

Analysis of the Implementation of Corporate Internet Banking in Business Debt Management to Support Internal Control at PT Spindo Tbk

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Keywords:

corporate internet banking;
internal control; corporate debt;
coso; accounting information
system.

Abstract

The implementation of digital financial systems in the manufacturing industry is crucial for accelerating cash flow turnover while maintaining the reliability of daily internal supervision. This study aimed to analyze the implications of implementing Corporate Internet Banking services on the effectiveness of internal control in managing accounts payable and vendor payments at PT SPINDO Tbk. This study employed a descriptive qualitative approach with a specific focus on the cash disbursement workflow. Primary data were obtained through in-depth interviews with key informants from the Finance Division who held authorization roles as Maker (Financial Staff), Checker (Financial Supervisor), and Approver (Financial Manager). Secondary data were supported by an analysis of the company's non-confidential internal documents. Data validity was assessed through source triangulation and methodological triangulation. The results showed that the migration from manual systems to the Corporate Internet Banking platform significantly improved operational efficiency through time and cost savings. The system successfully reduced the administrative burden associated with manual preparation of giro/checks, eliminated physical courier queues at bank branches, and provided real-time cash transaction data. Based on the COSO Internal Control Framework and Accounting Information System (AIS) perspectives, the implementation of a tiered authorization system (Maker–Checker–Approver) and automated beneficiary account validation proved effective in minimizing the risks of fraud, duplicate payments, and human error.

INTRODUCTION

In today's digital economy, the effectiveness of internal control is a key factor in safeguarding company assets and ensuring the reliability of financial reporting (Al Sabti, 2023; Darboe, 2026; El Bechychy & Alliou, 2024; Halar & Schwaiberger, 2026; Mamatelashvili & Kuchukova, 2022; Usmani, 2023). The government, through Bank Indonesia, continues to promote payment system digitalization programs to accelerate financial transaction processing and enhance transparency in the corporate sector. The presence of Corporate Internet Banking services has emerged as a transformative solution that provides 24/7 transaction access, bulk payable management, and a tiered approval system (maker-checker-approver) designed to strengthen controls over cash disbursement activities.

Prior to the adoption of this system, the vendor payment process at PT SPINDO Tbk relied on manual procedures (Lubis & Marpaung, 2025; Pramalegawa et al., 2025; Ramola et al., 2026). Financial staff were required to prepare physical bilyet giro and transfer forms, queue at bank branches, and obtain wet signatures from board members with high mobility

(Class, 2023; Gomes, 2022). This dependence on physical processes and paper-based documentation was not only time-consuming but also created financial security gaps and increased the risk of input errors or delayed payments that could disrupt vendor relationships.

However, the implementation of Corporate Internet Banking services at PT SPINDO Tbk did not completely eliminate operational risks and control weaknesses (Herlambang & Wibowo, 2026; Prasetyo, n.d.; Sazly et al., 2025). Based on initial observations, migration to a digital payment system introduced new challenges, particularly related to infrastructure reliability and the management of access credentials. Technical issues, such as system downtime or internet network disruptions during payment deadlines, could require the company to revert to manual procedures as backup measures. This situation not only triggered potential duplication of work but also had the potential to reduce consistency in the enforcement of daily control procedures (Korol & Korol, 2025; Mainardi, 2025; Yue & Shyu, 2024).

The research gap lies in the limited empirical studies that comprehensively examine the implications of Corporate Internet Banking implementation for internal control effectiveness in manufacturing companies, particularly regarding the integration of digital payment systems with established internal control frameworks, such as the COSO Internal Control Framework and Accounting Information Systems (AIS). Furthermore, limited research has critically examined operational risks and control gaps that remain after digital transformation, including issues related to credential security management and contingency procedures for system failures. The urgency of this research is reinforced by the increasing adoption of digital payment systems among Indonesian manufacturing companies, driven by government initiatives and the demand for operational efficiency, while many organizations may remain unaware of the control weaknesses that can accompany digital transformation (Li et al., 2024; Bueno et al., 2024). Without a comprehensive understanding of how digital payment systems influence internal control effectiveness, companies may implement technologies that introduce new vulnerabilities while attempting to resolve existing operational limitations.

Although banking technologies provide multi-level monitoring and authorization features, inadequate optimization and discipline in managing digital access privileges can leave systems vulnerable to misuse. If these issues are not properly addressed, significant investments in banking technology may not fully mitigate fraud risks.

Therefore, this qualitative research was important for analyzing how reporting reliability, segregation of duties, digital authorization security, and fraud prevention were maintained following the implementation of a new payment system. Based on this background, the researcher selected the title: “Analysis of the Implementation of Corporate Internet Banking in Business Debt Management to Support Internal Control at PT SPINDO Tbk.”

Based on the background described above, the research problem in this study was formulated as follows: What were the implications of implementing Corporate Internet Banking on the effectiveness of internal control in managing accounts payable and vendor payments at PT SPINDO Tbk?

Based on the research problem formulation, this study aimed to analyze the implications of implementing Corporate Internet Banking on the effectiveness of internal control in managing business debts and vendor payments at PT SPINDO Tbk.

