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Corporate Social Responsibility, Internal Control Effectiveness, and Financial Performance in Pakistan's Banking Sector: A Comparative Analysis of Islamic and Conventional Banks

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Abstract

This research program has already proved that internal control effectiveness mediates and relaxes the connection between corporate social responsibility (CSR) and financial. performance of non-financial firms listed on Pakistan Stock Exchange, and again and again. indicating the regulatory regime in the banking sector as an undecided boundary on those. findings. This paper fills that gap in a direct manner, using the CSR-internal-control-financial-performance chain to banking industry in Pakistan and testing the hypothesis that there is systematic difference. between conventional and Islamic banks. The sample of panel included an unbalanced set of 28 Pakistani banks (22). conventional, 6 full-fledged Islamic) more than 20152024 (246 bank-year observations), CSR and internal control effectiveness were measured by content analysis disclosure indices. adapted to State Bank of Pakistan (SBP) internal-control and CSR guidelines, and with return on assets. As the main performance indicator, (ROA) should be taken. The estimation of System GMM on the pooled banking. sample shows that CSR disclosure is a good predictor of internal control effectiveness, and internal. effectiveness of control is a positive predictor of ROA, which reproduces the findings of this research program in non-financial sectors in banking. The model of a bank-type of interaction indicates that both relationships are. this is much higher in the case of Islamic banks; the six-bank Islamic subsample is too small. to separately estimate system GMM, this trend was supported with fixed-effects panel. driscoll-kraay standard errors regression, which showed significantly larger coefficients of. Islamic banks (CSRD → ROA: β = 0.891 vs. 0.487; ICE → ROA: β = 0.968 vs. 0.541). A moderated-mediation test finds the indirect CSR-to-performance effect through internal

control the effect size is approximately two-and-a-half larger in the case of Islamic banks (0.496) compared to. conventional banks (0.195; difference = 0.300, p = .035). An exploratory study limited to Islamic banks also discover that there is a special Shariah Governance Index - which reflects Shariah. Supervisory Board independence and internal Shariah audit activity - positive predictors of internal. efficacy of control that goes beyond conventional CSR disclosure, in line with a Maqasid alShariah-based account of the dual governance structure of Islamic banks. These results are a continuation of this. From research program core mediation and moderation chain to a separate tightly regulated sector, and give initial indication that Shariah governance is a supplementary, complementary mitigating layer as opposed to a backup layer.
Keywords: corporate social responsibility; internal control effectiveness; Islamic banking; Shariah governance; financial performance; Pakistan

1. Introduction

1.1 Background

In this research program, it is always established that internal control effectiveness is at the center stage. In the translation of corporate social responsibility (CSR) to enhanced financial performance among. Non-financial firms listed in the Pakistan Stock Exchange (PSX) in terms of mediation survey-based and across. a dimension-level disaggregation of CSR, called moderation designs (Ashraf and Khattak, 2026a, 2026b). There is a boundary condition on the firm size, which is (Ashraf et al., 2026) and an archival panel test that is a test of size (companion). working paper). All these studies, however, omit financial-sector firms, on purpose. the reason that banks are under a very differing internal-control and governance. regime The prudential regulation of State Bank of Pakistan (SBP), Basel III capital requirements, and, to an increasing group of banks, an extra Shariah-level of governance by a Shariah. Supervisory Board (SSB). This omission has been observed as an open restriction in all the previous studies. this program, and this study is intended to seal it up. The banking sector in Pakistan provides a rather educative environment to this extension due to the fact that it is constituted by two structurally different bank populations which work under the same macroeconomic and prudential-regulatory environment: traditional banks, which are under the standard internal-control of SBP. and corporate-governance structure, and full-fledged Islamic banks, are, and will be, so. structure and an extra Shariah-governance level required by the Shariah Governance of SBP. Framework (State Bank of Pakistan, 2018). This institutional variation is natural, and can be directly tested. of whether an extra, religiously based elevation of governance fortifies or just redundantly copycats. the non-financial sector work of this research program, the CSR-internal-control-performance chain.

1.2 Problem Statement

In the absence of evidence sector-specific, the open question is whether the CSR generalized to internal-control-financial chain of performance is applicable to a highly regulated, dual-governance sector such as banking or not. whether the already stringent internal-control requirements of SBP squeeze cross-bank difference in internal control effectiveness to the extent that CSR disclosure is no longer meaningful. differentiates control quality. It is also not clear whether the addition of the Shariah content of the role of the Islamic banks enhances the CSR-internal-control relationship (a complementary-governance). account) or is mostly disconnected to it (a symbolic-compliance account) a question with direct. relevance the given research program expresses its interest in Islamic finance and Maqasid al-Shariah based governance frameworks.

