

Ascendia: Journal of Economic and Business Advancement
Vol 2 No 1 September 2026, Hal 436-450
ISSN: 3110-8229 (Print) ISSN: 3110-6994 (Electronic)
Open Access: https://scriptaintelektual.com/ascendia/index

Challenges of Adapting Sharia Accounting to Changing Digital Business Models

Nurhidayah Rasak[1]
[1] Institut Agama Islam Negeri (IAIN) Bone, Indonesia
email: nurhidayahrasak@gmail.com[1]

Article Info :
Received:
22-08-2026
Revised:
17-09-2026
Accepted:
27-09-2026

Abstract

Digital business models have introduced accounting challenges for Islamic financial institutions by changing transaction structures, information processing, contractual execution, and reporting requirements. This study examines how digital transformation influences Sharia accounting practices, identifies principal adaptation barriers, evaluates blockchain and smart contracts, and formulates institutional responses. A systematic literature review was conducted using scholarly publications retrieved from Google Scholar, Garuda, Scopus, and ScienceDirect. The documented review selected seven articles for thematic content analysis, while a broader bibliography of 35 references provided additional conceptual and institutional context. Findings indicate that fintech platforms, digital banking, cloud computing, artificial intelligence, and blockchain require adjustments in transaction recognition, measurement, presentation, disclosure, and audit procedures. Key challenges concern professional competencies, regulatory and accounting-standard responsiveness, cybersecurity, infrastructure integration, and Sharia governance. Blockchain may strengthen traceability, while smart contracts may facilitate automated execution; neither technology independently establishes contractual validity or accounting compliance. Adaptation requires integrated professional training, clearer technical guidance, secure accounting systems, digital Sharia auditing, and coordination among regulators, educators, and industry participants. The study contributes a conceptual framework connecting business model characteristics with accounting and governance requirements. Its literature-based findings require empirical validation, particularly regarding implementation and the effectiveness of proposed strategies across Islamic financial institutions.

Keywords: *Accounting Information Systems, Digital Business Models, Islamic Fintech, Sharia Accounting, Smart Contracts.*

©2026 Authors.. This work is licensed under a Creative Commons Attribution-Non Commercial 4.0 International License.
(https://creativecommons.org/licenses/by-nc/4.0/)

INTRODUCTION

The expansion of digital business models has altered the operational architecture of financial institutions by changing how transactions are initiated, processed, recorded, and communicated across interconnected economic platforms. Platform-based financing, automated payment systems, artificial intelligence, and digitally mediated contractual arrangements have introduced transaction characteristics that require greater responsiveness from accounting information systems. The development of Islamic financial technology has extended these changes into financial services structured around Sharia-compliant transactions, creating new opportunities for financial inclusion alongside regulatory and institutional challenges (Alshater et al., 2022). Digital innovation has also reshaped the operating models of Islamic and conventional banks, with differences in technological adoption, operational efficiency, and institutional stability becoming relevant considerations in financial management (Meero, 2025). These developments create accounting challenges because automated transaction processing must preserve the economic substance of contractual arrangements while maintaining reliable recognition, measurement, presentation, and disclosure procedures. Research examining digitalized accounting practices and Islamic fintech adoption identifies technological integration, organizational readiness, and regulatory support as interconnected factors influencing institutional adaptation (Alsmadi & Al-Omoush, 2025). The adaptation of Sharia accounting has consequently become a substantive concern because technological changes require adjustments in

accounting standards, professional capabilities, and institutional governance without compromising the principles underlying Islamic financial transactions (Chaniago et al., 2024).

Contemporary scholarship on digital Sharia accounting has developed through interconnected investigations of technological implementation, accounting treatment, financial reporting compliance, and the integration of Islamic ethical objectives. Studies addressing digital transformation in Islamic financial institutions have examined the operational and regulatory challenges associated with incorporating digital technologies into Sharia-compliant accounting systems (Eddy et al., 2025). Research on Islamic fintech accounting has extended this discussion toward the practical treatment of technology-mediated transactions, demonstrating how platform-based financial activities can create difficulties when existing accounting standards are applied to emerging business arrangements (Mukhlisin & Farezi, 2025). A related body of scholarship examines the presentation of financial information and compliance with accounting requirements, identifying variations in reporting practices among Islamic fintech platforms and the need for clearer regulatory alignment (Rifqiawan et al., 2025). Investigations of digital accounting information systems in Islamic microfinance have introduced Maqasid Sharia principles into assessments of technological implementation, broadening the evaluation of accounting systems beyond operational functionality (Wijayanti et al., 2025). Considered collectively, these studies establish that technological modernization, accounting treatment, regulatory compliance, and Islamic ethical objectives constitute interconnected dimensions of institutional adaptation, although they have generally been examined through distinct analytical approaches.

The available literature reveals an unresolved conceptual problem concerning the relationship between changes in digital business models and the corresponding adjustment of Sharia accounting practices. Research on accounting innovation has identified technological opportunities and implementation constraints, particularly those involving professional competencies, information security, and the complexity of Islamic accounting principles (Supriadi, 2023). Investigations of Sharia accounting standards have further highlighted the challenges of technological integration and standard harmonization, indicating that digital modernization cannot be evaluated independently of the regulatory framework governing financial reporting (Chaniago et al., 2024). More recent system-oriented scholarship has proposed integrating digital accounting technologies, Sharia governance, and ethical objectives within accounting information system models, extending attention toward the institutional design of Sharia-compliant technological applications (Syafaruddin et al., 2026). These contributions establish important foundations but do not fully explain how different characteristics of evolving digital business models generate particular accounting adaptation requirements across transaction recognition, measurement, presentation, disclosure, and institutional oversight. Evidence from Islamic fintech accounting practice illustrates this unresolved relationship through the difficulties of applying existing accounting standards to platform-based transactions and the resulting need for accounting guidance that accommodates their distinctive contractual characteristics (Mukhlisin & Farezi, 2025). The research gap therefore concerns the limited integration of business model transformation, transaction-specific accounting requirements, technological capabilities, professional readiness, and Sharia compliance within a unified analytical explanation of accounting adaptation.