METHOD

Research Focus

This descriptive qualitative study focused on the implications of implementing Corporate Internet Banking on the effectiveness of internal control in managing accounts payable and vendor payments at PT SPINDO Tbk. The study was limited to theoretical and research object contexts. Theoretically, the analysis focused on indicators of digital internal control effectiveness, including compliance with authority structures, segregation of duties, system security and credential access management, transaction data reliability and accuracy, and the system's ability to prevent fraudulent activities, such as duplicate payments and data manipulation. Regarding the research object, the study was limited to the accounts payable management and vendor payment workflow within the Finance Division of PT SPINDO Tbk and did not cover the cash receipt cycle or external vendor relationship management.

Research Site (Location)

This research will be carried out at PT Steel Pipe Industry of Indonesia Tbk (PT SPINDO Tbk), the head office located at Jalan Kalibutih Number 189-191 RT.02 RW.05, Tembok Dukuh Village, Bubutan District, Surabaya City, 60173.

PT SPINDO Tbk is a manufacturing company engaged in the production of steel pipes with various applications, ranging from construction, infrastructure, to the oil and gas industry. The company has been operating nationally and internationally, thus managing relationships with vendors on a large and complex scale. The selection of this location is based on the fact that the company has adopted a *Corporate Internet Banking application* as part of its digital transformation initiatives, making it highly relevant to the focus of the research.

Research Informant

The resource persons in this study were chosen deliberately (*purposive*) by limiting the scope only to the internal finance division of PT SPINDO Tbk. This restriction was taken to maintain the effectiveness of the research considering the large number of barriers to access if the vendor was involved as an informant. The selection of informants is based on direct involvement and operational authority in *the Corporate Internet Banking* ecosystem, consisting of the Financial Manager as the person in charge of the final approval decision (*Approver*), the Financial Supervisor as the transaction verifier (*Checker*), and the Financial Staff (*Accounts Payable*) as the technical implementer of data input (*Maker*). Restrictions are imposed on the *Finance division* because it focuses directly on daily cash execution so that the data obtained is truly sourced from the party holding the authorization access rights and experiencing firsthand the dynamics of cash supervision in the field.

Data Types and Sources

The types of data used include primary data and secondary data. Primary data was obtained directly from the results of in-depth interviews with key informants related to the implementation of authorization, separation of functions, system security, and daily *fraud* prevention mechanisms. The secondary data is obtained from non-confidential company documents, such as *flowcharts* of Standard Operating Procedures (SOP) for business debt payments, templates or records of non-nominal transaction verification, and Notes on Financial Statements (CALK) related to accounts receivable as stated in the public *Annual Report* of PT SPINDO Tbk.

Data Collection Techniques

Field data collection is carried out through two main complementary techniques, namely in-depth interviews and documentation. In-depth interviews were conducted in a semi-structured manner using interview guides designed to explore the experiences and facts of the implementation of digital control from informants. Meanwhile, the documentation technique is carried out by collecting, reading, and analyzing the company's *non-confidential supporting documents* to pay attention to the written rules related to the authorization matrix, cash disbursement procedures, and the flow of reconciliation of banking transaction data.

Validity Test

To test the validity of the secondary data and the field results obtained, the researcher applied source triangulation and triangulation techniques. Source triangulation was carried out by comparing the consistency of statements between the top-level informant (Manager) and the daily executor (Financial Staff). Meanwhile, technical triangulation is carried out by crossing the data of in-depth interview results with numerical evidence or written notes in the company's secondary documents.

Data Analysis Methods

The data analysis method is carried out in an interactive qualitative manner through three main stages. The process begins with data reduction, in which the researcher selects, sorts, and discards information from interview transcripts as well as secondary documents that are not relevant to the effectiveness of internal control. The filtered data is then presented in the form of a structured descriptive narrative based on the main indicators of the effectiveness of internal controls, including the clarity of authorization (*maker-checker-approver*), enforcement of separation of duties, discipline of system security and credential access, reliability of transaction data and reconciliation, and effectiveness of *fraud* prevention and handling technical obstacles. The final stage was closed with drawing conclusions and verifying to conclude research findings objectively in answering the problem formulation.

RESULTS AND DISCUSSION

Dynamics of Payment System Change: Before and After *Corporate Internet Banking*

Based on the informants, before switching to *Corporate Internet Banking*, the process of repaying business debts to vendors at PT SPINDO Tbk went through a long manual bureaucracy. In the old system, the Financial Staff had to write checks or bilyet giro and fill out the money transfer form physically. The biggest challenge arose during the wet signature authorization process from the board of directors. Because the board of directors has high mobility, the Financial Manager in charge of requesting the signature never leaves the document on the board of directors' desk. This is done to avoid the risk of documents being slipped, lost, or stacked by files from other departments. The Finance Division usually relies on information from the secretary or security guard to monitor the presence of the board of directors in the office or to know when their meeting is over.