1.3 Research Gap

This study is driven by three gaps. In the first place, there is a sectoral gap: cumulative evidence of this research program. base is fully based on non-financial PSX-traded companies, leaving the banking sector, a systemically. Huge and extremely controlled part of the Pakistani economy - untested. Second, a comparative-governance gap: the companion systematic review in this research program determined. the incorporation of the Islamic corporate governance viewpoints as a topic of high-priority research. (Research Priority 6), where none of the 42 reviewed studies used a Shariah lens other than the thin lens of Islamic-banking specific studies with limited external validity. (Aziz & Rahim, 2025; Al-Otaibi, 2026). Third, methodological gap: only a few. Normal dynamic panel GMM models applied of full-fledged Islamic banks functioning in Pakistan. Elsewhere in this study program are infeasible econometrically to an individual Islamic-bank. subsample, that it needs a methodologically adapted comparative procedure developed in Section 3.

1.4 Research Objectives

This research paper has five objectives: (1) to determine the relationship between CSR disclosure and internal control: (2) to determine whether CSR disclosure predicts internal control: effectiveness Pakistani banks; (2) to examine whether the internal control effectiveness predicts. bank financial performance; (3) to determine whether internal control effectiveness is a mediating factor between CSR and performance; financial-performance relationship in banking; (4) to examine whether type of bank (Islamic or not) matters. conventional) dampens the two legs of this chain and the indirect effect that follows; and (5) to exploratively investigate whether a special Shariah Governance Index forecasts internal control. efficacy in Islamic banks in particular, outside of the traditional CSR disclosure.

1.5 Significance of the Study

This study extends this research program's cumulative evidence into a systemically important sector that was previously left out on specified methodological reasons, and one of the initial researches - as part of the larger body of literature charted in the companion systematic review of this program - to test. Shariah governance as a supplementary and not descriptive phenomenon within the. CSR–internal-control–performance chain. To the sector-level, the findings provide value to SBP and bank boards. information to inform internal-control supervisory practices and, in order to do so, specific and bank-type-specific evidence. in the case of Islamic banks, in particular, the evidence on whether further investment in Shariah-governance. infrastructure demonstrates quantifiable control and performance payoffs out of the box. governance mechanisms.

2. Literature Review and Hypotheses Development

2.1 Theoretical Framework

This paper unites the stakeholder, agency, and resource-based theorizing applied in this paper. Shariah governance theory on which research program (Ashraf and Khattak, 2026a, 2026b) is based. the Maqasid al-Shariah (purposes of Islamic law) principle of accountability (hisbah) and trusteeship (amanah) (Iqbal & Saeed, 2022; Aziz & Rahim, 2025). In agency theory, the agency is the. Shariah Supervisory Board is another level of monitoring that is similar to but not equal. constitutionally separate, the traditional audit committee, narrowing management options. to uncouple CSR disclosure and material control practice (Al-Otaibi, 2026). Under the Maqasid-al-Shariah account, the religiously based Islamic banks accountability notion. approaches CSR and internal control as manifestations of the same basic trusteeship duty. to depositors, shareholders and the community at large (ummah), foretelling a closer, more. CSR and internal control activity do not have internal consistent coupling compared to the arms-length, more of a compliance-driven coupling of more traditional banks (Iqbal & Saeed, 2022).

2.2 CSR and Internal Control Effectiveness in Banking

In line with non-financial-sector antecedent findings of this research program (Ashraf et al., This is supported by 2026) and the evidence on general banking-governance (Hussain et al., 2020; Khattak and Rehman, 2022), CSR disclosure is anticipated to have a positive anticipation of internal control effectiveness disclosure amongst. Pakistani banks, being CSR-oriented banks are supposed to formalize the risk-assessment, infrastructure required to support the monitoring and reporting of any commitments to SBP and other stakeholders. Accordingly:

H1: There is a significant positive relationship between CSR disclosure and internal control effectiveness among. Pakistani banks.

2.3 Internal Control Effectiveness and Bank Financial Performance

The expected bank financial performance predictors are the internal control effectiveness would be positive. less credit loss, better-regulatory-capital efficiency, and less operational-risk incidence. (Ashraf & Khattak, 2026a). Accordingly:

H2: Financial performance of among is strongly positively influenced by internal control effectiveness. Pakistani banks.

2.4 Mediation

H1 + H2 + non-financial-sector mediation = Hypothesis: Combining H1 and H2, and in line with the non-financial-sector mediation of this research program. evidence (Ashraf & Khattak, 2026a):

H3: A relationship exists between CSR disclosure and financial mediated by internal control effectiveness. performance of Pakistani banks.

Bank Type as a Moderator: CSR–Internal-Control-Effectiveness Relationship

2.5 Bank Type as a Moderator: CSR–Internal-Control-Effectiveness Relationship

This dual system governance structure of Islamic banks, consisting of a conventional board and audit committee, and a. Internal Shariah audit function by Shariah Supervisory Board - offers an extra. institutional channel whereby commitments of CSR are tracked and incorporated into the control. practice (Al-Otaibi, 2026). This is under the Maqasid-al-Shariah account which is developed in Section 2.1. dual architecture will generate a more close tie up between CSR disclosure and internal. greater control effectiveness in Islamic banks when compared to conventional ones, whose governance. this extra layer of accountability is missing in architecture. Accordingly:

H4: There is a moderating effect of bank type in the relation between CSR disclosure and internal control. Effectiveness, in the sense that, the relationship is stronger with Islamic banks compared to conventional banks.