The practical consequences of this gap extend beyond accounting-system efficiency because digital financial transactions require dependable records, transparent contractual information, and consistent application of Sharia accounting requirements. Inconsistent financial reporting can weaken accountability and comparability, particularly when technologically mediated transactions involve contractual classifications that are not adequately reflected in existing reporting arrangements. An examination of Islamic fintech financial reports identified differences in the application of Sharia financial reporting requirements, indicating that regulatory obligations and accounting presentation practices are not necessarily aligned across digital financial platforms (Rifqiawan et al., 2025). Institutional adaptation also depends on technological readiness and regulatory support because accounting digitalization may advance more rapidly than organizational capabilities and governance arrangements required for compliant implementation (Alsmadi & Al-Omoush, 2025). Digital accounting transformation introduces additional concerns involving information security, professional competencies, and the integration of Islamic ethical requirements into automated financial processes (Eddy et al., 2025). Without an integrated evaluation of these constraints, organizations may prioritize technological functionality while leaving unresolved questions concerning accounting accuracy,

contractual transparency, regulatory consistency, and responsibility for digitally generated financial information.

The present study is positioned at the intersection of digital business model innovation, Sharia accounting adaptation, and institutional compliance, with attention directed toward the relationships among technological change, accounting requirements, and governance capabilities. Existing reviews have mapped the development of Islamic fintech research across technological applications and financial service innovation, establishing a broad foundation for understanding the expansion of digitally mediated Islamic finance (Alshater et al., 2022). Comparative banking research has examined how fintech and artificial intelligence influence institutional business models and financial performance, but its primary analytical emphasis differs from the accounting treatment of transactions generated through these models (Meero, 2025). Research integrating Maqasid Sharia principles into digital accounting information systems contributes an ethical evaluation dimension, although its institutional focus does not independently resolve the accounting challenges associated with diverse digital business arrangements (Wijayanti et al., 2025). Digital accounting system development has also advanced toward designs incorporating Sharia governance and technological functionality, providing a foundation for examining implementation requirements across Islamic financial institutions (Syafaruddin et al., 2026). The proposed novelty lies in connecting these previously differentiated perspectives through an analytical framework that traces how changing transaction structures create requirements for adjustments in accounting recognition, measurement, reporting, professional competencies, information security, and regulatory supervision. Particular attention is directed toward blockchain and smart contracts as technological arrangements that may support transaction traceability and automation while introducing questions concerning contractual validity, recognition timing, accounting accountability, and the preservation of Sharia principles.

This study aims to analyze the challenges of adapting Sharia accounting to changing digital business models by examining the relationships among technological innovation, accounting practices, institutional readiness, and Sharia compliance. The first objective is to identify the characteristics of digital business model transformation that create new requirements for recognizing, measuring, recording, presenting, and disclosing Sharia-compliant financial transactions. The second objective is to examine accounting and reporting challenges associated with Islamic fintech activities, particularly the consistency of contractual treatment, financial disclosure, and regulatory compliance identified in existing research (Rifqiawan et al., 2025). The third objective is to evaluate constraints involving accounting standards, professional competencies, technological infrastructure, cybersecurity, and regulatory harmonization that influence the capacity of institutions to accommodate digital business innovations (Chaniago et al., 2024). The fourth objective is to assess the opportunities and limitations of blockchain, smart contracts, and digital accounting systems while formulating adaptation priorities that preserve transparency, accountability, and Islamic accounting principles (Supriadi, 2023). The intended contribution is an integrated analytical explanation of Sharia accounting adaptation that distinguishes technology-related operational challenges from accounting-specific and institutional constraints, providing a conceptual foundation for more responsive accounting practices and governance arrangements in digitally evolving Islamic financial activities.

RESEARCH METHODS

This study employed a Systematic Literature Review (SLR) to identify, evaluate, and synthesize published research concerning the adaptation of Sharia accounting to changing digital business models, with scholarly articles serving as the primary units of analysis. The review addressed five research questions concerning the drivers of accounting adaptation, the implications of digital business model changes, principal implementation challenges, opportunities and limitations associated with blockchain and smart contracts, and appropriate adaptation strategies, reflecting issues associated with evolving digital financial business models (Meero, 2025). Literature searches were conducted through Google Scholar, Garuda, Scopus, and ScienceDirect using the terms “Islamic accounting,” “digital business model,” “digital transformation,” “financial technology,” “blockchain,” “artificial intelligence,” “cloud accounting,” “smart contract,” and “Sharia accounting.” These search terms represented the intersection of financial technology, digital innovation, and Islamic financial practices examined in previous scholarly reviews (Alshater et al., 2022). Eligible publications were restricted to the 2021–2025 period and required substantive relevance to Sharia accounting or Islamic finance,

discussion of digital transformation or changing business models, full-text accessibility, and publication in a credible scholarly journal or conference proceeding. The eligibility framework emphasized the adjustment of accounting practices to technological developments, consistent with existing scholarship examining innovation and transformation in Sharia accounting during digitalization (Supriadi, 2023).

The literature selection procedure comprised identification, eligibility screening, quality assessment, and thematic synthesis, resulting in seven articles that satisfied the documented selection process. Each potentially eligible publication was assessed against four criteria: publication within 2021–2025, examination of digital business model changes affecting Sharia accounting, identification of adaptation challenges, and relevance to the research objectives. Assessment responses were classified as Y (yes) when the criterion was satisfied and T (no) when it was not satisfied, without assigning additional numerical scores or applying undocumented assessment procedures. Content analysis was conducted on the seven selected articles by identifying recurring themes, organizing related findings, comparing evidence across publications, and synthesizing the results according to the five research questions, with attention to accounting treatment issues associated with Islamic fintech transactions (Mukhlisin & Farezi, 2025). The thematic interpretation distinguished accounting standards and reporting requirements from technological infrastructure, professional capabilities, and institutional governance, reflecting challenges identified in research concerning the digital transformation of Sharia accounting (Chaniago et al., 2024). The synthesis also considered the relationship between digital accounting information systems and Sharia-oriented institutional objectives, providing an analytical basis for evaluating accounting adaptation without separating technological functionality from Islamic financial principles (Wijayanti et al., 2025).

RESULTS AND DISCUSSION

Literature Selection, Quality Assessment, and Characteristics of Reviewed Studies

The bibliographic corpus comprises 35 references addressing Sharia accounting, Islamic financial technology, digital business models, accounting information systems, and institutional governance. These references consist of 27 scholarly journal articles, three institutional publications, and five books that provide contextual and conceptual support for the analysis. The journal articles were published between 2022 and 2026, reflecting recent scholarly attention to the interaction between technological innovation and Islamic financial practices. Research on Islamic fintech has examined the development of digital financial services and their implications for financial institutions, providing a relevant foundation for investigating accounting adaptation (Alshater et al., 2022). The corpus also incorporates studies concerning digital accounting systems, regulatory alignment, and the treatment of transactions generated through emerging financial technologies. Institutional publications provide additional regulatory and financial-sector context, particularly regarding the development of Islamic banking and digital financial infrastructure in Indonesia (Otoritas Jasa Keuangan, 2023). The distinction between scholarly articles and supporting publications is necessary because the number of bibliographic references does not independently establish the number of studies satisfying systematic review eligibility requirements.

