P-ISSN XXXX-XXXX | E-ISSN XXXX-XXXX
Vol.1, No.1, Yr.2026, 76-94.
https://doi.org

Enhancing Financial Accountability through Cash Management Systems: Evidence from an Indonesian Islamic Higher Education Institution

Mohammad Iqbal Baidowi [a*], Muhammad Ullah[b]

[a] IAI At Taqwa Bondowoso , Indonesia
[b] Tanvir Mokammel Centre for Partition and Liberation War Studies, Jahangirnagar University, Savar, Bangladesh
[*]kaprodiekonomisyariah@gmail.com

Abstract

This study examines the implementation of the Cash Management System (CMS) and its contribution to financial governance and organizational effectiveness at IAI At Taqwa Bondowoso. As higher education institutions increasingly adopt digital technologies to improve accountability, transparency, and efficiency, CMS has emerged as a strategic tool for modernizing financial management practices. This research employed a qualitative case study approach, utilizing interviews, observations, and document analysis as data collection techniques. Data were analyzed using the interactive model of Miles, Huberman, and Saldaña. The findings indicate that CMS has transformed conventional financial administration into an integrated digital governance system through the Maker–Checker–Releaser authorization mechanism. The system strengthens internal control, enhances financial accountability, improves transaction transparency, and supports real-time financial monitoring. Furthermore, CMS contributes to organizational effectiveness by increasing time efficiency, reducing operational costs, improving information accuracy, and facilitating faster decision-making processes. The study concludes that CMS functions not only as a financial transaction platform but also as a governance instrument that supports sustainable and accountable financial management in higher education institutions. These findings contribute to the

Keywords

Cash Management System;
Digital Financial Governance;
Financial Accountability;

*Received: 05-05-2026
*Revised: 15-05-2026
*accepted: 20-05-2026

growing literature on digital financial governance within the context of Islamic higher education.

Introduction

The rapid advancement of digital technology has fundamentally transformed the governance and management practices of organizations across sectors, including higher education institutions. The emergence of digital financial systems has enabled organizations to improve efficiency, transparency, accountability, and decision-making processes through integrated financial management mechanisms. In the context of higher education, digital transformation is no longer limited to learning management systems and academic services but has increasingly expanded into institutional governance, particularly financial administration and resource management (Bond et al. 2024). As universities face growing demands for accountability and performance measurement, the adoption of digital financial management tools has become an essential component of institutional sustainability and competitiveness.

Higher education institutions operate within a complex governance environment characterized by multiple stakeholders, including governments, students, faculty members, accreditation bodies, and society at large. This complexity requires universities to establish financial management systems capable of ensuring accountability, transparency, efficiency, and compliance with regulatory requirements (Allui and Sahni 2016). Financial governance has consequently emerged as one of the most critical dimensions of institutional management because financial resources determine the effectiveness of teaching, research, and community engagement activities, which constitute the core missions of higher education institutions (Sahrodi and Karim 2024). Inadequate financial management may lead to inefficiencies, budget leakage, delayed decision-making, and reduced institutional performance.

The increasing emphasis on good governance principles has further accelerated the digitalization of financial management processes. According to the governance framework developed by the United Nations Development Programme (UNDP), transparency, accountability, responsiveness, effectiveness, and efficiency represent fundamental principles that should guide public-sector organizations, including universities (de Siqueira et al. 2022). Consequently, universities worldwide have increasingly adopted electronic financial systems to strengthen governance mechanisms and improve organizational performance. Digital financial platforms enable real-time monitoring, automated reporting, audit trails, and integrated approval mechanisms that minimize human error and reduce opportunities for fraud and financial misconduct (Cahyati et al. 2025).

Within the broader context of financial digitalization, Cash Management Systems (CMS) have emerged as an important innovation in organizational financial governance. A Cash Management System refers to a technology-based financial management platform that facilitates the monitoring, control, authorization, and execution of financial transactions electronically. Through automated workflows, CMS enables institutions to conduct financial operations efficiently while maintaining adequate internal control mechanisms (Akdon 2006). The integration of maker-checker-approver structures within CMS platforms is particularly significant because it enhances segregation of duties and reduces operational risks associated with financial transactions.

Previous studies have demonstrated that the implementation of CMS contributes positively to organizational effectiveness. Research conducted by Sari (2020) found that CMS adoption significantly improved efficiency in public-sector financial management by reducing transaction processing time and enhancing accessibility to financial information. Similarly, Saputri and Indrawati (2020) reported that digital cash management systems strengthened financial accountability through improved monitoring and transaction documentation (Saputri and P.s 2025). Studies in banking and governmental institutions further indicate that CMS implementation reduces operational costs, accelerates financial reporting, and supports data-driven decision-making processes (Abdullah et al. 2025).

Despite the growing body of literature on digital financial systems, most existing studies have concentrated on governmental agencies, commercial organizations, and banking institutions. Research examining CMS implementation within higher education institutions remains relatively limited, particularly in the context of Islamic higher education institutions in developing countries (Cho and Park 2021). This gap is important because universities possess unique organizational characteristics that distinguish them from other institutions. Unlike profit-oriented organizations, universities must balance financial sustainability with educational, social, and community service objectives. Consequently, the effectiveness of CMS implementation within higher education settings may involve distinct challenges, opportunities, and governance implications that require further investigation.