2.6 Bank Type as a Moderator: Internal-Control-Effectiveness–Financial-Performance Relationship

The asset-backed and profit-and-loss-sharing financing model that is used by Islamic banks is more sensitive in structure. to underlying credit and quality of operations as compared to traditional lending on basis of debts (Aziz and). Rahim, 2025) meaning that the increase in the effectiveness of internal controls can be reflected in. A relatively greater financial-performance returns to Islamic banks due to better risk 7 adjusted asset selection. Accordingly:

H5: The relationship between internal control effectiveness and financial is bank type moderated. performance, in the sense that the relationship is more robust between Islamic banks as compared to conventional banks.

2.7 Moderated Mediation: Indirect CSRperformance Effect in Bank Type.

Using a combination of H3-H5, an indirect effect of CSR disclosure on financial performance via. It is proposed that internal control effectiveness will be conditional on the type of bank, and will be significantly lower. is stronger in the case of Islamic banks. Accordingly:

H6: CSR disclosure has an indirect role on financial performance via internal control. Islamic banks have much greater effectiveness than conventional ones.

2.8Internal Control Effectiveness and Shariah Governance (Exploratory)

In addition to the above kinds of bank-type moderation hypotheses, this research paper exploratively analyzes whether a. specific Shariah Governance Index (SGI) - representing SSB independence, frequency of meeting, and internal Shariah audit activity - forecasts internal control effectiveness of Islamic banks. particularly, in addition to traditional CSR reporting. A positive result would indicate. The Shariah governance is a complementary control mechanism on its own, as opposed to. completely subsumed in general CSR disclosure. Accordingly:

H7 (exploratory): Shariah Governance Index positively affects internal significantly. the effectiveness of control within the Islamic banks, controlling CSR disclosure.

2.9 Conceptual framework

The conceptual model defines the disclosure of CSR as predicting the effectiveness of internal control (H1). financial performance as predicting CSR internal control effectiveness (H2) and mediating the CSR moderating the CSR CSR internal control effectiveness (H3). financial-performance relationship (H3), bank type as moderating both legs of this chain (H4, H5) and the indirect effect (H6) resulting, and, in the Islamic-bank subsample alone, the Shariah. Additional predictor of internal control effectiveness (H7): Governance Index.

3. Research Methodology

3.1 Research Design

This research paper takes the form of an archival panel design, which is in line with the companion firm-size boundary condition study of this research program, but in this case, the study is restricted to the Pakistani banking industry in particular. The main modification in methodology, which is explained in

Section 3.5, is necessary as the number of full-fledged Islamic banks with operations in Pakistan is too small to run independent system GMM. estimation of that subgroup.

3.2 Sample and Data Sources

The sample is based on 28 banks in Pakistan working in 2015-2024: 22 conventional banks and. 6 full-fledged Islamic banks (Islamic banking windows of traditional banks are not counted as such). have a clean institutional comparison). There was sourcing of financial-statement and prudential data. based on the Financial Soundness Indicators of SBP and the annual reports audited by banks; CSR, internal. content analysis of hand-collected data on control, and Shariah-governance disclosure, the same annual reports and, where such are available, separate Shariah-compliance or CSR reports. After bank-years dropped out with missing data give the ultimate unbalanced panel of 246 bank-years. observations 194 conventional bank years and 52 Islamic bank years.

3.3 Variable Measurement

3.3.1 CSR Disclosure Index (CSRD)

An index of corporate social responsibility disclosure (CSRD). A 28-item checklist list of CSR disclosure based on the non-financial-sector of this research program. Banks SBP Corporate Social Responsibility guidelines on CSRD instrument, crosses the same. seven CSR dimensions applied in other parts of this program, rated as the proportion of applicable. items disclosed (0 to 1).

3.3.2 Internal Control Effectiveness Index (ICE)

The internal control effectiveness disclosure checklist is a 20 item checklist that will be developed based on the SBP. The COSO (2013) framework and guidelines on Internal Controls (2004, as later revised), addressing the identical five COSO elements applied in the rest of this program, rated as the percentage of relevant items reported (0 to 1).

3.3.3 Shariah Governance Index (SGI, Islamic Banks Only)

In the case of the 6 Islamic banks, an additional 10-item Shariah Governance Index was created. In accordance with the Shariah Governance Framework (2018) of SBP, SSB independence is captured, SSB. frequency of meetings, presence of internal Shariah audit function, Shariah compliance department. resourcing, and Shariah non-compliance risk disclosure, were the proportion of applicable, scored. items disclosed (0 to 1).Financial Performance

Return on assets (ROA in percentage points) is the main dependent variable. computed as net income/ total assets. Net interest margin (NIM) and the non-performing. Robustness-check measurements of a performance measure (NPL) are the loan ratio. Section 4.8.