Once the physical signature is obtained, the documents are handed over to the company's courier who is on special duty to go and queue at the bank branch office. The Finance Manager recalls the complexity of this old system:

"Because it cuts a lot of processes that go to the bank, yes, previously there were a lot of banks, you had to check the documents as well, not to mention the wet signatures to the

director... Almost all of them were eliminated except for the document checking process. So it's economical, very time-saving." (Interview with Financial Manager)

After transforming to the *Corporate Internet Banking* platform (in this case using the *Kopra by Mandiri* platform as recorded in the secondary document of the company's system interface), the workflow became much more concise and fast. The presence of this system cuts the dependence on the physical presence of the directors for routine transactions, as the daily *approval rights* are now delegated directly to the Finance Manager through the application. The role of couriers for daily transactions is also reduced because funds can be disbursed in *real-time* from the office.

To make it easier to understand this change, here is a comparison table of workflows before and after the implementation of *Corporate Internet Banking* at PT SPINDO Tbk:

Table 1. Comparison of Payment Systems Before and After the Implementation of *Corporate Internet Banking* at PT SPINDO Tbk

Comparative Aspects	Before the Implementation of <i>Corporate Internet Banking</i>	After the Implementation of <i>Corporate Internet Banking</i>
Transaction Media	Using physical checks, bilyet giro, and paper-based delivery forms.	Based on a corporate <i>internet banking online</i> application (<i>paperless</i>).
Operational & Transaction Costs	Incurred the cost of printing bilyet giro/checks, courier costs/fuel to the bank, and potential fines due to delays.	Cut paper/logistics costs and use <i>bulk payment rates</i> that are more economical and free of penalties.
Lead Time	It took days due to the process of making physical giros, searching for signature directors, and courier trips.	Processed in a matter of hours/minutes in <i>real-time</i> right from the office.
Authorization Procedure	Physically wet signatures of directors; prone to being slipped or delayed in the mobility of the directors.	Tiered digital authorization (<i>Maker-Checker-Approver</i>) uses cryptographic security tokens.
Execution to Bank	Physical documents are brought by special couriers to queue at bank branch offices.	Executed and disbursed instantly from the office through a network of electronic systems.
Mutation Monitoring & Reconciliation	Had to wait until the next day to get a physical newspaper print from the bank.	Accessible, downloaded, and reconciled anytime (<i>real-time</i>) with no day lag.
Accuracy & Account Data Input	Manually write the number and name of the destination account; prone to <i>human error</i> .	The name of the account owner and the amount of the bill appear automatically (<i>auto-validation</i>).
Fraud & Security Risks	Fraud gaps in manual current account writing and the risk of forging physical signatures.	Minimize <i>fraud</i> because access rights are locked based on <i>each person's</i> user ID <i>and</i> token.

Validity of Supporting Documents and Transaction SOP Matrix

Although the banking application offers speed, PT SPINDO Tbk still imposes strict quality control on the validity of supporting documents before transactions are entered into the system. Each transaction category and nominal value has different Standard Operating Procedures (SOP) related to the completeness of the file. However, in general, the basic documents of one transaction must be fulfilled completely, starting from the original invoice, Purchase Order (PO), Goods Receipt Report, tax invoice, invoice receipt, to proof that the

transaction has been recorded in the company's SAP application system. The file must also be equipped with a specimen of a tiered physical signature from the head of department, head of division, tax section, to the board of directors in accordance with the applicable authority limit matrix.

The validity of this document verification is a crucial basis in managing PT SPINDO Tbk's Trade Payables account which is of very large value. Based on the Notes on the Consolidated Financial Statements (CALK) of PT Steel Pipe Industry of Indonesia Tbk and its Subsidiaries (Note 16) as of December 31, 2025 and 2024, the composition of the company's accounts payable is recorded as follows:

PT STEEL PIPE INDUSTRY OF INDONESIA Tbk DAN ENTITAS ANAKNYA	PT STEEL PIPE INDUSTRY OF INDONESIA Tbk AND ITS SUBSIDIARY
CATATAN ATAS LAPORAN KEUANGAN	NOTES TO CONSOLIDATED FINANCIAL
KONSOLIDASIAN - Lanjutan	STATEMENTS - Continued
Pada dan Untuk Tahun Yang Berakhir Tanggal	As of and For The Year Ended
31 Desember 2025 dan 2024	December 31, 2025 and 2024

(Disajikan dalam Jutaan Rupiah, kecuali dinyatakan lain)

(Expressed in Millions of Rupiah, unless otherwise stated)

16. UTANG USAHA

16. TRADE PAYABLES

Akun ini terdiri dari:

This account consists of:

a. Berdasarkan pemasok

a. Suppliers

	2025	2024	
<u>Pihak ketiga</u>			<u>Third parties</u>
Pemasok luar negeri	211.612	271.308	Foreign suppliers
Pemasok dalam negeri	94.762	65.684	Local suppliers
Sub-jumlah	306.374	336.992	Sub-total
<u>Pihak berelasi</u>			<u>Related parties</u>
PT Sarana Surya Sakti	672	676	PT Sarana Surya Sakti
PT Sarana Steel Corporation	33	449	PT Sarana Steel Corporation
Sub-jumlah	705	1.125	Sub-total
Jumlah	307.079	338.117	Total

b. Berdasarkan umur

b. By age

	2025	2024	
<u>Pihak ketiga:</u>			<u>Third parties:</u>
Belum jatuh tempo	221.272	329.177	Not yet due
Telah jatuh tempo:			Past due :
1 - 30 hari	76.225	7.419	1 - 30 days
31 - 60 hari	8.877	248	31 - 60 days
61 - 90 hari	-	-	61 - 90 days
Di atas 90 hari	-	148	Over 90 days
Sub-jumlah	306.374	336.992	Sub-total

