144539584	5.18	0.0000
Residuals	888	5.9120502	0.027887029	–	–
Total	996	7.06836687	0.03212894	–	–

Source(s): Authors' own work

Table 15. ANOVA test on the IBs' liquidities

Source	Degree of freedom	Sum of squares	Average squares	F	Sig Prob > F
Model $Liqi_{it}$	8	1.54503819	0.193129773	4.63	0.0000
Residuals	998	7.68004327	0.041739366	–	–
Total	1,006	9.22508146	0.048047299	–	–

Note(s): $N = 2{,}224$ and $k = 9$

$Fl \rightarrow (9\ ;\ 2{,}206)$

$$Fcl = \frac{RSS - (RSS1 + RSS2)}{RSS1 + RSS2} * \frac{N - 2k}{k} = \frac{14.905 - (5.912 + 7.680)}{(5.912 + 7.680)} * \frac{2224 - (2*9)}{9} = 23.677 > 1.59$$

where Fcl = F calculated of the liquidity

Source(s): Authors' own work

Table 16. ANOVA test of the overall sample solvency

Source	Degree of freedom	Sum of squares	Average squares	F	Sig Prob > F
Model $LnSol_{it}$	8	275.527625	14.501454	2.08	0.0365
Residuals	1,991	1034.58404	2.8979945	–	–
Total	1,999	1310.11166	3.48433953	–	–

Source(s): Authors' own work

Table 17. ANOVA test of the CBs' solvencies

Source	Degree of freedom	Sum of squares	Average squares	F	Sig Prob > F
Model $LnSolc_{it}$	8	6.97821471	0.872276839	3.15	0.0022
Residuals	996	58.7799263	0.277263803	–	–
Total	1,004	65.7581411	0.298900641	–	–

Source(s): Authors' own work

significant variables which explained the impacts' quality in each model and consequently the quality of the AC's determinants. In what follows, Tables 19–26 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 AC determinants' impacts on the FP measures of the conventional and Islamic banks

4.1.1 Impacts of the ACQ on the profitability of conventional and Islamic banks. The results of the correlation between the CBs' profitabilities and the auditing system were most statistically significant. Table 19 illustrates the parameters of the effects between the

Source	Degree of freedom	Sum of squares	Average squares	F	Sig Prob > F
Model $LnSoli_{it}$	8	110.672255	13.8340318	2.25	0.0258
Residuals	992	1132.02882	6.15233055	–	–
Total	1,000	1242.70108	6.47240144	–	–

Note(s): $N = 2{,}224$ and $k = 9$

$Fs \rightarrow (9\ ;\ 2{,}206)$

$Fcs = \frac{RSS - (RSS1+RSS2)}{RSS1+RSS2} * \frac{N-2k}{k} = \frac{1034.584 - (58.779+1132.028)}{(58.779+1132.028)} * \frac{2224-(2*9)}{9} = -32.156 < 1.59$

where Fcs = F calculated of the solvency

Source(s): Authors' own work

Table 18. ANOVA Test of the IBs' solvencies

LnProc	Coefficient	Std. err	Z	$P > \|z\|$	[95% Conf. interval]	
LnTCOMc	−0.3690006	0.3122912	−1.18	0.019**	−0.9850671	0.2470659
LnPRESEXPc	0.3256752	0.1707604	1.91	0.058*	−0.0111891	0.6625395
LnINDCOMc	−0.2007704	0.1353857	−1.48	0.014**	−0.46785	0.0663092
LnREUCOMc	−0.7691618	0.1381292	−5.57	0.000***	−1.041653	−0.4966701
TYc	−0.0459267	0.1075946	−0.43	0.670	−0.1663286	0.258182
LnAGc	0.2706567	0.1054468	2.57	0.001***	0.0626385	0.4786749
LnTAc	0.1641456	0.2123066	0.77	0.023**	−0.2546783	0.5829695
LnINFc	−0.310217	0.1021077	−3.04	0.003***	−0.5116481	−0.1087859
Constant	3.930467	0.7296175	5.39	0.000	2.491128	5.369806