Furthermore, Islamic higher education institutions present an additional layer of complexity due to their dual commitment to modern management practices and Islamic ethical values. Financial governance within Islamic educational institutions is expected not only to achieve efficiency and accountability but also to reflect principles of trustworthiness (amanah), justice ('adl), transparency (shafafiyyah), and responsibility (mas'uliyyah) (Ahmed et al. 2019). The integration of digital financial technologies into such institutional environments raises important questions regarding how technological innovations contribute to the realization of both organizational effectiveness and ethical governance objectives. Nevertheless, empirical evidence addressing this issue remains scarce in the contemporary literature.

The case of IAI At Taqwa Bondowoso provides a valuable context for examining the role of CMS in enhancing financial governance within Islamic higher education. Over the past decade, the institution has gradually integrated CMS into its financial management practices to support various operational activities, including payroll administration, expenditure management, transaction authorization, and financial monitoring. The implementation of CMS has transformed traditional manual procedures into digitalized workflows involving multiple levels of authorization and verification. Such transformation offers an opportunity to evaluate the extent to which CMS contributes to organizational effectiveness, transparency, internal control, and financial accountability.

This study is theoretically grounded in organizational effectiveness theory and digital governance perspectives. Organizational effectiveness theory emphasizes the ability of an organization to achieve its objectives through efficient resource utilization and effective operational processes (Alfian et al. 2025). Meanwhile, digital governance theory highlights the strategic role of information technologies in improving institutional transparency, accountability, and service delivery (Wahab and Mahdiya 2025). By integrating these theoretical perspectives, the present study seeks to explore how CMS functions not merely as a technological tool but also as a governance mechanism that shapes organizational behavior and institutional performance.

The novelty of this research lies in three important aspects. First, it extends the existing literature by examining CMS implementation within an Islamic higher education institution, a context that remains underexplored in previous studies. Second, it investigates CMS from a governance perspective rather than merely a technological or operational standpoint. Third, it provides empirical evidence regarding the contribution of CMS to financial accountability, internal control, and organizational effectiveness within the framework of digital transformation in higher education.

Therefore, this study aims to analyze the implementation of Cash Management Systems in the financial management practices of IAI At Taqwa Bondowoso and to evaluate their contribution to organizational effectiveness, financial transparency, accountability, and internal control. The findings are expected to enrich the literature on digital financial governance in higher education and provide practical insights for educational institutions seeking to strengthen their financial management systems through technological innovation.

Method

This study employed a qualitative case study approach to investigate the implementation of the Cash Management System (CMS) in the financial management practices of IAI At Taqwa Bondowoso. The qualitative approach was considered appropriate because the study sought to understand organizational processes, institutional experiences, and governance practices related to digital financial management within their natural setting. According to John W. Creswell, qualitative research is particularly suitable for exploring complex social phenomena and interpreting participants' experiences in depth. Furthermore, the case study design allows researchers to examine a contemporary phenomenon within its real-life context, especially when the boundaries between the phenomenon and the context are not clearly evident (Creswell and Creswell 2017; Yin 2011).

The selection of IAI At Taqwa Bondowoso as the research site was based on purposive considerations. The institution has implemented Cash Management System services for more than a decade and has integrated digital financial transactions into various administrative and financial activities. This long-term implementation provides a valuable setting for examining how digital financial systems contribute to organizational effectiveness, financial accountability, and institutional governance within an Islamic higher education context.

The study utilized purposive sampling to identify participants who possessed direct knowledge and practical experience regarding the implementation of CMS. Informants consisted of institutional leaders, finance administrators, treasurers, and other personnel directly involved in financial transaction authorization and monitoring. Purposive sampling is widely recognized in qualitative research as an effective strategy for selecting information-rich participants who can provide detailed insights into the phenomenon under investigation (Patton 2002).

Data were collected through three complementary techniques: semi-structured interviews, participant observation, and document analysis. Semi-structured interviews were conducted to obtain detailed information regarding the implementation process, perceived benefits, challenges, and organizational impacts of CMS. This interview format provided flexibility for participants to express their experiences while enabling the researcher to maintain consistency across interview sessions (Kvale and Brinkmann 2009).

Participant observation was conducted to understand the actual operational processes involved in CMS implementation. The researcher observed transaction procedures, verification mechanisms, approval workflows, and interactions among organizational actors responsible for financial administration. Observation is particularly useful in qualitative inquiry because it enables researchers to compare participants' narratives with actual practices occurring in the field (Tisdell et al. 2025).

To strengthen the validity of findings, document analysis was also undertaken. Documents examined included institutional financial reports, transaction records, financial administration guidelines, organizational policies, and other relevant materials related to CMS implementation. Documentary evidence serves as an important source of data in case study research because it provides contextual information and facilitates triangulation among multiple data sources (Yin 2011).