(Disajikan dalam Jutaan Rupiah, kecuali dinyatakan lain)

(Expressed in Millions of Rupiah, unless otherwise stated)

16. UTANG USAHA - Lanjutan

16. TRADE PAYABLES - Continued

b. Berdasarkan umur - Lanjutan

b. By age - Continued

	2025	2024	
Pihak berelasi (lihat Catatan 33)			<u>Related parties (see Note 33)</u>
Belum jatuh tempo	210	693	Not yet due
Telah jatuh tempo:			Past due :
1 - 30 hari	495	-	1 - 30 days
31 - 60 hari	-	432	31 - 60 days
61 - 90 hari	-	-	61 - 90 days
Di atas 90 hari	-	-	Over 90 days
Sub-jumlah	705	1.125	Sub-total
Jumlah	307.079	338.117	Total

c. Berdasarkan mata uang

c. By currencies

	2025	2024	
Pihak ketiga			<u>Third parties</u>
Pemasok luar negeri:			Foreign suppliers:
Dolar Amerika Serikat (Catatan 36)	47.535	269.301	United States Dollars (Note 36)
Lain-lain	189.437	2.007	Others
Sub-jumlah	236.972	271.308	Sub-total
Pemasok dalam negeri:			Local suppliers:
Rupiah	69.357	65.682	Indonesian Rupiah
Dolar Amerika Serikat (Catatan 36)	45	2	United States Dollars (Note 36)
Sub-jumlah	69.402	65.684	Sub-total
Pihak berelasi (lihat Catatan 33)			<u>Related parties (see Note 33)</u>
Rupiah	705	1.125	Indonesian Rupiah
Jumlah	307.079	338.117	Total

Tidak terdapat jaminan yang diberikan sehubungan dengan utang usaha tersebut.

There is no collateral provided with regards to trade payables.

Figure 1. Details of Accounts of PT SPINDO Tbk Based on CALK Note 16 (in Millions of Rupiah)

The CALK secondary data shows that the company's total operating debt reaches IDR 307,079 million (in 2025) and IDR 338,117 million (in 2024), with the dominance of payments to foreign suppliers as well as foreign currency (USD) and Rupiah transactions. The complexity and magnitude of this transaction nominal emphasizes the need for caution in the process of validating supporting documents and the accuracy of the payment execution scheme through the Corporate Internet Banking system.

Basic Application of Function Separation: Maker, Checker, and Approver

The Corporate Internet Banking *application* at PT SPINDO Tbk systematically locks employee authority into three separate functions to minimize the risk of negligence and potential *fraud*. Evidence of the implementation of this digital separation of functions can be seen directly in the screenshot of the *Kopra by Mandiri system interface* in the Finance division, where accounts that are actively operated by Finance Staff use special authority with the initials MAKERKP1

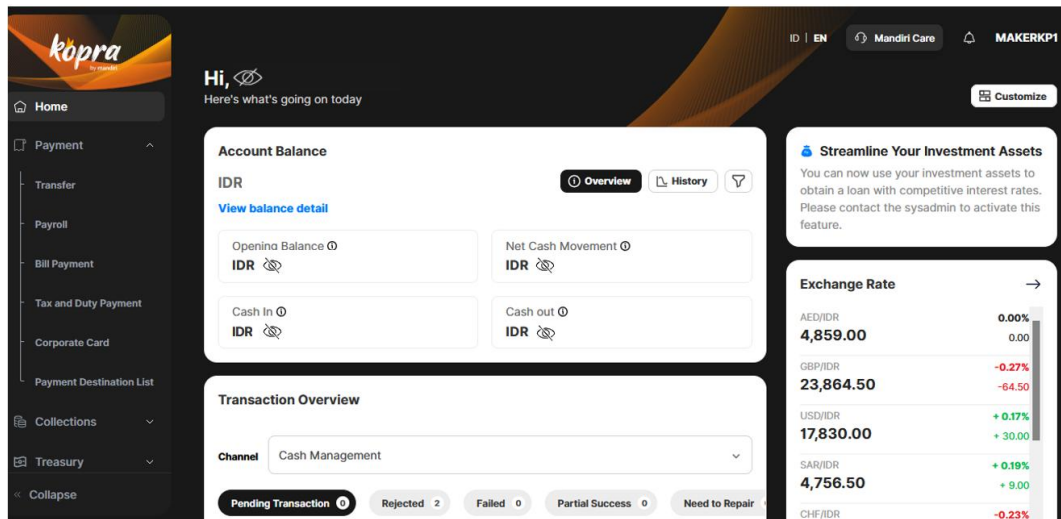


Figure 2. Corporate Internet Banking Dashboard Interface on Kopra by Mandiri

Function Maker (Financial Staff)