3.3.4 Bank Type and Control Variables

BANKTYPE is a dummy variable of 1 that represents full-fledged Islamic and 0 that represents conventional. banks. Control variables are the capital adequacy ratio (CAR, percent), size of bank (natural logarithm). of total assets), age of the bank (years since incorporation or conversion to Islamic-banking-license), board independence (percentage of independent directors), and audit quality (Big Four auditor dummy).

3.4 Model Specification

The basic dynamic panel form of the equation of financial-performance is as follows: $ROA_{it} = \alpha + \beta_1 ROA_{i,t-1} + \beta_2 CSRD_{it} + \beta_3 ICE_{it} + \beta_4 BANKTYPE_i + \beta_5 (CSRD \times BANKTYPE)_{it} + \beta_6 (ICE \times BANKTYPE)_{it}$

+ β7 CAR_it + β8 SIZE_it + β9 BOARDIND_it + β10 AUDITQ_it + λt + εit A similar model at the first stage, regresses ICEit on CSRDit, BANKTYPEi, the interaction thereof. and the same controls to determine the CSR- internal- control- effectiveness path and its moderation. by bank type.

3.5 Estimation Technique

The full-sample model (with theBANKTYPE interaction terms) is modelled as: two-step system GMM, using Windmeijer-corrected standard errors, in line with the companion. This research program firm-size study (Arellano and Bond, 1995; Blundell and Bond, 1998), where the number of cross-sectional units (28 banks) exceeded the number of the instruments count (counted below). Roodman's (2009) guidance. But since the Islamic-bank subsample has 6 cross sections units, which are not enough to perform system GMM estimation, the subsample system estimation cannot be done econometrically feasible. that group - the number of instruments needed to obtain a valid GMM specification would necessarily outnumber or come too near the number of groups, with danger of extreme proliferation of instruments and unreliable Hansen J tests (Roodman, 2009). The coefficients of the banks type are hence. calculated as two-way (bank- and year-) fixed-effects panel regression with DriscollKraay standard errors, which are resistant to cross-sectional dependence and heteroskedasticity in. individual panels with few cross-sectional units (Driscoll & Kraay, 1998), used alone. to the conventional-bank and Islamic-bank subsamples. This is a two-fold procedure - system GMM of. the mixed-effects model, fixed-effects model (used to compare subsamples) with Driscoll-Kraay errors. -- is employed all through Section 4.

3.6 Moderated-Mediation and Exploratory Shariah-Governance Test

H6 is also tested by calculating the indirect effect of CSRD on ROA through ICE in each bank-type. subsample (the product of the CSRD → ICE and ICE → ROA fixed-effects coefficients), with standard errors were obtained through a bank-clustered bootstrap of 2,000 replications, and a test of the between-group difference, where the Hayes (2015) moderated-mediation procedure was modified in order to fit in the fixed-effects. panel setting. This is because H7 is tested with a fixed-effects regression of ICE on SGI and CSRD. Islamic-bank subsample only.

Empirical Results

3.7 Descriptive Statistics

Table 1 displays the descriptive statistics of the entire banking sample as well as for the Islamic and the non-Islamic sample. conventional banks. Mean CSR disclosure, internal control are more common in Islamic banks. greater effectivity, ROA, and NIM, and significantly lower non-performing loan ratio, which is in line with the growing asset-collateraled, risk-sharing nature of Islamic financing lowering credit-quality decline. relative to conventional lending.

Table 1. Descriptive Statistics: Full Sample, Islamic Banks, and Conventional Banks

Variable	Full Sample Mean (SD)	Islamic Banks Mean (SD)	Conventional Banks Mean (SD)
CSR Disclosure Index (CSRD)	0.487 (0.171)	0.542 (0.158)	0.471 (0.174)
Internal Control Effectiveness (ICE)	0.512 (0.163)	0.578 (0.149)	0.494 (0.166)
Shariah Governance Index (SGI)	n/a	0.681 (0.142)	n/a
Return on Assets (ROA, %)	1.24 (0.87)	1.41 (0.82)	1.19 (0.88)
Net Interest Margin (NIM, %)	4.52 (1.38)	4.79 (1.26)	4.45 (1.41)
Non-Performing Loan Ratio (NPL, %)	8.24 (4.12)	6.13 (3.48)	8.81 (4.19)
Capital Adequacy Ratio (CAR, %)	15.8 (3.2)	16.7 (3.0)	15.5 (3.3)
Bank Size (In Total Assets)	19.8 (1.2)	19.1 (1.0)	20.0 (1.2)
Bank Age (years)	32.6 (24.1)	14.2 (6.8)	38.5 (22.3)
Board Independence (BOARDIND)	0.42 (0.13)	0.44 (0.12)	0.41 (0.13)

Note. N = 246 bank-years (28 banks); Islamic banks n = 52 bank-years (6 banks); conventional banks n = 194 bank-years (22 banks). SGI applies only to Islamic banks.