Data analysis followed the interactive model developed by Matthew B. Miles, A. Michael Huberman, and Johnny Saldaña. The analysis process consisted of three interconnected stages: data condensation, data display, and conclusion drawing (Miles and Huberman 1994). During data condensation, interview transcripts, observation notes, and documentary evidence were systematically organized, coded, and categorized according to emerging themes. Subsequently, the data were presented in narrative descriptions and thematic matrices to facilitate interpretation and comparison. Finally, conclusions were generated through an iterative process of reflection, pattern recognition, and verification of findings.

The trustworthiness of the study was ensured through several validation strategies. Credibility was established through methodological triangulation and source triangulation by comparing information obtained from interviews, observations, and documentary evidence. Member checking was conducted to confirm the accuracy of participants' statements and interpretations. Dependability was maintained through detailed documentation of the research procedures, while confirmability was strengthened through the maintenance of an audit trail that recorded analytical decisions throughout the study. Transferability was enhanced by providing a rich and detailed description of the institutional context, enabling readers to assess the applicability of findings to similar settings (Lincoln and Guba 1985).

Ethical considerations were carefully observed throughout the research process. Participants were informed about the purpose of the study, their voluntary participation, and their right to withdraw at any stage. Confidentiality and anonymity were maintained by protecting personal identities and sensitive institutional information. All data were used exclusively for academic purposes and analyzed in accordance with established research ethics standards.

By employing this methodological framework, the study aimed to generate a comprehensive understanding of how Cash Management System implementation contributes to financial accountability, operational efficiency, internal control, and digital governance within Islamic higher education institutions. The methodological rigor adopted in this study provides a reliable foundation for examining the role of digital financial technologies in strengthening institutional governance and supporting sustainable organizational development.

Results and Discussion

Implementation of Cash Management System in Higher Education Financial Management

The rapid advancement of digital technology has encouraged higher education institutions to transform various aspects of institutional governance, including financial management systems. In recent years, financial digitalization has become an essential strategy for improving organizational efficiency, transparency, accountability, and service quality within educational institutions. Financial management is recognized as one of the most critical administrative functions because it directly influences institutional sustainability, resource allocation, and the successful implementation of academic programs (de Siqueira et al. 2022). Consequently, universities are increasingly adopting technology-based financial systems to strengthen governance structures and improve operational effectiveness (Mergel et al., 2019; Bond et al., 2024).

The implementation of the Cash Management System (CMS) at IAI At Taqwa Bondowoso represents an institutional response to the growing demand for effective and accountable financial governance. The institution has utilized CMS for approximately fifteen years as a primary platform for managing financial transactions and monitoring organizational cash flows (Rusmayanthy et al. 2023). Prior to the adoption of CMS, financial transactions were largely conducted through conventional banking procedures that required direct visits to banking institutions, manual documentation, and physical verification processes. Such procedures often resulted in inefficiencies related to time consumption, administrative burdens, and limitations in monitoring financial activities. The transition toward CMS-based financial management therefore marked a significant shift from traditional administrative practices toward digital financial governance.

The decision to adopt CMS was influenced by the institution's need to establish a more efficient financial administration system capable of supporting increasingly complex organizational activities. As an Islamic higher education institution experiencing organizational growth and expansion, IAI At Taqwa Bondowoso required a financial management mechanism that could facilitate timely transactions, ensure accurate financial records, and provide real-time access to financial information. This finding aligns with the argument of Turban et al. (2021), who emphasize that information systems play a strategic role in improving organizational decision-making and operational efficiency through the integration of digital technologies into administrative processes (Turban et al. 2021).

The implementation process of CMS at IAI At Taqwa Bondowoso is conducted through a structured workflow that integrates multiple levels of authorization and verification. The system operates based on a governance mechanism commonly referred to as the Maker–Checker–Releaser model. This model is designed to ensure that financial transactions are conducted through a series of control procedures before final approval is granted. The Maker is responsible for initiating and entering transaction data into the system. Subsequently, the Checker verifies the accuracy and legitimacy of the transaction based on supporting documentation and institutional requirements (Alamri 2023). Finally, the Releaser provides final authorization, allowing the transaction to be executed electronically. This workflow creates a systematic process of supervision and accountability that minimizes the possibility of unauthorized transactions.

From an organizational perspective, the Maker–Checker–Releaser mechanism reflects the principle of segregation of duties, which is widely recognized as a fundamental component of effective internal control systems. According to the Committee of Sponsoring Organizations (Surdyk 2017), the separation of responsibilities among different actors reduces operational risks and prevents the concentration of authority in a single individual. By distributing financial responsibilities across multiple levels, CMS enhances institutional oversight and contributes to greater accountability in financial management practices.

Another significant feature of CMS implementation at IAI At Taqwa Bondowoso is its ability to support various financial activities through an integrated digital platform. The system facilitates multiple transaction categories, including payroll processing, operational expenditure payments, utility payments, and fund transfers. One of the most beneficial features identified by institutional administrators is the payroll service, which enables the simultaneous distribution of salaries to employees through an automated mechanism. This feature significantly reduces administrative workloads and shortens transaction processing times. Rather than conducting individual transactions manually, financial administrators can complete salary payments through a single integrated process.