Responsible for checking network connections, password expiration dates, and entering bill data. On the Kopra application interface, staff operate main menus such as *Payment* (Transfer, Bill Payment, Tax and Duty Payment). When entering the destination account, if you use a Virtual Account or utility bill (BPJS, PGN, PDAM, Tax) through the *Bill Payment menu*, the system will automatically bring up the nominal and name of the recipient. Meanwhile, for regular bank accounts on the *Transfer menu*, the system directly displays the name of the account owner, but the Finance Staff must fill in the nominal funds manually. The Finance Staff explained the initial verification process:

"Let's input the bill, check the bill, start... Starting from the first date, destination bank, beneficiary bank, name, account number, nominal... Come on, let's get this out of the way, I'm going to have to ask you for help sometimes. Let's go with the flow, to check it out. There's a double check, right?" (Interview with Finance Staff)

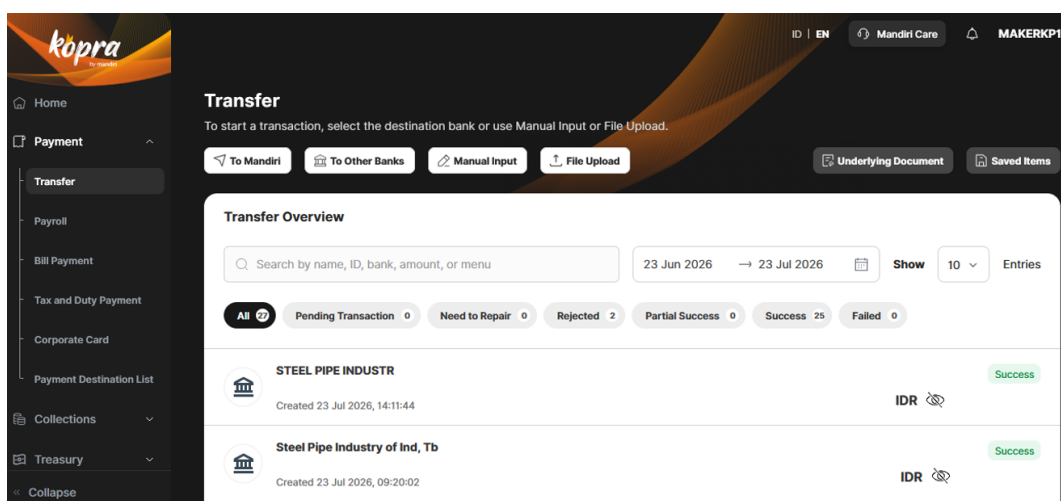


Figure 3. Transfer Transaction Overview on Kopra by Mandiri

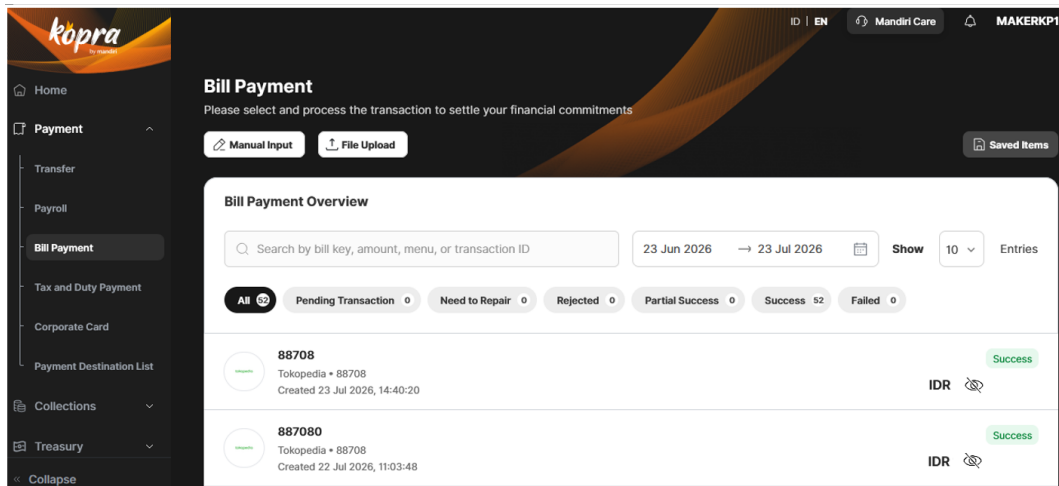


Figure 4. Bill Payment Transaction Overview on Kopra by Mandiri

Functions of Checker (Financial Supervisor)

Responsible for verifying Maker's input draft with physical documents. In the transaction summary (*Transfer Overview* or *Bill Payment Overview*), the Supervisor checks the status of incoming transactions. If an error is found before the draft is submitted (*submitted*), Checker can directly order maker to change the nominal or transaction data. However, if the data has already been sent to the final stage, the draft must be *rejected* and repeated from the beginning. As seen in the secondary data of the company's banking system image, the system transparently displays transaction history categories such as *Pending Transaction*, *Need to Repair*, *Rejected*, *Partial Success*, *Success*, and *Failed*. The Financial Supervisor affirms this rule of the game:

For example... The Fed has already drafted that... A rewrite of the article, for example, or a lack of it. With the help of the Financial Planner and Accountant, the Treasurer... "That is why it has been reverted, and it needs to be reverted." (Interview with Financial Supervisor)