The initial review documented 20 identified articles, of which 14 remained after publication-year screening and seven satisfied the subsequent selection requirements. Those figures were generated under the original 2021–2025 eligibility period and cannot be directly transferred to a review covering 2022–2026. The bibliography contains 35 references, creating a broader source inventory that requires eligibility screening and quality assessment before the final number of included studies can be established. Recent scholarship examining technological transformation in Sharia accounting standards reinforces the relevance of incorporating publications covering contemporary developments in financial reporting and accounting systems (Chaniago et al., 2024). Table 1 presents the composition of the reference corpus, separating journal articles eligible by publication year from institutional reports and foundational books. This classification preserves the available bibliographic information without interpreting all 35 references as articles that have completed systematic screening.

Table 1. Stages of Literature Selection

Selection Stage or Source Classification	Number of Sources
References identified in the bibliography	35
Journal articles published between 2022 and 2026	27
Institutional publications used as contextual sources	3
Books used as conceptual and theoretical sources	5
Journal articles assessed in the original review	7
Journal articles requiring further eligibility and quality assessment	20
Final number of articles meeting all inclusion criteria	Not yet documented

Table 1 identifies 27 journal articles as the principal pool for assessment under the 2022–2026 publication period, while eight additional sources provide institutional and theoretical context. The journal articles comprise two publications from 2022, two from 2023, four from 2024, thirteen from 2025, and six from 2026, indicating that the greatest concentration of listed publications falls within the final two years of the review period. Institutional publications comprise Bank Indonesia's payment-system statistics and two Financial Services Authority publications addressing the development of Islamic finance and banking policy (Bank Indonesia, 2023). The five books address Islamic accounting principles, Islamic financial arrangements, and accounting information systems, supporting interpretation of the regulatory and technological issues identified in journal research. Recent developments in Islamic financial technology have broadened the scholarly discussion toward emerging institutional business models and their operational characteristics (Meero, 2025). The composition of the bibliography supports an expanded examination of technological and accounting developments, although the sources vary in research design, institutional setting, and analytical objectives. The bibliographic distribution should consequently be interpreted as a description of the available reference corpus rather than evidence of how frequently particular challenges occur across Islamic financial institutions.

Quality assessment was organized around four criteria retained from the original review, with the publication-year requirement defined as 2022–2026. The first criterion (QA1) examines publication-year eligibility, while QA2 evaluates whether the article addresses the effects of digital business model changes on Sharia accounting. The third criterion (QA3) concerns the identification of accounting adaptation challenges, and QA4 evaluates relevance to the research objectives. The original assessment records provide responses for seven articles, whereas equivalent documented evaluations are unavailable for the remaining 20 journal articles in the bibliography. Two articles in the original assessment received negative responses for QA2 despite being retained, indicating that the relationship between individual criterion results and final inclusion decisions requires clarification. Table 2 presents the available assessment information, distinguishing previously assessed articles from those requiring further examination under the 2022–2026 eligibility period.

Table 2. Quality Assessment Results

No.	Authors	Year	QA1	QA2	QA3	QA4	Result
1	Didi & Lidyah	2025	Y	Y	Y	Y	✓
2	Hammi & Nurlaila	2025	Y	Y	Y	Y	✓
3	Pratama et al.	2025	Y	Y	Y	Y	✓
4	Zulkifli & Akbar	2026	Y	T	Y	Y	✓
5	Yuwanda & Firdaus	2024	Y	T	Y	Y	✓
6	Amelia et al.	2024	Y	Y	Y	Y	✓
7	Rahmawati	2022	Y	Y	Y	Y	✓

Notes:

✓: Literature included in the review.

✗: Literature excluded from the review.

Table 2 presents the quality assessment results for seven articles selected for the literature synthesis concerning digital transformation and Sharia accounting adaptation. The selected publications span 2022–2026 and address technological innovation, accounting implementation, institutional readiness, and challenges associated with Sharia-compliant financial practices. Five articles satisfied all four assessment criteria, while two received negative responses under QA2 despite being retained in the original review. Research examining digital accounting information systems emphasizes the relationship between technological innovation and organizational readiness in implementing Sharia accounting practices (Didi & Lidyah, 2025). Studies addressing fundamental accounting concepts further identify the need to reconcile digital transaction mechanisms with recognition, measurement, and reporting requirements (Pratama et al., 2025). The assessment indicates differences in thematic relevance across the selected publications, requiring careful distinction between direct evidence of digital business transformation and broader discussions of accounting implementation. Retaining the two articles with negative QA2 assessments may provide contextual information, but their inclusion as primary synthesis evidence requires an explicit eligibility rationale.

The selected literature reflects several connected research orientations rather than a single methodological or institutional perspective. Studies concerning Sharia accounting implementation emphasize professional competency, institutional preparedness, and the challenges of applying Islamic accounting principles through digital technologies (Hammi & Nurlaila, 2025). Research on Islamic fintech examines emerging financial services and their implications for technological adaptation, regulatory compliance, and institutional development (Amelia et al., 2024). Other publications address accounting practices within business organizations, particularly the practical requirements for maintaining transparency and accountability under changing operational conditions (Yuwanda & Firdaus, 2024). These perspectives indicate that adaptation involves both accounting-specific requirements and broader institutional capabilities supporting digital operations. Their analytical contribution lies in identifying complementary dimensions of accounting transformation without assuming that every publication examines the same technological applications or organizational setting.

The thematic synthesis identifies accounting standards, technological infrastructure, professional competence, and Sharia compliance as recurring analytical dimensions within the selected literature. Accounting standards remain relevant because new forms of digital transactions may require clarification of contractual classification, recognition timing, measurement procedures, and financial disclosure. Research examining Sharia accounting in the digital era emphasizes the importance of maintaining Islamic accounting principles while incorporating technological developments into financial reporting activities (Rahmawati, 2022). Institutional implementation also depends on practitioners' capacity to understand digital accounting systems and the Sharia requirements governing financial transactions. Studies addressing technological transformation highlight potential difficulties involving system integration, professional preparedness, and the continued relevance of Islamic contractual principles (Didi & Lidyah, 2025). These dimensions are analytically interconnected because technological efficiency cannot independently establish the reliability or Sharia compliance of financial information. Their relationship provides a foundation for examining how changes in digital business models influence both operational accounting procedures and institutional accountability.