The implementation of CMS has also transformed the accessibility of financial services within the institution. Unlike conventional banking procedures that are limited by operational banking hours, CMS enables authorized personnel to conduct transactions at any time and from any location with internet access. This flexibility is particularly important in higher education environments where administrative activities frequently extend beyond conventional office hours (Salas-Molina et al. 2021). The availability of real-time transaction capabilities allows financial operations to continue without interruption, thereby supporting institutional responsiveness and operational continuity. Similar findings have been reported by Sari (2021), who argues that digital cash management systems significantly improve accessibility and reduce transaction-related constraints associated with traditional financial management practices (R. Sari 2021).

Furthermore, CMS facilitates real-time financial monitoring and reporting. Through the system, institutional leaders and financial administrators can access updated financial information, review transaction histories, and monitor cash flows without waiting for manual reporting procedures. The availability of real-time data contributes to more informed decision-making and enables organizational leaders to respond promptly to financial challenges and opportunities. In the context of higher education governance, timely access to financial information is crucial because strategic decisions often depend on accurate assessments of institutional financial capacity (Arsyad et al. 2025).

The findings also indicate that the implementation of CMS has contributed to improvements in administrative efficiency. Digital transaction processing eliminates many of the manual procedures previously required in financial administration, including physical document submission, repeated verification processes, and frequent visits to banking institutions. Consequently, the institution has experienced reductions in operational costs associated with transportation, administrative paperwork, and transaction processing. These outcomes support previous research demonstrating that digital financial systems contribute to organizational efficiency by streamlining administrative workflows and reducing resource consumption (Saputri and P.s 2025).

Despite its numerous benefits, the implementation of CMS requires adequate technological infrastructure and human resource capacity. The effectiveness of the system depends heavily on stable internet connectivity and the ability of users to operate digital financial platforms. Institutional informants reported that initial implementation stages were accompanied by technical challenges and system adaptation issues. However, these difficulties gradually diminished as users gained experience and received training related to system operation. This finding is consistent with digital transformation literature emphasizing that organizational readiness, technological competence, and user adaptation are critical determinants of successful technology adoption (Johnson and Pastory 2023).

The implementation of CMS at IAI At Taqwa Bondowoso therefore illustrates a broader process of digital transformation in higher education financial management. Rather than functioning merely as a transaction platform, CMS has become an integral component of institutional governance by facilitating financial administration, improving accessibility, strengthening transaction control mechanisms, and supporting evidence-based decision-making. The adoption of CMS demonstrates how digital technologies can be utilized to modernize financial management practices while simultaneously enhancing organizational effectiveness and governance quality. Through the integration of automated workflows, multi-level authorization procedures, and real-time financial monitoring, CMS has enabled the institution to establish a more efficient, accountable, and transparent financial management system capable of supporting its long-term educational mission.

The Contribution of Cash Management System to Financial Governance and Organizational Effectiveness

The implementation of Cash Management System (CMS) in higher education institutions extends beyond the digitization of financial transactions. More fundamentally, CMS functions as a strategic governance instrument that contributes to financial accountability, internal control, organizational transparency, and institutional effectiveness. In contemporary higher education management, financial governance has become a critical concern due to increasing demands for accountability from stakeholders, including governments, accreditation agencies, students, and society. As universities manage increasingly complex financial activities, the adoption of digital financial systems has become essential to ensure that institutional resources are administered effectively, efficiently, and transparently (OECD 2017).

The findings of this study indicate that CMS has significantly strengthened financial governance practices at IAI At Taqwa Bondowoso. One of the most important contributions of CMS is its ability to enhance internal control mechanisms through the implementation of a structured authorization process involving multiple actors. The Maker–Checker–Releaser model adopted within the system creates a layered control structure that minimizes operational risks and reduces opportunities for financial misconduct. Every transaction must pass through sequential stages of preparation, verification, and approval before execution (Svahnberg et al. 2010). This mechanism ensures that no single individual possesses complete authority over financial transactions, thereby promoting accountability and reducing the likelihood of fraud.

From the perspective of internal control theory, this finding reflects the principle of segregation of duties, which is widely recognized as a fundamental safeguard against financial irregularities. According to the Committee of Sponsoring Organizations (Chowdhury and Uddin 2021), effective internal control systems require the separation of responsibilities among different organizational actors to prevent errors and intentional misuse of resources. The CMS framework implemented at IAI At Taqwa Bondowoso demonstrates how digital technology can institutionalize these principles by embedding control procedures directly into financial workflows. Consequently, the system not only facilitates transactions but also serves as an automated governance mechanism that strengthens institutional oversight.

Another significant contribution of CMS is its role in improving financial accountability. Accountability in higher education refers to the obligation of institutions to manage public and organizational resources responsibly while providing transparent information regarding financial activities and outcomes (Yeoh 2017). Through CMS, financial transactions are automatically recorded, stored, and documented within a centralized digital system. This feature creates a comprehensive audit trail that allows institutional leaders and auditors to trace financial activities accurately and efficiently. Unlike conventional systems that rely heavily on manual documentation, CMS provides a more reliable mechanism for recording financial transactions and maintaining historical records.