Approver (Financial Manager) Function

Acts as the final breaker of disbursement of funds using security tokens. Financial Managers apply strict audit discipline to maintain the safety of company funds:

"The approver must have his own SOP that for one check, he will not immediately say yes. This means that he already knows the SOP in... In the time when he performs the execution, he has to do it two to three times, even if it's a hurry." (Interview with Financial Manager)

Credential Information Security and Technical Disaster Recovery Plan

The information security aspect in *Corporate Internet Banking* operations at PT SPINDO Tbk is implemented with high discipline to close the gap of abuse of authority. All informants agreed that accounts and access tokens should not be lent or delegated to other colleagues, as each device is legally attached to each employee's personal name. To prevent potential leaks, Financial Staff are required to change passwords periodically in the system. The physical storage of these credentials is done by recording a new password on a special book that is stored tightly in a locked cabinet. However, this includes efforts to mitigate staff senility, which by cybersecurity standards is a physical risk gap.

On the other hand, the Finance Manager as the holder of the highest authority (*Approver*) keeps physical tokens in the office safe, or carries them independently if they have

to carry out tasks outside the city. The strictness of the rules regarding the prohibition of token borrowing is reflected in the statement of the Financial Staff:

"If you want to make a personal statement, ... So yes, it can't be loaned. Right, there's a name... Each name in the bank system exists." (Interview with Finance Staff)

In addition to its commitment to data security, the *Finance* division is also required to be prepared to deal with non-human operational risks such as internet network disruptions (*system downtime*). If there is an internet connection problem during bill processing, the first step taken by the Finance Staff is to coordinate directly with the internal IT division to switch the internet channel.

However, if there is a banking system outage (*downtime*) or the internet connection goes down for a longer period of time while there is a very urgent payment transaction, the company switches the processing procedure back to the manual method. In such an emergency situation, the Financial Staff will immediately create and fill out bilyet giro or cheque manually, process the physical authorization sheet to the authorized winning official, and send a courier to deliver it directly to the branch office of the partner bank so that the disbursement of funds does not experience delays.

The Contribution of the Corporate Internet Banking System to Operational Efficiency and Cash Transparency

The transition from manual payment procedures to the *Corporate Internet Banking* platform at PT SPINDO Tbk brought significant changes to the operational efficiency of the finance division. Referring to Digital Transformation Theory (Bonnet & Westerman, 2020), digitalization not only transforms the transaction medium from paper to screen, but also cuts repetitive and non-value-added workflows.

From the dimension of *time efficiency*, the reduction in transaction duration occurred massively. If previously the disbursement of funds took days due to reliance on the physical signatures of the directors and the courier queue at the bank branch office, now transactions can be completed in minutes in *real-time*. This efficiency is strengthened by the cash mutation monitoring feature that can be accessed 24/7 through the *Statement Report* and *Transaction Report* menus in the banking system. As shown in the visual evidence of the company's corporate banking system, the Finance team can monitor the balance (*Account Balance*), *Net Cash Movement*, *Cash In*, *Cash Out*, and download periodic transaction reports (daily, weekly, monthly) flexibly. The Finance team no longer needs to wait for the physical bank statement printout the next day, so the daily cash reconciliation process runs much faster and more accurately.

In addition to time efficiency, the positive impact can also be seen from the cost *efficiency aspect*. The use of *bulk payment* cuts administrative costs per transaction when compared to the use of bilyet giro or manual transfers per entity. These savings also include reducing logistics costs (paper, printing, courier operations) and minimizing the risk of *late payment penalties* from vendors due to bureaucratic delays in internal verification. The smooth payment of this payment significantly contributes to maintaining the stability of cash flow on business debt worth IDR 307,079 million by the end of 2025, of which the largest portion, namely IDR 221,272 million, is in an unmaturing status. Digitization of the payment system does not aim to reduce the balance of accounts payable (which is highly dependent on the volume of raw material purchases/operations of the company), but rather to increase *turnover rate*

(processing speed), transparency of trails, and accuracy of payment deadlines (preventing fines/penalties). These findings are in line with the research of Tasya et al. (2024) which affirms that the integration of Cash Management System (CMS) in the manufacturing industry has been proven to improve time efficiency as well as daily cash flow transparency.

Internal Control Analysis Based on the COSO Framework and Accounting Information System (SIA)

Internal control over vendor bill payment transactions at PT Steel Pipe Industry of Indonesia Tbk (SPINDO) is analyzed through the integration of the Accounting Information