The literature selection provides an analytical foundation for addressing the five research questions concerning drivers, effects, challenges, technological opportunities, and adaptation strategies. The seven previously assessed articles constitute the documented review set, whereas the broader bibliography includes additional research and supporting publications that have not undergone the same recorded assessment procedure. Recent scholarship on digital accounting innovation identifies the need to reconcile technological developments with the normative and procedural characteristics of Sharia accounting (Supriadi, 2023). Evidence concerning Islamic fintech transactions also indicates the importance of examining accounting treatment and contractual characteristics rather than treating technological adoption as an independent indicator of reporting quality (Mukhlisin & Farezi, 2025). The selected studies support thematic interpretation of adaptation challenges, but the available screening records do not justify assigning numerical prevalence or effect sizes to individual challenges. Subsequent analysis therefore concentrates on conceptual relationships and documented accounting implications while distinguishing the selected review evidence from complementary literature.

.

Digital Business Model Transformation and Its Implications for Sharia Accounting Practices

Digital business model transformation has altered the operational structure of financial activities by changing how transactions are initiated, executed, recorded, and communicated among economic participants. Unlike conventional business arrangements that depend predominantly on physical interactions and sequential administrative procedures, digitally integrated models enable financial transactions to occur through interconnected platforms with increasingly automated processing mechanisms. These developments affect accounting systems because transaction information must be captured, classified, and reported within technological environments that accommodate multiple participants and contractual arrangements. The development of Islamic financial technology has expanded the application of digital platforms to Sharia-compliant financial services, introducing technological opportunities alongside institutional and regulatory challenges (Alshater et al., 2022). Research concerning digital accounting information systems identifies technological integration as a significant aspect of financial management transformation, particularly regarding information processing and organizational adaptation (Didi & Lidyah, 2025). For Sharia accounting, these developments create additional requirements because digital transaction processing must preserve the economic substance of contractual relationships and maintain consistency with Islamic financial principles. The principal implication is that accounting adaptation involves changes in transaction recognition, information architecture, reporting procedures, and institutional oversight rather than the replacement of manual bookkeeping with electronic applications alone.

The expansion of Islamic fintech, digital banking, electronic payments, and platform-based financing illustrates how digital business models modify the organization of financial transactions. These arrangements enable financial institutions to connect customers, funding providers, and service operators through technological interfaces that may reduce geographical constraints and accelerate transaction execution. Research on Islamic fintech development identifies digital innovation as a relevant opportunity for extending Sharia-compliant financial services while recognizing implementation and governance challenges (Amelia et al., 2024). Platform-based transactions also introduce accounting considerations involving the identification of contracting parties, the classification of financial arrangements, and the allocation of contractual rights and obligations. A case study examining Islamic fintech accounting addresses the treatment of transactions conducted through digital financing arrangements, illustrating the need to evaluate accounting requirements at the level of contractual substance (Mukhlisin & Farezi, 2025). These characteristics indicate that changing business models affect accounting practices not merely through transaction speed but also through the structure of the underlying financial relationships.

The implications for Sharia accounting become more apparent when digital transactions are examined through recognition, measurement, presentation, and disclosure requirements. Transaction recognition requires identification of the economic event and the contractual conditions that establish the relevant rights and obligations, regardless of whether execution occurs through a physical agreement or an electronic platform. Research addressing changes in fundamental Sharia accounting concepts has examined the challenges arising from technological developments and their implications for maintaining accounting principles in digital financial activities (Pratama et al., 2025). Measurement procedures must also remain consistent with the characteristics of Islamic contracts, particularly when transaction processing involves automated calculations, multiple payment stages, or digitally administered financing arrangements. Scholarship concerning Sharia accounting in the digital era emphasizes the continuing relevance of Islamic accounting principles despite changes in the technological mechanisms used to record and communicate financial information (Rahmawati, 2022). Presentation and disclosure requirements become more complex when financial information originates from integrated platforms containing different transaction types, contractual relationships, and operational responsibilities. Accounting adaptation consequently requires procedures that distinguish technological execution from the underlying financial substance, ensuring that automation does not obscure the information necessary for accurate reporting and Sharia compliance.

The development of cloud computing, artificial intelligence, and integrated accounting information systems has expanded the technological capabilities available for processing financial information. Cloud-based accounting applications can facilitate information accessibility and coordination among organizational units, while automated systems may reduce repetitive processing activities and support more timely financial reporting. Research examining digital transformation in

Islamic financial accounting information systems identifies technological development as an opportunity for operational improvement while recognizing institutional readiness and implementation challenges (Didi & Lidyah, 2025). Artificial intelligence introduces additional possibilities for automated transaction classification, data processing, and the identification of irregular accounting information, although these applications require appropriate verification and supervisory arrangements. Investigations of accounting digitalization and Islamic fintech adoption emphasize the relationship between technological implementation and organizational capabilities, indicating that digital accounting transformation involves institutional adjustments beyond the installation of software (Alsmadi & Al-Omoush, 2025). Table 3 presents an analytical mapping of digital business model characteristics and their corresponding implications for Sharia accounting adaptation.

Table 3. Digital Business Model Characteristics and Implications for Sharia Accounting Adaptation

Digital Business Model	Accounting Implications	Adaptation Requirements
Islamic fintech and platform financing	Contract recognition, transaction classification, and financial disclosure	Accounting treatment consistent with Sharia contractual arrangements
Digital banking and electronic payments	Electronic recording, transaction reconciliation, and financial reporting	Integrated accounting systems and transaction controls
Cloud-based accounting	Information accessibility, processing efficiency, and data integrity	Secure data management, access controls, and reliable reporting
Artificial intelligence	Automated transaction classification and financial data processing	Human verification, algorithmic oversight, and Sharia-compliant controls
Blockchain and smart contracts	Transaction traceability, automated execution, and digital audit records	Contract validation, auditable records, and appropriate recognition procedures
Digital Islamic microfinance	Financial transparency and Sharia-oriented institutional accountability	Integration of accounting information systems and Maqasid Sharia principles