3.8 Correlation Matrix

Table 2. Pairwise Correlation Matrix (Full Sample, N = 246)

	CSRD	ICE	ROA	CAR	SIZE
CSRD	1.000				
ICE	0.487	1.000			
ROA	0.341	0.398	1.000		
CAR	0.212	0.264	0.318	1.000	
SIZE	0.298	0.276	0.187	0.096	1.000

Note. All correlations below 0.55, indicating no severe multicollinearity concern; formally confirmed via VIF in Table 3 (mean VIF = 1.38, all values below 3.0, untabulated for brevity).

3.9 Pooled System GMM Results with Bank-Type Interaction

Table 3 shows two-step system GMM estimations of the pooled banking sample, including BANKTYPE interaction terms. The disclosure of CSR and the effectiveness of internal controls have a positive relationship. test ROA in the pooled sample, and emulate H1-H2 in banking. Both interaction terms (CSRD × BANKTYPE, ICE × BANKTYPE) are positive and have a value of significance of significance. pretentious preliminary pooled-sample support of H4 and H5. Model validity is supported by diagnostic tests: AR(2) fails. to reject the null of no second-order serial correlation (p =.271) and the Hansen J test does not. reject instrument validity (p = .298), and the number of instruments (24) is lower than the number of banks. (28).

Table 3. System GMM Results — Financial Performance Equation (DV: ROA, %), Pooled Banking Sample with Bank-Type Interaction

Variable	Coefficient	Std. Error	p-value
L.ROA	0.341	0.072	0.000
CSRD	0.478	0.229	0.037
ICE	0.512	0.248	0.039
BANKTYPE (Islamic = 1)	0.212	0.098	0.031
CSRD × BANKTYPE	0.298	0.121	0.014
ICE × BANKTYPE	0.341	0.134	0.011
CAR	0.092	0.038	0.015
SIZE	0.184	0.079	0.020
BOARDIND	0.421	0.203	0.038
Constant	-2.140	1.020	0.036

Note. N = 246; Banks = 28; Instruments = 24; AR(1) p = .009; AR(2) p = .271; Hansen J p = .298. Two-step system GMM with Windmeijer-corrected standard errors.

3.10 First-Stage GMM: CSR Disclosure and Internal Control Effectiveness

Table 4. System GMM Results — Internal Control Effectiveness Equation (DV: ICE), Pooled Sample

Variable	Coefficient	Std. Error	p-value
CSRD	0.398	0.087	0.000
BANKTYPE	0.089	0.041	0.030
CSRD × BANKTYPE	0.187	0.072	0.009
Controls	Included	—	—

Note. Supports H1 (CSRD → ICE, p < .001) and provides pooled-sample support for H4 (positive, significant interaction term).

3.11 Fixed-Effects Subsample Comparison

Since the six-bank Islamic subsample is not supportive of the independent system GMM estimation (Section. Table 5 shows the two-way fixed-effects estimates, using Driscoll-Kraay standard errors of each. subsample. Consistent with the pooled interaction results, both the CSRD and ICE coefficients are substantially larger among Islamic banks (CSRD: β = 0.891, p < .01; ICE: β = 0.968, p < .01) than conventional banks (CSRD: β = 0.487, $p < .05$; ICE: β = 0.541, $p < .05$), corroborating H4 and H5 by means of an independent estimation method

Table 5. Fixed-Effects Results with Driscoll-Kraay SEs — Financial Performance Equation (DV: ROA, %) by Bank Type

Variable	Islamic Banks β (SE)	Conventional Banks β (SE)
CSRD	0.891 (0.312)**	0.487 (0.198)*
ICE	0.968 (0.334)**	0.541 (0.221)*
CAR	0.104 (0.048)*	0.088 (0.041)*
SIZE	0.201 (0.096)*	0.176 (0.084)*
BOARDIND	0.398 (0.187)*	0.412 (0.198)*
Bank & Year FE	Included	Included
N (bank-years)	52	194
Banks	6	22
R^2 (within)	0.612	0.487

*Note. *p < .10, **p < .05. Two-way fixed-effects with Driscoll-Kraay standard errors, robust to cross-sectional dependence in small-N panels (Driscoll & Kraay, 1998).*

3.12 First-Stage Fixed-Effects: CSR and Internal Control Effectiveness by Bank Type

Table 6. Fixed-Effects Results — Internal Control Effectiveness Equation (DV: ICE) by Bank Type

Sample	CSRD Coefficient	Std. Error	p-value	N (bank-years)	Banks
Islamic banks	0.512	0.142	0.002	52	6
Conventional banks	0.361	0.098	0.000	194	22

3.13 Moderated-Mediation Test

The moderated-mediation test that is at the heart of H6 is reported in Table 7. The indirect impact of CSR disclosure. on ROA by the effectiveness of the internal control is about a two-and-a-half times larger in the case of Islamic banks (0.4956) than conventional banks (0.1953), and this difference (0.3003) is statistically significant ($z = 2.115$, $p = .035$) 2,000-replication bootstrap by bank-clustering. resampling, confirming H6.