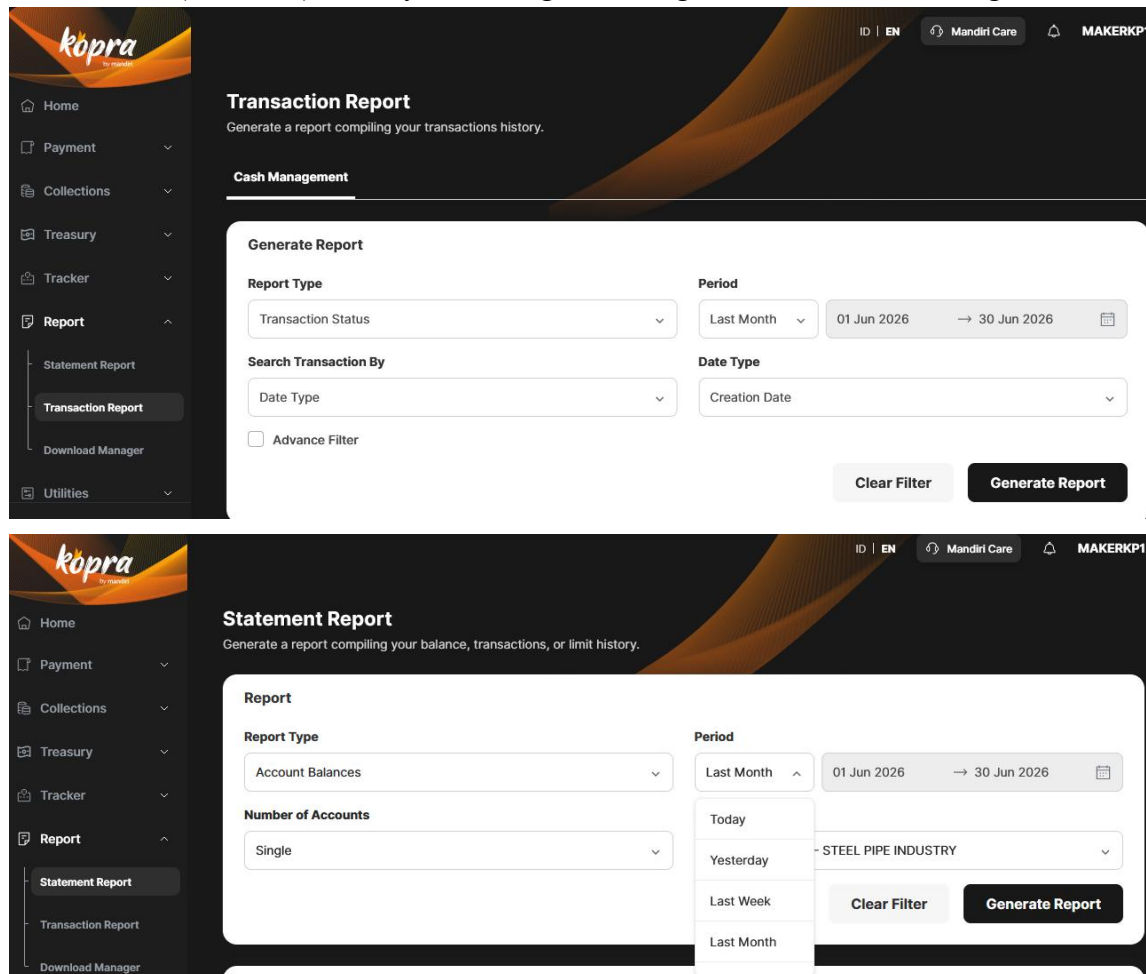


Figure 5. Transaction and Statement Report Features on Kopra by Mandiri

System components (Input, Process, Output) and the five components of COSO's internal control:

Input Controls & Control Environment

1. Supporting Document Compliance: Compliance with the validity of supporting documents such as *Purchase Order* (PO), *Goods Receipt Report* (LPB), *Invoice*, and *Tax Invoice* (*three-way matching*) shows that the company is not sacrificing accounting prudence in order to pursue digital speed [*COSO Control Activities*].
2. System Automatic Validation: The automation feature for validating the account owner's name and *Virtual Account number* in the Kopra by Mandiri banking application (such as in the *Bill Payment* and *Transfer menu*) has been proven to minimize the potential for *human*

error or destination account errors that often occur in the manual system [*COSO Risk Assessment*].

3. SOP Basis: This input procedure refers to SOP No. FI-AC/SPD/11 of 2016 concerning "*Procedure for Bill Payment from Suppliers/Vendors*". Although this written SOP has not been updated specifically for the operation of digital banking platforms, the discipline of input verification is maintained through the commitment of management and staff [*(COSO Control Environment)*].

	PT. STEEL PIPE INDUSTRY OF INDONESIA, Tbk (SPINDO)	Doc No	: FI-AC/SPD/11
		Revision	: 0
		Date	: 12-13-2016
		Page	: 3 of 4
SUPPLIER/VENDOR BILL PAYMENT PROCEDURE			
5.2. Bank Admin		There are 2 payment methods that must be determined, namely: • If payment is determined by transfer: a. Make a "payment instruction" to the designated bank by filling in the nominal amount to be paid. b. "Payment order" is approved and signed by a certain party on the day before (H-1) sending it to the bank. - payment" to a "order c. Sending predetermined bank. d. Record payment transactions into the system according to the "daily bank account". • If payment is determined using BG/Cheque: a. Make payment for transaction by crediting BG/Cheque recording the "Cheque in Transit" account. b. Print the BG/Check by filling in the name of the supplier/vendor who will receive the payment and other information. Then, hand it over to the supplier/vendor concerned and sign the copy of the BG/Check. c. A copy of the BG/Cheque that has been signed by the vendor is archived as proof that payment has been made.	