Table 3 demonstrates that different digital business models generate distinct accounting requirements, although these requirements share common concerns involving information reliability, contractual transparency, and institutional accountability. Islamic fintech platforms create accounting challenges primarily through the characteristics of financing arrangements and the need to determine appropriate treatment for digitally mediated contractual transactions. Research examining accounting practices within Islamic fintech provides a relevant foundation for understanding how contractual classification and financial reporting must be considered when adapting accounting procedures to platform-based financing (Mukhlisin & Farezi, 2025). Digital banking and electronic payments present a related but distinguishable challenge because their operational structure emphasizes transaction processing, reconciliation, and the integration of financial information across technological systems. Studies investigating the transformation of banking business models indicate that financial institutions increasingly operate through digital technologies whose implications extend to organizational efficiency and the management of financial activities (Meero, 2025). Cloud-based accounting and artificial intelligence introduce further requirements concerning information security, automated classification, and the verification of digitally generated records. The comparative mapping indicates that effective adaptation requires differentiated accounting responses based on transaction characteristics rather than assuming that a single technological solution can address every reporting and compliance requirement.

Information transparency and accountability represent another significant dimension of Sharia accounting adaptation because financial reporting must remain verifiable despite increasing technological complexity. Blockchain technology offers the possibility of maintaining distributed

transaction records that support traceability and facilitate verification of recorded financial activities. The relevance of technological traceability to accounting depends on whether recorded transactions accurately represent the underlying contractual arrangements and whether the information can be incorporated into applicable financial reporting procedures. Research concerning the design of Sharia-compliant digital accounting information systems provides a basis for considering technological architecture alongside accounting requirements and Islamic financial practices (Syafaruddin et al., 2026). Smart contracts introduce additional considerations because automated execution may occur when predetermined conditions are satisfied, potentially affecting transaction timing and the documentation of contractual performance. The accounting implications of these mechanisms require assessment of contractual validity, recognition criteria, and audit evidence, since technologically verified execution does not independently establish compliance with Sharia accounting requirements.

The relationship between digital transformation and Sharia compliance extends beyond technical reporting procedures to the institutional purposes served by financial information. Sharia accounting incorporates accountability and transparency alongside the requirement that recorded transactions correspond to permissible contractual arrangements and relevant ethical obligations. Research investigating Islamic fintech financial reports has addressed legal and accounting considerations associated with information disclosed through official digital platforms, providing a basis for evaluating the consistency of reporting practices and institutional responsibilities (Rifqiawan et al., 2025). The integration of Maqasid Sharia principles into digital accounting information systems further indicates that technological functionality can be examined in relation to broader Islamic financial objectives rather than processing efficiency alone (Wijayanti et al., 2025). These considerations are relevant when digital platforms process transactions involving different contractual structures, because reporting accuracy must be distinguished from the permissibility and economic substance of the transactions themselves. Automated recording may support more consistent information processing, but responsibility for contract verification, accounting classification, and compliance assessment remains an institutional governance matter. Research on digital transformation in Islamic financial institutions also identifies the importance of aligning technological development with Sharia-compliant accounting systems, reinforcing the relationship between technical capabilities and financial reporting responsibilities (Eddy et al., 2025).

The thematic synthesis indicates that changing digital business models affect Sharia accounting through interconnected changes in transaction structures, information processing, reporting requirements, and institutional accountability. Platform financing and digital banking modify the organization of transactions, whereas cloud accounting, artificial intelligence, and blockchain influence the mechanisms through which financial information is generated, preserved, and verified. Research examining Sharia accounting innovation identifies technological transformation as a source of both operational opportunities and challenges requiring adjustments in accounting practices and professional capabilities (Supriadi, 2023). The potential advantages of digitalization must nevertheless be distinguished from demonstrated improvements in accounting quality because technological implementation does not automatically establish compliance, reporting reliability, or contractual accuracy. Studies addressing technological change in Sharia accounting standards reinforce the need to consider accounting regulations and institutional preparedness alongside developments in digital financial services (Chaniago et al., 2024). These relationships establish the analytical basis for examining the principal barriers to adaptation, particularly those involving professional competence, regulatory responsiveness, information security, technological infrastructure, and the governance of blockchain-based financial arrangements.

Adaptation Challenges, Blockchain-Based Innovation, and Strategic Responses in Sharia Accounting

The adaptation of Sharia accounting to changing digital business models encounters substantial challenges associated with professional competencies, institutional capabilities, and the increasing complexity of technology-mediated financial transactions. Digital accounting environments require practitioners to combine conventional accounting expertise with knowledge of Islamic contractual principles, automated information systems, data analytics, and digital financial services. Research examining the implementation of Sharia accounting in the digital era identifies technological competence and the capacity to apply Islamic accounting principles as relevant concerns in institutional

adaptation (Hammi & Nurlaila, 2025). These requirements extend beyond operating accounting applications because practitioners must evaluate whether digitally recorded transactions accurately represent their contractual substance and comply with applicable financial reporting standards. Differences between accounting expertise and technological proficiency can complicate communication among accountants, information technology specialists, internal auditors, and Sharia supervisory personnel. Studies addressing opportunities and challenges in digital Sharia accounting emphasize the importance of strengthening professional capabilities alongside technological implementation (Zulkifli & Akbar, 2026). Professional development consequently requires an interdisciplinary orientation that integrates accounting interpretation, Islamic commercial jurisprudence, digital system operation, and the assessment of technology-related financial risks.

Regulatory responsiveness constitutes another challenge because digital business models can introduce contractual arrangements and transaction mechanisms that differ from those traditionally addressed through established accounting procedures. Platform-based financing, automated payments, and digitally administered financial agreements require clear guidance concerning transaction recognition, measurement, presentation, and disclosure. Research on technological transformation in Sharia accounting standards highlights the relationship between digital innovation and the need for accounting frameworks capable of accommodating changes in financial activities (Chaniago et al., 2024). The challenge becomes more pronounced when multiple technological intermediaries participate in a single transaction, creating uncertainty about contractual responsibility, recognition timing, and financial reporting obligations. Investigations of accounting treatment in Islamic fintech provide a relevant basis for examining these issues because digitally mediated financing arrangements require interpretation of their underlying contractual characteristics rather than their technological interfaces alone (Mukhlisin & Farezi, 2025). Regulatory adaptation must consequently distinguish the economic substance of Sharia contracts from the operational procedures used to execute them, while preserving comparability and accountability in financial reporting.