Table 7. Moderated-Mediation Test: Indirect Effect of CSRD on ROA via ICE, by Bank Type

Group	Indirect Effect (a1 × b1)	Bootstrap SE	95% CI
Islamic banks	0.4956	0.1587	[0.1846, 0.8066]
Conventional banks	0.1953	0.0724	[0.0534, 0.3372]
Difference (Islamic − Conventional)	0.3003	0.1420	z = 2.115, p = .035

3.14 Exploratory Test: Shariah Governance and Internal Control Effectiveness

Table 8 reports the exploratory Islamic-bank-only fixed-effects regression of ICE on the Shariah Governance Index (SGI) adjusted by CSRD. There is a substantial positive response of SGI on ICE (β). (= -.623, p < .05) when CSRD is controlled, as well as H7 and the inference that Shariah governing infrastructure - SSB independence, meeting frequency, and internal Shariah audit, have a positive influence. activity - plays a role in effectiveness of internal controls as a complementary mechanism that is separate. based on the general CSR disclosure, in line with the Maqasid-al-Shariah account elaborated in. Section 2.1.

Table 8. Fixed-Effects Results — Shariah Governance Index and Internal Control Effectiveness (Islamic Banks Only, N = 52)

Variable	Coefficient	Std. Error	p-value
SGI	0.623	0.187	0.004
CSRD	0.298	0.134	0.032
Bank & Year FE	Included	—	—
R^2 (within)	0.658	—	—

3.15 Robustness Checks

Table 9 re-estimates the pooled system GMM model (Table 3) by using NIM and the (reverse-coded) perform different performance measures, such as inverse NPL ratio. The direction and pattern of significance of the CSRD, ICE and interaction-term coefficients are maintained between the two alternative measures, that justifies the strength of the support to the option of financial performance proxy.5.

Table 9. Robustness Checks: Alternative Performance Measures (Pooled Sample)

Variable	DV: NIM (%) β (SE)	DV: Inverse NPL β (SE)
CSRD	0.312 (0.148)*	0.284 (0.132)*
ICE	0.356 (0.161)*	0.319 (0.144)*
CSRD × BANKTYPE	0.198 (0.089)*	0.176 (0.081)*
Variable	**DV: NIM (%) β (SE)**	**DV: Inverse NPL β (SE)**
ICE × BANKTYPE	0.221 (0.096)*	0.203 (0.092)*
Controls	Included	Included
N (bank-years)	246	246

3.16 Summary of Hypothesis Testing

Table 10. Summary of Hypothesis Testing Results

Hypothesis	Statement	Result
H1	CSR disclosure → Internal control effectiveness (positive)	Supported
H2	Internal control effectiveness → Financial performance (positive)	Supported
H3	Internal control effectiveness mediates CSR → Financial performance	Supported
H4	Bank type moderates CSR → Internal control effectiveness (stronger for Islamic banks)	Supported
H5	Bank type moderates Internal control effectiveness → Financial performance (stronger for Islamic banks)	Supported
H6	Indirect CSR → Financial performance effect is stronger for Islamic banks (moderated mediation)	Supported
H7 (exploratory)	Shariah Governance Index → Internal control effectiveness (Islamic banks), controlling for CSRD	Supported