Figure 6. Internal Control Framework for Corporate Internet Banking Transactions

Processing Controls & Authorization Activities

1. Segregation of Duties: Payment processing at *Kopra by Mandiri* implements a tiered authorization scheme, namely *Maker* (staff), *Checker* (supervisor), and *Approver* (manager) [*COSO Control Activity*].

2. Managerial Prudence: To mitigate the risk of mispayment or default, the Financial Manager applies 2–3 *double/triple checks on the completeness of documents and the availability of funds before granting approval, even when transactions are in urgent circumstances* [COSO Risk Assessment].

Output Controls, Information & Monitoring

1. Information Flow Transparency: The *Transaction Report*, *Statement Report*, and real-time transaction status (*Success*, *Pending*, *Rejected*) features on *Kopra by Mandiri* provide accurate and transparent output information for accounting and cash reconciliation needs [(COSO Information & Communication)].
2. Periodic Monitoring Mechanism: Monitoring of system outputs is carried out through a *peer-review* mechanism or *cross-checking* between staff within the Finance Division to ensure the compatibility between *proof of Kopra* transfers, *payment vouchers*, and *recording on the general ledger* [(COSO Monitoring/Monitoring)].

Critical Analysis of Operational Risks and Internal Control Gaps

Although the *Corporate Internet Banking system* has improved the effectiveness of supervision, this study found two aspects of operational risk that require critical evaluation from the point of view of accounting internal controls:

Reliance on Technical Networks and the Effectiveness of Contingency Procedures (Manual Backup)

The findings of the study show that when there is an internet network outage (*system downtime*) during an urgent payment deadline, the *Finance division* relies on coordination with the IT team for network switching or reverting to the manual procedure for generating physical bills/cheques.

Operationally, the switch to manual procedures has proven to be a pragmatic *safety net* so that good relations with vendors are maintained and factory operations are not disrupted. However, from the perspective of internal control of accounting and the COSO framework (2013), the abrupt transition from digital to manual systems during emergency situations has a higher level of vulnerability (*operational risk exposure*). Manual processes reduce the risk of *human error* in nominal/account writing, require extra time allocation for physical authorization mobility, and slow down *real-time updates*. Therefore, companies need to strengthen IT infrastructure resilience so that reliance on manual procedures can be minimized to the maximum.

Password Credentials Physical Security Vulnerability

In terms of digital security, the *Maker* staff records regular updates of account *passwords* in a special book stored in a locked cabinet. Based on the *Technology Acceptance Model* (Davis, 1989) and information security standards, recording passwords on physical media (paper) is classified as a *physical security risk*. Even though the closet is locked, the existence of a physical record of the *password* still opens a gap in readability by those who manage to access the area illegally.

Technology Acceptance Model (TAM)

The implementation of Corporate Internet Banking (CIB) *Kopra by Mandiri* at PT SPINDO Tbk can be analyzed using the Technology Acceptance Model (TAM) framework developed by Davis (1989). Based on the results of interviews and field observations, the

acceptance of technology by users (user acceptance) in the finance department environment is driven by two main constructs:

Perceived Usefulness

Staff and authorisation officers reflect that CIB provides very high use value and tangible benefits to their daily work performance. CIB's ability to cut vendor payment processing lead time from 2–3 business days to real-time, minimize the risk of late fines, and provide integrated cash flow visibility has been proven to significantly improve operational efficiency. This encourages full adoption by all levels of management because this technology is considered to be directly able to solve the bureaucratic obstacles of manual payments.

Perceived Ease of Use

From the convenience aspect, the interface of the Kopra by Mandiri platform is designed intuitively with excellent features in the form of auto-validation (especially for Virtual Account transactions and account owner name validation), account numbers are also stored in history so staff can directly input the nominal, and also can be made directly for the schedule date so that staff can organize their work load. This feature dramatically minimizes staff concerns about data input errors (human error). Although in the early stages of migration there was a learning curve related to the management of physical credentials (such as Hard/Soft Tokens) and concerns about system downtime, the perception of ease of use remains high because digital workflows are considered much more flexible than the physical signing of bilyet giro documents in stages.

Thus, the integration between high benefit perception and adequate ease of use has formed a positive behavioral intention to use in PT SPINDO Tbk. This triggered a shift in work culture from a conventional paper-based system to a digital-based cash management ecosystem.

CONCLUSION

Based on the results of the research on the implementation of Corporate Internet Banking in accounts payable management to support internal control at PT SPINDO Tbk, it was concluded that the implementation of Kopra by Mandiri improved operational efficiency, cash flow transparency, and internal control effectiveness through the digitalization of payment processes, the elimination of manual procedures, and the application of tiered authorization principles in accordance with the Accounting Information System (AIS) and the COSO framework. The system accelerated vendor payment processes, reduced the risk of human error, prevented duplicate payments, and provided audit trails that supported reconciliation and management oversight. However, several operational risks remained, particularly the reliance on manual procedures during system outages and weaknesses in credential management due to the use of physical password records. Therefore, PT SPINDO Tbk was advised to update digital payment SOPs, strengthen information technology infrastructure through network backup systems, and implement secure digital credential management practices. Future research may expand this study by integrating digital accounting aspects through ERP/SAP systems and examining the impact of electronic payment system implementation on supply chain efficiency from the vendor perspective.

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