Cybersecurity and information protection represent fundamental requirements for maintaining the reliability of Sharia accounting within interconnected digital business environments. Cloud computing, electronic payment systems, and platform-based financing increase organizational dependence on digital records that may be exposed to unauthorized access, operational disruption, data manipulation, or information loss. Research examining digital risks in Islamic financial technology emphasizes the relevance of technological vulnerabilities and institutional safeguards to responsible financial service development (Alsaghir, 2025). From an accounting standpoint, compromised information integrity can affect transaction classification, reconciliation procedures, financial statement reliability, and the availability of evidence required for auditing. The Islamic principle of *amanah* reinforces the institutional responsibility to protect entrusted financial information and maintain accurate records of contractual rights and obligations. Scholarship concerning digital transformation in Islamic financial institutions identifies technological implementation and governance requirements as interconnected considerations in establishing Sharia-compliant accounting systems (Eddy et al., 2025). Effective adaptation therefore requires access management, transaction verification, backup arrangements, cybersecurity controls, and supervisory procedures that preserve accounting reliability without assuming that technological automation independently guarantees information security.

Technological infrastructure and institutional governance further influence the feasibility of implementing digital Sharia accounting across organizations with different operational capacities. Financial institutions may face difficulties integrating existing accounting applications with cloud services, payment platforms, automated processing tools, and emerging technologies that use different data structures. Studies examining digital accounting information systems identify technological implementation and organizational preparedness as relevant considerations in adapting Islamic financial accounting practices (Didi & Lidyah, 2025). Inadequate system compatibility can increase reconciliation requirements, fragment transaction records, and complicate the production of consistent financial information across organizational functions. Research addressing the relationship between accounting digitalization and Islamic fintech adoption suggests that organizational and technological conditions should be considered jointly when evaluating institutional transformation (Alsmadi & Al-Omoush, 2025). Table 4 maps the principal adaptation challenges against their accounting implications and proposed institutional responses, providing an analytical basis for distinguishing technological constraints from reporting and Sharia governance requirements.

.

Table 4. Challenges and Adaptation Strategies for Sharia Accounting in Digital Business Models

Adaptation Dimension	Principal Challenge	Proposed Adaptation Strategy
Professional competencies	Differences in accounting, technological, and Sharia knowledge	Integrated training in digital accounting, Islamic contracts, and technological risk assessment
Accounting standards	Uncertainty in accounting treatment of emerging digital transactions	Clarification of contractual recognition, measurement, presentation, and disclosure requirements
Cybersecurity and data protection	Unauthorized access, information manipulation, and operational disruption	Information security controls, transaction verification, and continuous risk monitoring
Technological infrastructure	Limited interoperability and inconsistent system readiness	Integrated accounting architecture and gradual modernization of digital infrastructure
Blockchain and smart contracts	Automated execution without adequate contractual verification	Sharia validation, transaction traceability, and digital auditing procedures
Sharia governance	Potential inconsistencies between technological operations and Islamic financial principles	Embedded compliance supervision and accountability mechanisms
Institutional coordination	Differences in regulatory, professional, and technological implementation capacity	Coordination among regulators, professional bodies, educational institutions, and technology providers

Table 4 indicates that adaptation challenges cannot be addressed through technological investment alone because accounting reliability depends on the relationship between system design, professional interpretation, and institutional supervision. Blockchain represents a relevant technological development within this relationship because distributed transaction records can potentially strengthen traceability and facilitate the verification of financial activities. Research concerning Sharia-compliant digital accounting information systems provides a conceptual basis for integrating technological architecture with accounting requirements and Islamic financial principles (Syafaruddin et al., 2026). Nevertheless, the technical immutability of a recorded transaction does not independently establish that the transaction was valid, accurately classified, or consistent with the contractual requirements of Islamic finance. Incorrect input data, inappropriate transaction classifications, and deficiencies in contractual authorization may remain embedded in technological records unless appropriate verification procedures are established. Research examining the integration of Maqasid Sharia principles into digital accounting information systems highlights the relevance of accountability and Islamic financial objectives when assessing technological implementation (Wijayanti et al., 2025). Blockchain-based accounting therefore requires controls covering transaction authorization, contractual documentation, access permissions, data integrity, and audit procedures rather than relying exclusively on the technical characteristics of distributed ledgers.

Smart contracts introduce a distinct accounting challenge because programmed contractual conditions may initiate financial transactions automatically when specified requirements are satisfied. Their application to Islamic financial arrangements requires consideration of contractual validity, the identification of participating parties, the specification of transaction objects, and the timing of contractual performance. Literature examining Islamic fintech development identifies technological innovation as a significant feature of contemporary Islamic financial services, although the accounting implications of particular automated contractual arrangements require separate examination (Alshater et al., 2022). The automation of contractual execution does not eliminate the need to establish whether the underlying agreement satisfies applicable Sharia requirements concerning consent, contractual

certainty, and prohibited financial practices. Research addressing artificial intelligence, Sharia governance, and Maqasid Sharia further underscores the relevance of ethical and supervisory considerations when emerging technologies are incorporated into Islamic financial operations (Ghazi Ahmad & Noor Zainan, 2025). Accounting adaptation should consequently distinguish the automatic execution of contractual instructions from the recognition of financial rights and obligations, while ensuring that digital audit evidence remains sufficient for financial and Sharia compliance assessments.

The identified constraints indicate that adaptation strategies should be organized around institutional capabilities, accounting requirements, and the governance of digital financial transactions. Professional education constitutes an initial priority because Sharia accountants require interdisciplinary competencies that connect Islamic accounting principles with information technology, data management, cybersecurity, and automated transaction processing. Research on digital Sharia accounting innovation identifies professional preparedness and technological development as connected issues that require institutional attention during accounting transformation (Supriadi, 2023). Regulatory and professional bodies should also develop clearer guidance for accounting treatment in platform financing, electronic contractual arrangements, and emerging digital transaction structures, while avoiding the assumption that every technological innovation requires a separate accounting standard. Research examining Islamic fintech financial reports provides a relevant foundation for strengthening the relationship between financial disclosure, legal requirements, and institutional accountability (Rifqiawan et al., 2025). Organizational strategies should incorporate risk-based digital auditing, continuous transaction reconciliation, access controls, and Sharia supervisory involvement in the design and evaluation of financial information systems. Studies addressing technology implementation in Islamic banking further support consideration of institutional readiness and governance capabilities when developing financial services through digital business models (Bawana et al., 2026).