Note(s): * Correlation is significant at the 0.10 level; ** Correlation is significant at the 0.05 level; *** Correlation is significant at the 0.01 level

Source(s): Authors' own work

Table 19. Regression results of the AC's impacts on the CBs' profitability

LnProi	Coefficient	Std. err	Z	$P > \|z\|$	[95% Conf. interval]	
LnTCOMc	0.7456123	0.3303697	2.26	0.025**	0.0930042	1.39822
LnPRESEXPc	−0.1899257	0.1819712	−1.04	0.006***	−0.5493892	0.1695378
LnINDCOMc	−0.3311608	0.1371441	−2.41	0.017**	−0.6020736	−0.0602481
LnREUCOMc	−0.0635436	0.1378169	−0.46	0.645	−0.3357853	0.2086981
TYc	0.2751691	0.1047932	2.63	0.010***	0.0681619	0.4821763
LnAGc	0.1788393	0.0933347	1.92	0.000***	−0.0055329	0.3632115
LnTAc	−0.7546426	0.3303035	−2.28	0.024**	−1.40712	−0.1021653
LnINFc	−0.6660688	0.1191256	−5.59	0.000***	−0.9013879	−0.4307496
Constant	3.865778	0.7613688	5.08	0.000	2.36178	5.369776

Note(s): ** Correlation is significant at the 0.05 level; *** Correlation is significant at the 0.01 level

Source(s): Authors' own work

Table 20. Regression results of the AC's impacts on the IBs' profitability

Effc	Coefficient	Std. err	Z	$P > \|z\|$	[95% Conf. interval]	
LnTCOMc	0.5635711	0.3854691	1.46	0.095*	−0.1970199	1.324162
LnPRESEXPc	−0.506293	0.2114613	−2.39	0.018**	−0.9235392	−0.0890467
LnINDCOMc	−0.3365649	0.1692185	−1.99	0.048**	−0.6704596	−0.0026701
LnREUCOMc	−0.2915094	0.1725128	−1.69	0.003***	−0.6319043	0.0488855
TYc	0.0216742	0.1403389	0.15	0.877	−0.2985849	0.2552366
LnAGc	0.3503843	0.132294	2.65	0.009***	0.0893475	0.611421
LnTAc	−0.7260411	0.2902967	−2.50	0.013**	−1.298842	−0.1532401
LnINFc	0.4523007	0.1265786	3.57	0.000***	0.2025413	0.7020601
Constant	−3.639358	0.9526918	−3.82	0.000	−5.519168	−1.759547

Note(s): * Correlation is significant at the 0.10 level; ** Correlation is significant at the 0.05 level; *** Correlation is significant at the 0.01 level
Source(s): Authors' own work

Table 21.
Regression results of the AC's impacts on the CBs' efficiency

Effi	Coefficient	Std. err	Z	$P > \|z\|$	[95% Conf. interval]	
LnTCOMi	−0.5635711	0.3854691	−1.46	0.002***	−0.1970199	1.324162
LnPRESEXPi	0.506293	0.2114613	2.39	0.018**	−0.9235392	−0.0890467
LnINDCOMi	−0.3365649	0.1692185	−1.99	0.048**	−0.6704596	−0.0026701
LnREUCOMi	0.2915094	0.1725128	1.69	0.093*	−0.6319043	0.0488855
TYi	0.0216742	0.1403389	0.15	0.055*	−0.2985849	0.2552366
LnAGi	0.3503843	0.132294	2.65	0.009***	0.0893475	0.611421
LnTAi	0.7260411	0.2902967	2.50	0.013**	−1.298842	−0.1532401
LnINFi	0.4523007	0.1265786	3.57	0.000***	0.2025413	0.7020601
Constant	−3.639358	0.9526918	−3.82	0.000	−5.519168	−1.759547

Note(s): * Correlation is significant at the 0.10 level; ** Correlation is significant at the 0.05 level; *** Correlation is significant at the 0.01 level
Source(s): Authors' own work