The availability of real-time transaction data further enhances accountability by enabling continuous monitoring of institutional financial activities. Financial administrators can immediately identify transaction statuses, verify payment records, and monitor cash flow movements without waiting for periodic reports. This capability supports more proactive financial management and facilitates timely corrective actions when necessary (Bastomi et al. 2017). Similar findings have been reported by Mergel et al. (2019), who argue that digital governance systems improve organizational accountability by increasing the visibility and traceability of administrative processes (Mergel et al. 2019).

Transparency represents another critical dimension strengthened through CMS implementation. Transparency is widely regarded as a cornerstone of good governance because it enables stakeholders to access relevant information regarding organizational activities and decision-making processes (de Siqueira et al. 2022). In the context of higher education, transparent financial management contributes to stakeholder trust and institutional legitimacy. The findings reveal that CMS enhances transparency by providing accurate, accessible, and verifiable financial information. Because transaction data are recorded automatically and can be monitored electronically, institutional leaders are able to obtain a clearer understanding of financial conditions and resource utilization.

The integration of digital financial records also reduces information asymmetry within the organization. Under conventional financial systems, access to financial information is often limited to specific administrative personnel, creating potential challenges related to communication and oversight (Campbell et al., n.d.). CMS addresses this issue by facilitating controlled information sharing among authorized stakeholders. As a result, financial governance becomes more transparent and collaborative, supporting informed decision-making at various organizational levels.

Beyond accountability and transparency, CMS has demonstrated substantial contributions to organizational effectiveness. Organizational effectiveness refers to the extent to which an organization achieves its goals through the efficient utilization of resources and the successful execution of operational processes (Bok 2023). The empirical findings indicate that CMS has improved effectiveness across several dimensions, including time efficiency, cost efficiency, information accuracy, decision-making quality, and service responsiveness.

The first dimension is time efficiency. Prior to CMS implementation, financial transactions often required physical visits to banking institutions and extensive manual processing. Such procedures consumed considerable time and frequently delayed administrative activities. Through CMS, transactions can be conducted electronically at any time and from any location with internet access. This flexibility significantly reduces transaction processing times and allows financial operations to continue without interruption. The findings support previous studies suggesting that digital financial systems improve organizational performance by accelerating administrative processes and reducing procedural delays (R. N. Sari 2025).

The second dimension involves cost efficiency. The implementation of CMS has reduced operational expenses associated with transportation, administrative paperwork, and manual transaction processing. Digital transactions eliminate the need for frequent visits to financial institutions and reduce the consumption of physical resources. These savings contribute to more efficient resource allocation and allow institutions to redirect financial resources toward strategic educational activities. According to Turban et al. (2021), digital systems generate organizational value by optimizing resource utilization and minimizing unnecessary operational expenditures (Turban et al. 2021).

A third contribution relates to information accuracy and decision-making effectiveness. Financial decisions within higher education institutions require accurate and timely information regarding available resources, expenditure patterns, and budget allocations. CMS provides real-time access to financial data, enabling institutional leaders to make informed decisions based on current information rather than delayed reports. The system also reduces the likelihood of human error because many financial processes are automated and standardized (Widyastuti et al. 2025). Consequently, financial planning and resource allocation become more reliable and evidence-based.

The findings further reveal that CMS supports organizational responsiveness by enabling rapid execution of financial activities. Institutional leaders can authorize transactions remotely, monitor financial conditions continuously, and respond promptly to emerging organizational needs. This capability is particularly valuable in dynamic educational environments where timely financial decisions often influence the implementation of academic programs, institutional projects, and operational activities. As noted by Vial (2021), digital transformation enhances organizational agility by increasing the speed and flexibility of administrative processes (Vial 2021).

An important finding emerging from this study is that the contribution of CMS extends beyond operational efficiency toward broader institutional transformation. The adoption of digital financial systems has encouraged the development of a governance culture characterized by accountability, professionalism, and evidence-based management. Financial activities that were previously dependent on manual procedures have become increasingly standardized, transparent, and measurable. Such transformation reflects the principles of digital governance, which emphasize the strategic use of technology to improve organizational performance and public value creation (Mergel et al. 2019).

For Islamic higher education institutions, these contributions carry additional significance because financial governance is closely associated with ethical values such as amanah (trustworthiness), ‘adl (justice), and mas’uliyyah (responsibility). The CMS framework facilitates the realization of these values by ensuring that financial resources are managed transparently, responsibly, and in accordance with established procedures. In this regard, technology functions not merely as an operational tool but also as a mechanism for strengthening ethical governance practices within educational institutions.