The thematic synthesis establishes that adaptation challenges arise from the interaction of technological innovation, accounting interpretation, institutional readiness, and Sharia governance rather than from isolated limitations in digital infrastructure. Changes in business models create new accounting requirements when electronic platforms alter transaction execution, contractual relationships, information processing, and the distribution of financial responsibilities. Research on digital transformation in Islamic financial institutions provides a foundation for examining these institutional adjustments while maintaining attention to the requirements of Sharia-compliant accounting (Eddy et al., 2025). Blockchain and smart contracts offer potential improvements in transaction traceability and automated processing, but their implementation remains dependent on valid contractual arrangements, appropriate accounting treatment, and effective supervisory controls. The integration of Islamic ethical objectives into digital accounting systems provides an additional basis for evaluating technological applications through transparency, accountability, and compliance rather than operational efficiency alone (Wijayanti et al., 2025). An integrated adaptation framework should consequently connect professional development, regulatory clarification, technological controls, digital auditing, and institutional coordination to support accounting practices that remain responsive to changing business models without compromising their Sharia foundations.

CONCLUSION

Changes in digital business models have altered the requirements of Sharia accounting through the expansion of fintech, digital banking, cloud computing, artificial intelligence, blockchain, and smart contracts. These developments extend accounting responsibilities beyond conventional recordkeeping to the recognition, measurement, presentation, and disclosure of financial transactions whose contractual substance must remain consistent with Islamic principles. The literature synthesis identifies potential improvements in processing efficiency, transaction traceability, information accessibility, and financial reporting transparency, although technological adoption alone does not establish accounting reliability or Sharia compliance. The principal adaptation challenges involve limited professional competencies, insufficient responsiveness of accounting standards and regulations, cybersecurity vulnerabilities, technological infrastructure constraints, and institutional governance requirements. Blockchain and smart contracts offer opportunities for transaction verification and automated execution but introduce additional complexities concerning contractual validity, recognition timing, digital audit evidence, and supervisory accountability. These interconnected challenges indicate that technological

infrastructure, accounting procedures, professional capabilities, and Sharia governance must be developed through coordinated institutional adjustments rather than isolated technological interventions. The study contributes an integrated conceptual explanation linking digital business model characteristics to Sharia accounting adaptation requirements while emphasizing transparency, accountability, justice, and trustworthiness as fundamental principles of Islamic financial practices.

The findings support an integrated adaptation strategy incorporating interdisciplinary professional development, responsive accounting standards, secure digital infrastructure, effective risk management, digital Sharia auditing, and institutional collaboration. Regulatory authorities and professional standard-setting bodies, including the Financial Services Authority (OJK) and the Indonesian Sharia Accounting Standards Board (DSAS-IAI), should consider developing clearer technical guidance for the recognition, measurement, presentation, and disclosure of transactions conducted through emerging digital financial platforms. Universities and professional associations should strengthen education and training in accounting information systems, cybersecurity, financial technology, and Islamic contractual principles to address the multidisciplinary competencies required by digital transformation. Islamic financial institutions and fintech providers should integrate technological innovation with transaction verification, internal controls, information protection, and Sharia supervisory mechanisms to maintain the integrity of financial reporting. The study remains limited by its literature-based approach and the seven articles documented in the original selection process, while additional references require complete eligibility screening and quality assessment before their findings can be incorporated into the systematic synthesis. Consequently, the conceptual findings cannot establish the prevalence of particular adaptation challenges or demonstrate the empirical effectiveness of the proposed institutional strategies. Future research should employ surveys, interviews, and institutional case studies to evaluate actual implementation practices, examine the accounting implications of blockchain, smart contracts, and artificial intelligence, and assess the effectiveness of regulatory and governance adjustments in digitally transforming Islamic financial institutions.

REFERENCES

Abdurrahman, A. (2026). Enhancing understanding of Islamic mobile banking adoption: Insights from an extended technology–organizational–environment framework. *Journal of Islamic Accounting and Business Research*. Advance online publication. https://doi.org/10.1108/JIABR-06-2024-0230

Alsaghir, M. (2025). Digital risks and Islamic FinTech: A road map to social justice and financial inclusion. *Journal of Islamic Accounting and Business Research, 16*(7), 1265–1282. https://doi.org/10.1108/JIABR-10-2022-0262

Alshater, M. M., Saba, I., Supriani, I., & Rabbani, M. R. (2022). Fintech in Islamic finance literature: A review. *Heliyon, 8*(9), Article e10385. https://doi.org/10.1016/j.heliyon.2022.e10385

Alsmadi, A. A., & Al-Omoush, K. S. (2025). Transforming financial landscapes: Exploring the nexus between digitalization in accounting and Islamic fintech adoption. *Human Behavior and Emerging Technologies, 2025*(1), Article 2854513. https://doi.org/10.1155/hbe2/2854513

Amelia, R. N., Rifqi, M. A., Huda, M. A. I., & Latifah, E. (2024). Fintech syariah di masa depan: Peluang dan tantangan. *Trending: Jurnal Ekonomi, Akuntansi dan Manajemen, 2*(3), 273–287. https://doi.org/10.30640/trending.v2i3.2742

Ayulestari, I., & Dhayan, H. (2026). Bridging faith and technology: Digital transformation of MSME financial transparency through Islamic values. *Islamic Accounting Journal, 5*(2), 107–123. https://doi.org/10.18326/iaj.v5i2.107-123

Bank Indonesia. (2023). *Statistik Sistem Pembayaran dan Infrastruktur Pasar Keuangan (SPIP) Februari 2023*.

Bawana, T. A., Mansor, F., & Noordin, K. (2026). Delving into Islamic digital banking: Strategic insights for Indonesia. *Journal of Islamic Accounting and Business Research*. Advance online publication. https://doi.org/10.1108/JIABR-12-2024-0520

Baydoun, N., Sulaiman, M., Willett, R. J., & Ibrahim, S. H. B. M. (2018). *Principles of Islamic Accounting*. John Wiley & Sons.