Table 22.
Regression results of the AC's impacts on the IBs' efficiency

Liqc	Coefficient	Std. err	Z	$P > \|z\|$	[95% Conf. Interval]	
LnTCOMc	0.0230827	0.0132145	1.75	0.064*	−0.0491541	0.0029887
LnPRESEXPc	−0.0027156	0.0068792	−0.39	0.693	−0.0108566	0.0162878
LnINDCOMc	−0.0001795	0.005707	−0.03	0.975	−0.01108	0.0114391
LnREUCOMc	0.0053715	0.0058016	0.93	0.006***	−0.0060748	0.0168178
TYc	−0.0001909	0.004128	−0.05	0.963	−0.0083351	0.0079534
LnAGc	0.0097612	0.0031573	3.09	0.002***	0.0035321	0.0159903
LnTAc	−0.0276267	0.0112254	−2.46	0.000***	0.0054796	0.0497737
LnINFc	−0.0050449	0.0047604	−1.06	0.001***	−0.004347	0.0144368
Constant	−0.0618575	0.0255779	−2.42	0.017	−0.1123213	−0.0113938

Note(s): * Correlation is significant at the 0.10 level; *** Correlation is significant at the 0.01 level
Source(s): Authors' own work

Table 23.
Regression results of the AC's impacts on the CBs' liquidity

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

Liqi	Coefficient	Std. err	Z	$P > \|z\|$	[95% Conf. interval]	
LnTCOMi	−0.0103563	0.0536024	−0.19	0.847	−0.1160183	0.0953058
LnPRESEXPi	0.0355094	0.0292879	1.21	0.227	−0.0222234	0.0932423
LnINDCOMi	−0.0001826	0.0236885	−0.01	0.001***	−0.0465126	0.0468778
LnREUCOMi	0.0619193	0.0241388	2.57	0.000***	0.0143365	0.1095022
TYi	−0.0198306	0.0184098	−1.08	0.283	−0.0561204	0.0164592
LnAGi	0.0271863	0.0180877	1.50	0.034**	−0.0084685	0.0628411
LnTAi	0.0996069	0.034553	2.88	0.004***	−0.1677184	−0.0314955
LnINFi	−0.0798724	0.0179172	−4.46	0.000***	−0.1151912	−0.0445537
Constant	0.7640561	0.119199	6.41	0.000	0.5290891	0.9990231

Note(s): ** Correlation is significant at the 0.05 level; *** Correlation is significant at the 0.01 level
Source(s): Authors' own work

Table 24. Regression results of the AC's impacts on the IBs' liquidity

LnSolc	Coefficient	Std. err	Z	$P > \|z\|$	[95% Conf. interval]	
LnTCOMc	−0.0192461	0.0756708	−0.25	0.002***	−0.130048	0.1685402
LnPRESEXPc	0.0017022	0.0393925	0.04	0.006***	−0.0760169	0.0794213
LnINDCOMc	−0.0731493	0.0326802	−2.24	0.226	−0.1376254	−0.0086733
LnREUCOMc	0.03582	0.0332222	1.08	0.000***	−0.0297254	0.1013653
TYc	−0.0013657	0.0236383	−0.06	0.954	−0.0452713	0.0480027
LnAGc	−0.005686	0.0180797	−0.31	0.753	−0.0299841	0.0413561
LnTAc	−0.2723791	0.0642805	−4.24	0.000***	0.1455574	0.3992008
LnINFc	−0.0366407	0.0272595	−1.34	0.001***	−0.0904222	0.0171407
Constant	−0.0203986	0.1464682	−0.14	0.889	−0.3093716	0.2685743

Note(s): *** Correlation is significant at the 0.01 level
Source(s): Authors' own work