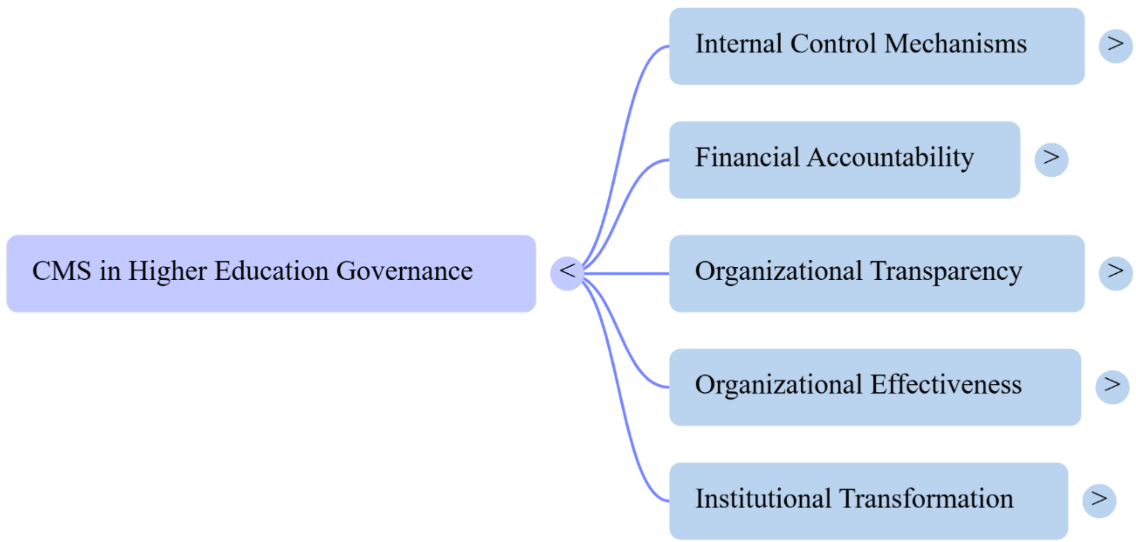

Figure 1Digital Governance and Financial Accountability in Higher Education

Overall, the findings demonstrate that CMS has become a critical component of financial governance and organizational effectiveness at IAI At Taqwa Bondowoso. Through its contributions to internal control, accountability, transparency, efficiency, and decision-making quality, CMS supports the development of a modern and sustainable financial management system. The evidence suggests that digital financial governance can play a transformative role in strengthening institutional capacity and enhancing the overall quality of higher education management. Such findings contribute to the growing body of literature on digital governance by illustrating how technology-based financial systems can support organizational effectiveness while simultaneously promoting accountability and transparency in higher education institutions.

Conclusion

This study demonstrates that the implementation of the Cash Management System (CMS) has significantly transformed financial management practices at IAI At Taqwa Bondowoso. The transition from conventional financial administration to a digital-based financial management system has enabled the institution to improve the efficiency, accuracy, and effectiveness of financial operations. Through the integration of digital transaction services, CMS has become an essential instrument in supporting the modernization of higher education financial governance while responding to the growing demands for transparency, accountability, and organizational performance.

The findings reveal that the implementation of CMS is characterized by a structured governance mechanism involving the Maker–Checker–Releaser model. This multi-level authorization framework ensures that every financial transaction undergoes systematic verification and approval before execution. Such a mechanism strengthens internal control practices by promoting segregation of duties, reducing operational risks, and minimizing opportunities for fraud or financial misconduct. Consequently, CMS functions not merely as a transactional platform but also as a governance tool that reinforces institutional oversight and financial discipline.

Furthermore, the study confirms that CMS contributes substantially to enhancing financial accountability and transparency. The system facilitates real-time transaction monitoring, automatic documentation, and comprehensive audit trails, enabling institutional leaders to access accurate financial information and exercise effective financial supervision. These capabilities support evidence-based decision-making and strengthen institutional trust by ensuring that financial resources are managed responsibly and in accordance with established procedures.

From the perspective of organizational effectiveness, CMS has generated significant benefits in terms of time efficiency, cost reduction, information accuracy, operational flexibility, and service responsiveness. Digital transaction processing has simplified administrative procedures, reduced dependency on manual operations, and improved the institution’s ability to manage financial activities efficiently. The availability of real-time financial information has also enhanced managerial decision-making and strengthened the institution’s capacity to respond to operational needs in a timely manner.

Theoretically, this study contributes to the literature on digital financial governance by demonstrating how technology-based financial systems can support organizational effectiveness, accountability, and internal control within higher education institutions. The findings extend previous studies by providing empirical evidence from the context of an Islamic higher education institution, an area that remains relatively underexplored in existing research. The study therefore highlights the strategic role of CMS as a catalyst for digital transformation and governance improvement in educational organizations.

Practically, the findings suggest that higher education institutions should consider the adoption and continuous development of digital financial management systems as part of broader institutional governance reforms. Investment in technological infrastructure, user training, and system integration is essential to maximize the benefits of CMS implementation. Future research may expand this study by examining comparative cases across different higher education institutions, investigating user acceptance factors, or exploring the integration of emerging technologies such as artificial intelligence, enterprise resource planning (ERP), and data analytics within higher education financial management systems.

In conclusion, the Cash Management System has proven to be an effective instrument for strengthening financial governance, improving organizational effectiveness, and supporting digital transformation in higher education. Its contribution extends beyond operational efficiency to the establishment of a more accountable, transparent, and sustainable financial management framework capable of supporting the long-term development of higher education institutions.

Bibliography and Citation

Abdullah, Sukmawati, Sutopo Sutopo, Zakaria Habib Al-Ra'zie, et al. 2025. *Pengembangan Masyarakat Berbasis Digital*. Yayasan Tri Edukasi Ilmiah.