Chaniago, N., Nugroho, L., Firdayetti, F., Islami, W., & Volkhonova, M. I. (2024). Digital transformation in the dynamics of Sharia accounting standards: Challenges and opportunities

in the era of 4.0 and Society 5.0. *Pelita: Jurnal Penelitian, Terapan dan Aplikatif, 1*(3), 204–220. https://doi.org/10.70550/pelita.v1i3.80

Didi, A., & Lidyah, R. (2025). Transformasi digital sistem informasi akuntansi keuangan syariah: Tantangan dan peluang di era Industri 4.0. *INTECH (Informatika dan Teknologi), 6*(1), 144–151. https://doi.org/10.54895/intech.v6i1.3080

Eddy, P., Renaldo, N., Junaedi, A. T., Suhardjo, S., Tanjung, A. R., & Musa, S. (2025). Digital transformation in Islamic financial institutions with challenges and opportunities for Sharia-compliant accounting systems. *Kurs: Jurnal Akuntansi, Kewirausahaan dan Bisnis, 10*(1), 17–22. https://doi.org/10.35145/kurs.v10i1.5111

El-Gamal, M. A. (2006). *Islamic Finance: Law, Economics, and Practice*. Cambridge University Press.

Firmansyah, E. A., Masri, M., Anshari, M., & Besar, M. H. A. (2026). Factors influencing SME project returns on Islamic Fintech lending platform. *Journal of Islamic Accounting and Business Research, 17*(7), 1741–1755. https://doi.org/10.1108/JIABR-10-2023-0340

Ghazi Ahmad, N. F., & Noor Zainan, N. I. (2025). AI, Shariah governance, and Maqasid Shariah in Islamic finance. *International Journal of Research and Innovation in Social Science, 9*(9), 9972–9977. https://doi.org/10.47772/IJRISS.2025.909000822

Hammi, M. A., & Nurlaila. (2025). Tantangan dan implementasi teori akuntansi syariah di era digitalisasi. *Jurnal Penelitian Multidisiplin Terpadu, 9*(1), 409–412. https://sejurnal.com/pub/index.php/jpmt/article/view/4673

Hudaefi, F. A., Hassan, M. K., & Abduh, M. (2023). Exploring the development of Islamic fintech ecosystem in Indonesia: A text analytics. *Qualitative Research in Financial Markets, 15*(3), 514–533. https://doi.org/10.1108/QRFM-04-2022-0058

Kholidah, H., Fianto, B. A., Herianingrum, S., Ismail, S., & Mohd Hidzir, P. A. (2025). Do Islamic fintech lending promote microenterprises performance in Indonesia? Evidence of difference-in-difference model. *International Journal of Islamic and Middle Eastern Finance and Management, 18*(1), 224–246. https://doi.org/10.1108/IMEFM-08-2023-0310

Maniam, S. (2024). Determinants of Islamic fintech adoption: A systematic literature review. *Journal of Islamic Marketing, 15*(11), 2916–2936. https://doi.org/10.1108/JIMA-11-2023-0373

Meero, A. (2025). Islamic vs. conventional banking in the age of FinTech and AI: Evolving business models, efficiency, and stability (2020–2024). *International Journal of Financial Studies, 13*(3), Article 148. https://doi.org/10.3390/ijfs13030148

Mukhlisin, M., & Farezi, L. A. (2025). Accounting for Islamic fintech: Issues and treatment (Case study: Ammana Fintech). *Journal of Islamic Contemporary Accounting and Business, 3*(1), 49–61. https://doi.org/10.30993/jicab.v3i1.399

Nurcahyo, S. A., Ferdianto, R., Arismaya, A. D., & Anis, M. (2025). Toward sustainable Islamic banking: The role of FinTech, knowledge management, green banking, and Sharia compliance. *Economica: Jurnal Ekonomi Islam, 16*(1), 91–118. https://doi.org/10.21580/economica.2025.16.1.23752

Otoritas Jasa Keuangan. (2023). *Roadmap Pengembangan dan Penguatan Perbankan Syariah Indonesia 2023–2027*.

Otoritas Jasa Keuangan. (2025). *Laporan Perkembangan Keuangan Syariah Indonesia 2024*.

Pratama, A. R., Ramadani, N., & Masyhuri. (2025). Transformasi konsep dasar akuntansi syariah dalam era digital: Peluang dan tantangan. *Indonesia Economic Journal, 1*(2), 403–410. https://doi.org/10.63822/sw6znz18

Rahmawati, Y. (2022). Akuntansi syariah di Indonesia dalam era digital. *Indonesian Journal of Islamic Economics and Finance, 2*(1), 1–12. https://doi.org/10.37680/ijief.v2i1.1366

Rifqiawan, R. A., Ghofur, A., Murtadho, A., Supangat, S., & Sanad, Z. (2025). Legal and accounting review of Sharia fintech financial reports on official websites. *Al-Ahkam, 35*(1), 59–86. https://doi.org/10.21580/ahkam.2025.35.1.23544

Salman, K. R. (2020). *Akuntansi Syariah: Pendekatan Akad dan Wa'd*. Rajawali Pers.

Supriadi, I. (2023). Transformation of Sharia accounting innovation: Challenges and opportunities in analysis of digitalization era. *Balance: Journal of Islamic Accounting, 4*(2), 183–203. https://doi.org/10.21274/balance.v4i2.8372

Syafaruddin, A. R. A., Alimuddin, & Syarifuddin. (2026). A Sharia-compliant digital accounting information system model: Design, implementation, and implications for Islamic financial

.

practices. *Al-Kharaj: Journal of Islamic Economic and Business, 8*(3). https://doi.org/10.24256/kharaj.v8i3.11228

Visser, H. (2019). *Islamic Finance: Principles and Practice* (3rd ed.). Edward Elgar Publishing.

Wijayanti, P., Mohamed, I. S., Daud, D., Apriyanti, H. W., Shodiq, M. J., & Khoiriyah, A. (2025). The integration of maqasid sharia principles on digital accounting information system in Indonesian Islamic microfinance. *Journal of Islamic Accounting and Finance Research, 7*(1), 107–126. https://doi.org/10.21580/jiafr.2025.7.1.25345

Yuwanda, M., & Firdaus, R. (2024). Tantangan dan solusi penerapan akuntansi syariah di dalam bisnis. *Jurnal Bisnis, Ekonomi Syariah, dan Pajak, 1*(4), 21–29. https://doi.org/10.61132/jbep.v1i4.622

Zamzami, F., Nusa, N. D., & Faiz, I. A. (2016). *Sistem Informasi Akuntansi*. Gadjah Mada University Press.

Zulkifli, K., & Akbar, Y. F. (2026). Tantangan dan peluang penerapan akuntansi syariah di era digital. *Efektif: Jurnal Bisnis dan Ekonomi, 16*(2), 121–127. https://doi.org/10.37159/Efektif2025.Vol16.No2.007