4. Discussion

This study extends this research program's CSR–internal-control–financial-performance chain, that had been in place before among non-financial PSX-listed firms (Ashraf and Khattak, 2026a, 2026b; In a companion working paper, Ashraf et al., 2026) tested the existence of boundary conditions by firm-size, and found these two studies. into the banking sector of Pakistan - a sector specifically exempt in that earlier work on stated methodological grounds. The pooled system GMM results (Table 3) confirm that the core chain duplicates in the banking sector: CSR disclosure has a positive prediction in internal control effectiveness and. financial performance is positively predicted by internal control effectiveness, which fills the gap in the sector. identified in Section 1.3. The more recent contribution is in terms of bank type. The pooled interaction model as well as the already fixed-effects subsample models estimated independently are approaching the same trend: the CSR–internal-control-effectiveness and internal-control-effectiveness–financial-performance relationships between Islamic banks and conventional banks are significantly stronger than between conventional banks. indirect CSR-to-performance effect is about two-and-a-half times greater with Islamic. banks. This trend is similar to the Maqasid-al-Shariah account that was constructed in Section 2.1: The dual nature of Islamic banks, in terms of governance with a conventional board and an. independent Shariah Supervisory Board and internal Shariah audit function - seems to operate. as a complementary, not redundant, accountability layer, increasing the binding between CSR commitment and control substance relative to conventional banks' single-layer governance structure. This interpretation is supported by the exploratory finding of Shariah Governance Index (H7, Table 8): SGI forecasts the effectiveness of internal controls of the Islamic banks, despite the control of. traditional CSR reporting, which suggests that something is taken in Shariah-governance activity. unlike, and complementary to, general CSR commitment - a result that has direct applicability to this. The larger concern of the research program with Islamic finance and Maqasid-al- Shariah -based governance. frameworks, and one which expands the Research Priority 6 of the companion systematic review (Islamic). A gap into which a stated gap is converted into a first empirical test is called corporate governance integration). This research is also methodologically illustrative of a practical solution to a perennial limitation in. Empirical study of Islamic-finance: the limited number of full-fledged Islamic banks in most. The national markets such as Pakistan do not allow the estimation of subsample systems GMM reliably. The overlaps of the pooled GMM interaction model and the separately estimated subsample models of the fixed effects here indicates that at least in terms of directional and relative-magnitude the pooled GMM interaction model and the separately estimated fixed effects subsample model coincide. conclusions made in this paper, the fixed-effects-with-Driscoll-Kraay model offers a. plausible alternative in infeasible GMM, a strategy also adopted by other small-N Islamic-banking. resources that may be of use in studies.

5. Theoretical and Practical Implications

5.1 Theoretical Implications

This research has three contributions to theory. First, it uses the stakeholder, and agency-theoretic framing of the research program to a field where the dual-layer governance is structurally different. architecture, displays the inner CSR- internal- control- performance chain duplicates but is not. homogeneous over governance architectures. Second, it operationalizes Maqasid-al-Shariah theorizing in a testable empirical forecast - the religiously-based dual accountability. enriches and not simply replicates traditional means of governance - and discovers. evidence towards such a prediction. Third, it shows that the Shariah government and the overall CSR. disclosure are empirically differentiable constructs that have independent explanatory power of. effectiveness of internal control, which tells the future research of Islamic-finance governance in poverty-stricken areas. specify these constructs.

5.2 Practical and Regulatory Implications

In the case of SBP, the conclusion is that Islamic banks exhibit a better CSR-internal-control-performance chain. indicates that the Shariah Governance Framework (2018) is working as planned - as a. formal, as opposed to ceremonial, accountability mechanism -- and can guide subsequent. is the expansion of the Islamic banking sector in Pakistan that is supported by regulations. In the case of traditional bank boards, the relatively less strong (however, positive and significant) chain offers possible value in. evaluating whether the aspects of the dual-governance model of the Islamic banks - especially independent specialized oversight committees that have a specific audit role - could be adjusted in a non-religious way to enhance the own CSR-internal-control of conventional banks. coupling. To the boards of Islamic banks, the SGI result recommends the investment to go on with SSB. independence and internal Shariah audit capacity have quantifiable internal-control benefits. different to general CSR investment.

6. Limitations and Future Research Directions

These findings have several limitations. To begin with, and most particularly, the six-bank Islamic. subsample, although it is a near representation of the entire population of full-fledged Islamic banks in. The sample period of Pakistan is small both in absolute terms and the fixed-effects estimates of. this group, which is supported by the independent pooled-interaction GMM specification, ought to. be understood with proper care with respect to generalizability to more than this particular bank. population. Second, like in the companion firm-size study, the disclosure-based CSRD, ICE, and The SGI indices reflect reported, as opposed to observed governance activity, and disclosure. completeness can also be systematic in its variance between the Islamic and conventional banks that are independent. of underlying substance. Third, this research fails to differentiate full-fledged Islamic banks. and conventional bank Islamic banking windows, a differentiation that future studies. with adequate window-level disclosure data might productively attract. Fourth, the ten-year panel, although. sufficient to test the fixed-effects and pooled GMM specifications are used, is not sufficient to test. whether this Islamic-conventional divide identified here has been narrowed or expanded as that of Pakistan. Islamic banking industry has come of age. In further studies, this comparison can be applied to the region. other markets with higher Islamic bank populations and that are Muslim majority (Malaysia, Indonesia, Gulf). Cooperation Council states) in which complete system GMM subsample estimation would be. viable, and may look into the question of whether the SGI-internal-control-effectiveness relationship as determined. here is also entrusted to non-bank Islamic financial institutions like takaful (Islamic insurance). operators.

7. Conclusion

This paper brought the chain of CSR-internal-control-effectiveness-financial-performance used in this research program to the banking industry of Pakistan, which had hitherto been outside the non-financial-firm evidence base of the program on its methodological considerations. The study based its confirmation of the core mediation chain replicating within the banking sector on a combination of pooled system GMM with fixed-effects-with-Driscoll-Kraay estimation specific to the small Islamic-bank sample, and finds that the core mediation chain is much stronger among Islamic banks than. mainstream banks, where there is a special Shariah Governance Index which adds some supplementary, complementary explanatory power to internal control effectiveness among Islamic banks, in particular. These results seal an earlier-identified gap in the sector in this study, are the first empirical answer to the incorporation of Islamic governance in the study of CSR-internal-control itself that the companion systematic review of this study itself calls upon, and provide SBP and bank boards with sector and bank-type specific evidence to inform their governance expectations in Pakistan, where two banks coexist.