Ahmed, Nisar, Khadija Rasheed, and Muhammad Talha. 2019. 'Islamic Banking Perspective on Shariah Compliant FinTech (Financial Technology) Model'. SSRN Scholarly Paper No. 3563030. Social Science Research Network, January 26. https://papers.ssrn.com/abstract=3563030.

Akdon, Akdon. 2006. 'Strategic Management for Educational Management'. *Alfabeta, Bandung*, 2008–12.

Alamri, Mufida Sadiq. 2023. 'STUDI TENTANG CASH MANAGEMENT SYSTEM (CMS) DALAM PEMBAYARAN KOMPENSASI PEGAWAI BALAI DIKLAT KEAGAMAAN MANADO PERSPEKTIF EKONOMI ISLAM'. *Transformasi* 5 (1): 20–50.

Alfian, Ian, M. Shabri Abd Majid, and Sugianto. 2025. 'The Role of Sharia Fintech in Enhancing Financial Inclusion in the Digital Era'. *Journal of Finance and Islamic Banking* 8 (1): 79–94. https://doi.org/10.22515/jfib.v8i1.11798.

Allui, Alwiya, and Jolly Sahni. 2016. 'Strategic Human Resource Management in Higher Education Institutions: Empirical Evidence from Saudi'. *Procedia - Social and Behavioral Sciences*, 12th International Strategic Management Conference, ISMC 2016, 28-30 October 2016, Antalya, Turkey, vol. 235 (November): 361–71. https://doi.org/10.1016/j.sbspro.2016.11.044.

Arsyad, Ifan, Dona Budi Kharisma, and Jamal Wiwoho. 2025. 'Artificial Intelligence and Islamic Finance Industry: Problems and Oversight'. *International Journal of Law and Management* 68 (4): 653–75. https://doi.org/10.1108/IJLMA-07-2024-0236.

Bastomi, Mohamad, Ubud Salim, and Siti Aisjah. 2017. 'The Role of Corporate Governance and Risk Management on Banking Financial Performance in Indonesia'. *Jurnal Keuangan Dan Perbankan* 21 (4): 670â€“680-670â€“680. https://doi.org/10.26905/jkdp.v21i4.1285.

Bok, Kenneth. 2023. *Decentralizing Finance: How DeFi, Digital Assets, and Distributed Ledger Technology Are Transforming Finance*. John Wiley & Sons.

Bond, Melissa, Hassan Khosravi, Maarten De Laat, et al. 2024. 'A Meta Systematic Review of Artificial Intelligence in Higher Education: A Call for Increased Ethics, Collaboration, and Rigour'. *International Journal of Educational Technology in Higher Education* 21 (1): 4. https://doi.org/10.1186/s41239-023-00436-z.

Cahyati, Cici, Niswatin Niswatin, and Yustina Hiola. 2025. 'The Influence of Islamic Financial Literacy on Sharia Digital Finance for Consumers at Pegadaian Syariah Gorontalo'. *Assets : Jurnal Ilmiah Ilmu Akuntansi, Keuangan Dan Pajak* 9 (2): 107–19. https://doi.org/10.30741/assets.v9i2.1559.

Campbell, Michael S., Carson Holt, Barry Moore, and Mark Yandell. n.d. *Genome Annotation and Curation Using MAKER and MAKER-P*. Accessed 14 June 2026. https://currentprotocols.onlinelibrary.wiley.com/doi/10.1002/0471250953.bi0411s48.

Cho, Man, and Soojin Park. 2021. 'Financial Consumer Protection in the Era of Digital Transformation: A Critical Survey of Literature and Policy Practices'. SSRN Scholarly Paper No. 3914573. Social Science Research Network, March 20. https://doi.org/10.2139/ssrn.3914573.

Chowdhury, Asad Iqbal, and Mohammad Shamsu Uddin. 2021. 'Artificial Intelligence, Financial Risk Management, and Islamic Finance'. In *Artificial Intelligence and Islamic Finance*. Routledge.

Creswell, John W., and J. David Creswell. 2017. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. SAGE Publications.

Johnson, F., and D. Pastory. 2023. 'The Influence of Cash Management on Financial Performance of Private Schools in Tanzania'. In *Sustainable Education and Development – Sustainable Industrialization and Innovation*, edited by Clinton Aigbavboa, Joseph N.

Mojekwu, Wellington Didibhuku Thwala, et al. Springer International Publishing. https://doi.org/10.1007/978-3-031-25998-2_65.

Kvale, Steinar, and Svend Brinkmann. 2009. *InterViews: Learning the Craft of Qualitative Research Interviewing*. SAGE.

Lincoln, Yvonna S., and Egon G. Guba. 1985. *Naturalistic Inquiry*. SAGE.

Mergel, Ines, Noella Edelmann, and Nathalie Haug. 2019. 'Defining Digital Transformation: Results from Expert Interviews'. *Government Information Quarterly* 36 (4): 101385. https://doi.org/10.1016/j.giq.2019.06.002.