Table 25. Regression results of the AC's impacts on the CBs' solvency

LnSoli	Coefficient	Std. err	Z	$P > \|z\|$	[95% Conf. interval]	
LnTCOMi	0.257406	0.1690168	1.52	0.009***	−0.5905748	0.0757628
LnPRESEXPi	−0.1461662	0.0923494	1.58	0.032**	−0.0358745	0.3282069
LnINDCOMi	−0.0316474	0.0746935	−0.42	0.017**	−0.1155897	0.1788846
LnREUCOMi	−0.152596	0.0761134	−2.00	0.056*	0.00256	0.3026321
TYi	0.138241	0.0580491	2.38	0.018**	−0.2526684	−0.0238136
LnAGi	−0.0182011	0.0570333	−0.32	0.750	−0.1306261	0.094224
LnTAi	0.0705174	0.108951	0.65	0.518	−0.2852834	0.1442486
LnINFi	−0.1730838	0.0564959	−3.06	0.002***	−0.2844495	−0.0617182
Constant	0.5057693	0.3758529	1.35	0.180	−0.2351183	1.246657

Note(s): * Correlation is significant at the 0.10 level ** Correlation is significant at the 0.05 level; *** Correlation is significant at the 0.01 level
Source(s): Authors' own work

Table 26. Regression results of the AC's impacts on the IBs' solvency

LnTAc positively influenced profitability at significant levels of 1 and 5%, respectively. According to Table 19, assumptions H1 and H4 were confirmed. However, assumptions H2 and H3 were ignored.

According to Table 20, 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' profitability 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, 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 1, 3, and 4 were rejected.

4.1.2 Impacts of the ACQ on the efficiency of conventional and Islamic banks. According to Table 21, the specific model of the 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 that 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 reaches the level of 5% significance. Consequently, Hypotheses 2 and 4 were accepted, but Hypotheses 1 and 3 were rejected.

Referring to Table 22, 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 1 in the IB framework, while Hypotheses 2, 3 and 4 are rejected.

4.1.3 Impacts of the ACQ on the liquidity of conventional and Islamic banks. Table 23 includes the results of the CB liquidity model. The provided coefficients indicated that only a few variables were statistically significant. 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 insignificant. 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 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 our hypotheses.

As shown in Table 24, 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. 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 2, 3 and 4 were rejected.

4.1.4 Impacts of the ACQ 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. This model was considered among the most significant models that remained. In the following, based on Table 25, 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, LnTCOMc and LnINDCOMc lowered the CB solvency, but only LnTCOMc was extremely significant at the 1% level. 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 1 in the context of CBs, but we explicitly rejected Hypotheses 2, 3 and 4.

The results of the IB solvency model revealed that there was an average number of variables whose impacts were statistically significant. Table 26 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. These results allowed us to validate Hypotheses 2 and 4. On the contrary, assumptions H1 and H3 are 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 it whatever the bank type.

4.2 Analogical study between the significant impacts of the ACQ on the FP 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 27 shows the ranking of the significant effects of two bank types according to their signs:

As illustrated in Table 27, 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

Table 27. Summary of the significant impacts of the AC's determinants on FP measurements between conventional and Islamic banks

Bank type	CBs		IBs	
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

Source(s): Authors' own work

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 was 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 FP thanks to the AC 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 MENA countries. They found that the AC size and independence restrained the earnings management practices of IBs' managers more than those of CBs' managers.

5. Conclusion

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 IBs' 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.

Like all research studies, there are a few limitations to note. First, we compared only the ACs' effects of 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.

Notes

1. Chief Executive Officer.
2. Authors' own work.

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Appendix

The Chow test was used to test the coefficient stability of the regression on two in-dependent 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:

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

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

(3) Calculate the statistics of the test, following the Fisher law:

$$F = \frac{\mathrm{RSS} - (\mathrm{RSS1} + \mathrm{RSS2})}{\mathrm{RSS1} + \mathrm{RSS2}} * \frac{N - 2k}{k} = \frac{\frac{\mathrm{RSS} - (\mathrm{RSS1} + \mathrm{RSS2})}{k}}{\frac{\mathrm{RSS1} + \mathrm{RSS2}}{N - 2k}} \quad \cdots \quad F \to (k, N - 2k)$$

The statistics of the test follow Fisher's law of degrees of freedom $\nu 1 = k$ and $\nu 2 = N1 + N2 - 2k$, 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.

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.

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