Declarations

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Conflict of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data Availability Statement

The hand-collected CSR, internal control, and Shariah-governance disclosure indices, together with the bank-panel dataset, are available from the corresponding author upon reasonable request.

Author Contributions

Muhammad Ashraf: sample construction, content analysis, econometric modeling, and original draft preparation. Amanullah Khattak: supervision, theoretical framing, and manuscript review. Khalid Rehman: methodology validation, robustness checks, and manuscript editing. All authors read and approved the final manuscript.

References

Al-Otaibi, F. (2026). CSR, internal control, and bank performance in Kuwait. International Journal of Islamic and Middle Eastern Finance and Management, 19(1), 44–63.

Arellano, M., & Bover, O. (1995). Another look at the instrumental variable estimation of error-components models. Journal of Econometrics, 68(1), 29–51.

Ashraf, M., & Khattak, A. (2026a). Corporate social responsibility and firm financial performance: The mediating role of internal control effectiveness under COSO and SOX frameworks — evidence from Pakistan. Journal of Management Science Research Review, 5(2), 313–332.

Ashraf, M., & Khattak, A. (2026b). Internal control effectiveness as a moderator in the relationship between corporate social responsibility and firms' financial performance: Evidence from Pakistan. Advance Journal of Econometrics and Finance, 4(2), 268–288.

Ashraf, M., Khattak, A., & Rehman, K. (2026). Impact of corporate social responsibility on internal control effectiveness: Evidence from Pakistan. Advance Journal of Econometrics and Finance, 4(2), 1–19.

Aziz, N., & Rahim, S. (2025). CSR and internal control quality in Malaysian Islamic banks.

Journal of Islamic Accounting and Business Research, 16(3), 455–474.
Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. Journal of Econometrics, 87(1), 115–143.
Committee of Sponsoring Organizations of the Treadway Commission [COSO]. (2013). Internal control — integrated framework: Executive summary. COSO.
Driscoll, J. C., & Kraay, A. C. (1998). Consistent covariance matrix estimation with spatially dependent panel data. Review of Economics and Statistics, 80(4), 549–560.
Hayes, A. F. (2015). An index and test of linear moderated mediation. Multivariate Behavioral Research, 50(1), 1–22.
Hussain, A., Yasin, N., & Zafar, S. (2020). Corporate governance code compliance and internal control disclosure quality in Pakistan. Journal of Accounting and Organizational Change, 16(4), 493–512.
Iqbal, S., & Saeed, M. (2022). Board oversight, anti-corruption practice, and internal control: A resource-based view of governance-oriented CSR. International Journal of Disclosure and Governance, 19(3), 289–307.
Khattak, A., & Rehman, K. (2022). Legal compliance orientation and internal audit maturity in Pakistani manufacturing and banking firms. Journal of Applied Accounting Research, 23(5), 1042–1061.
Roodman, D. (2009). A note on the theme of too many instruments. Oxford Bulletin of Economics and Statistics, 71(1), 135–158.
State Bank of Pakistan. (2018). Shariah governance framework for Islamic banking institutions. SBP Banking Policy & Regulations Department.
Windmeijer, F. (2005). A finite sample correction for the variance of linear efficient two-step GMM estimators. Journal of Econometrics, 126(1), 25–51.

Appendix A. Disclosure Checklists

CSR Disclosure Index (28 items across seven dimensions)

Adapted from this research program's non-financial-sector CSRD instrument and SBP's CSR guidelines for banks. Dimensions: economic (4 items), legal (4 items), ethical (4 items), philanthropic (4 items), environmental (4 items), stakeholder engagement (4 items), and governance (4 items), each scored as disclosed/not disclosed.

Internal Control Effectiveness Index (20 items across five COSO components) Adapted from SBP's Guidelines on Internal Controls and the COSO (2013) framework. Control environment (4 items), risk assessment (4 items), control activities (4 items), information and communication (4 items), and monitoring activities (4 items), each scored as disclosed/not disclosed.

Shariah Governance Index (10 items, Islamic banks only)

Adapted from SBP's Shariah Governance Framework (2018). Items include: SSB composition and independence disclosed; SSB meeting frequency disclosed; internal Shariah audit function disclosed; Shariah compliance department resourcing disclosed; Shariah non-compliance risk disclosure; Shariah pronouncement/fatwa disclosure process; annual Shariah compliance report published; SSB member qualification disclosure; product-level Shariah certification disclosed; and Shariah non-compliant income (if any) purification/charity disclosure.