Miles, Matthew B., and A. Michael Huberman. 1994. *Qualitative Data Analysis: An Expanded Sourcebook*. SAGE.

OECD, Obesity. 2017. 'OECD Organisation for Economic Co-Operation and Development'. *Citado Noviembre*.

Patton, Michael Quinn. 2002. *Qualitative Research and Evaluation Methods 3rd. Ed*. Sage publications.

Rusmayanthy, Rusmayanthy, R. Luki Karunia, and Edy Sutrisno. 2023. 'Optimizing The Use Of Government Credit Card And Cash Management System Virtual Account as a Tool For Paying For State Expenditures in Pusbangkom Management System BPSDM Ministry of PUPR'. *JHSS (JOURNAL OF HUMANITIES AND SOCIAL STUDIES)* 7 (2): 641. https://doi.org/10.33751/jhss.v7i2.7738.

Sahrodi, Jamali, and Abdul Karim. 2024. 'Leader Power of Islamic Higher Education Institutions in Improving the Performance of Human Resources Management'. *Cogent Arts & Humanities* 12 (1): 2442818. https://doi.org/10.1080/23311983.2024.2442818.

Salas-Molina, Francisco, Juan A. Rodriguez-Aguilar, David Pla-Santamaria, and Ana García-Bernabeu. 2021. 'On the Formal Foundations of Cash Management Systems'. *Operational Research* 21 (2): 1081–95. https://doi.org/10.1007/s12351-019-00464-6.

Saputri, Nadia, and Putri Anggalia P.s. 2025. 'Penerapan Model Problem Base Learning (PBL) Dalam Pembelajaran Pendidikan Agama Islam'. *QOSIM : Jurnal Pendidikan Sosial & Humaniora* 3 (2): 751–61. https://doi.org/10.61104/jq.v3i2.1112.

Sari, Rahmatika. 2021. 'Pengaruh Penggunaan Paylater Terhadap Perilaku Impulse Buying Pengguna E-Commerce Di Indonesia'. *Jurnal Riset Bisnis Dan Investasi* 7 (1): 44–57. https://doi.org/10.35313/jrbi.v7i1.2058.

Sari, Rizda Nirmala. 2025. 'Peran Supervisi Akademik Dalam Meningkatkan Kualitas Implementasi Kurikulum Di Lembaga Pendidikan Islam'. *Jurnal Budi Pekerti Agama Islam* 3 (3): 138–48. https://doi.org/10.61132/jbpai.v3i3.1194.

Siqueira, Julio Homem de, Andrew G. Mtewa, and Daury César Fabriz. 2022. 'United Nations Development Programme (UNDP)'. In *International Conflict and Security Law: A Research Handbook*, edited by Sergey Sayapin, Rustam Atadjanov, Umesh Kadam, Gerhard Kemp, Nicolás Zambrana-Tévar, and Noëlle Quénivet. T.M.C. Asser Press. https://doi.org/10.1007/978-94-6265-515-7_36.

Surdyk, Patricia M. 2017. *The History of Sponsoring Institutions, 1982–2017*. Journal of Graduate Medical Education. December 1. https://jgme.kglmeridian.com/view/journals/jgme/9/6s/article-p7.xml.

Svahnberg, Mikael, Tony Gorschek, Robert Feldt, Richard Torkar, Saad Bin Saleem, and Muhammad Usman Shafique. 2010. 'A Systematic Review on Strategic Release Planning Models'. *Information and Software Technology* 52 (3): 237–48. https://doi.org/10.1016/j.infsof.2009.11.006.

Tisdell, Elizabeth J., Sharan B. Merriam, and Heather L. Stuckey-Peyrot. 2025. *Qualitative Research: A Guide to Design and Implementation*. John Wiley & Sons.

Turban, Efraim, Carol Pollard, and Gregory Wood. 2021. *Information Technology for Management: Driving Digital Transformation to Increase Local and Global Performance, Growth and Sustainability*. John Wiley & Sons.

Vial, Gregory. 2021. 'Understanding Digital Transformation: A Review and a Research Agenda'. In *Managing Digital Transformation*. Routledge.

Wahab, Abdul Wahab, and Ilma Mahdiya. 2025. 'Digital Shariah Governance and the Future of Islamic Finance: A Framework for AI-Driven Shariah Compliance in a Global Regulatory Environment'. *International Journal of Islamic Finance* 3 (2): 19–31. https://doi.org/10.14421/ijif.v3i2.2777.

Widyastuti, Aditya, Rosidi Rosidi, and Syaiful Iqbal. 2025. 'Determinants Of Intention To Use Cash Management System In The Government Agencies With Organization Culture As A Moderating Variable'. *EKOMBIS REVIEW: Jurnal Ilmiah Ekonomi Dan Bisnis* 13 (1): 103–16. https://doi.org/10.37676/ekombis.v13i1.6790.

Yeoh, Peter. 2017. 'Regulatory Issues in Blockchain Technology'. *Journal of Financial Regulation and Compliance* 25 (2): 196–208. https://doi.org/10.1108/JFRC-08-2016-0068.

Yin, Robert K. 2011. *Applications of Case Study Research*. SAGE Publications.