



Empowering a Small Enterprise through Community Engagement: Redesigning Revenue Systems Using Microsoft Excel

Diah Hari Suryaningrum^{1*}, M. David Hardiansyah², Silvia Frahmadani¹, Lazuardy Syahputra³, Tatsuya Akashi⁴

¹ Faculty of Economics and Business, Universitas Pembangunan Nasional Veteran Jawa Timur, Jl. Raya Rungkut Madya, Gunung Anyar, East Java, Indonesia

² Faculty of Economics and Business, Universitas Brawijaya, Jl. Veteran No.1, RW.4, Ketawanggede, Lowokwaru, Malang, East Java, Indonesia.

³ STIE Port Numbay Jayapura, Jl. Beringin, Entrop, Distrik Jayapura Selatan, Kota Jayapura, Papua.

⁴ College of International Management, Ritsumeikan Asia Pacific University, Building A, Beppu, Oita, Japan

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ABSTRACT

Purpose: This study describes the procedure for posting revenue data to an Excel-based accounts receivable subsidiary ledger for an SMSE – CV SMN and identifies the obstacles that arise in the posting process together with their solutions. CV SMN is a local food trading company located in Malang Regency.

Method: A qualitative descriptive single case study was conducted during an internship at an accounting services office. Data were obtained through participant observation, consultations with the field supervisor, and documentation of the client's 2024 revenue recapitulation, customer list, payment records, and the office's working papers, and were analysed by comparing practice with accounts receivable, credit sales, and internal control concepts.

Findings: The posting procedure consists of four stages: reviewing initial client information, requesting source data, entering data into a subsidiary ledger organised as one sheet per customer, and compiling an overall receivables recapitulation. Each customer sheet records the transaction date, invoice number, item details, billed amount, payment date, payment amount, payment method, running balance, and payment status (paid, unpaid, or partially paid). Totals placed above each column are linked to the recapitulation sheet, whose ending balance supports the receivables reported in the statement of financial position and the notes to the financial statements. The main obstacles were duplicate customer names, misspelled customer names, and ending-balance discrepancies caused by formulas that were not extended or by input errors.

Implication: The procedure can be used as a training and reference tool for junior accounting staff and small businesses (SDG 8). Customer codes, naming standards, periodic verification, and staff training are needed to keep receivable balances reliable.

Originality: The study documents a practice-based posting procedure and links each step and obstacle to receivable control concepts in a small trading company setting.

Keywords: accounts receivable, subsidiary ledger, revenue posting, Microsoft Excel, internal control, SDG 8.

JEL Classification: A22, L81, M15, M41

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Correspondence:

* Diah Hari Suryaningrum and Email: suryaningrumharidiah@gmail.com



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1. INTRODUCTION

In corporate financial management, accurate recording and reporting are non-negotiable. An accounts receivable subsidiary ledger records the details of each customer's receivable, enabling the company to track payment status, identify problem receivables, and estimate cash inflows; recording receivables properly is what allows collection to be organised and funds tied up in receivables to be managed (Wiyati, 2022). For trading companies that sell on credit to many customers, the receivables subsidiary ledger is the main source of information for collection and credit control (Mulyadi, 2016).

Despite its importance, recording in the receivables subsidiary ledger often faces obstacles, particularly data-entry errors caused by carelessness and by ineffective recording systems. Improper grouping of receivables, for example combining receivables from different customers in one account, also makes it difficult to trace payments. Receivable accounts are prone to recording errors and to the risk of non-collection, and balances that do not reflect actual conditions reduce the reliability of the financial statements on which investors, creditors, and management base their decisions (Faza & Kirana, 2026).

To prevent such problems, studies of receivable control in service and trading firms recommend formal operating procedures, routine verification of invoices and collection reports, and training for the staff responsible for recording (Zahura & Hamdani, 2024; Ariyati, 2019). In small and medium entities, the recording system is often implemented as a Microsoft Excel workbook prepared by an accounting services office. Its effectiveness depends heavily on the design of the workbook, the integrity of its formulas, and the verification procedures applied (Romney & Steinbart, 2018); research on spreadsheets has shown that formula and data-entry errors are common in operational workbooks (Panko, 1998; Powell et al., 2008).

The first author experienced this context during the Merdeka Belajar Kampus Merdeka (MBKM) internship programme at the accounting services office (Kantor Jasa Akuntansi, KJA) Arif, Wahyudi & Lukman, when he was assigned to post the revenue data of one of the office's clients, CV SMN, to the receivables subsidiary ledger. The MBKM programme places students in workplaces for an extended period so that they can apply accounting concepts to real tasks, and the posting of receivables is one of the most common assignments given to interns in accounting services offices. Documenting how this task is actually performed, including the errors that occur, therefore has value both for practice and for accounting education. Based on this experience, the study aims (1) to describe the procedure for posting revenue to an Excel-based receivables subsidiary ledger and (2) to identify the obstacles that arise in the posting process and their solutions. The results are expected to serve as a practical reference for new accounting staff and as training material for teams that manage receivables. The remainder of the article reviews the relevant literature, describes the method, presents the four posting stages and the obstacles encountered, discusses the controls that the procedure embodies, and concludes with implications and limitations.

2. LITERATURE REVIEW

2.1 Revenue and Credit Sales

Sales are a core operating activity of a company and can be made in cash or on credit (Mulyadi, 2016). In a credit sale, the company delivers goods or services before receiving payment, giving rise to an account receivable that represents a right to receive cash in the future. In a cash sale, goods are delivered only after payment has been received in full, so there is no risk of default. The information that management needs from credit sales includes revenue by product, the receivable of each debtor, the cost of the products sold, the identity of buyers, quantities, salespeople, and authorisation by the responsible officer (Mulyadi, 2016).

A credit sales system involves the sales, credit, warehouse, shipping, billing, and accounting functions. The accounting function is responsible for recording the receivables arising from credit sales, preparing and sending statements to debtors, and preparing sales reports (Mulyadi, 2016). Separating these functions is part of internal control over the revenue cycle (Romney & Steinbart, 2018). Revenue must also be recognised in the correct period and reconciled with the related receivables, a requirement that becomes more demanding as the number of transactions and payment channels increases (Fila & Suhartini, 2025).

2.2 Accounts Receivable

A receivable is a claim on customers or other parties to receive money, goods, or services in the future as a result of goods or services delivered now (Mulyadi, 2016). Kieso et al. (2017) emphasise that trade receivables are financial assets arising from credit sales contracts, while Warren et al. (2017) define accounts receivable as amounts owed by customers for goods or services purchased. Warren et al. (2017) classify receivables into accounts receivable, notes receivable, and other receivables. The receivable information reported to management includes each debtor's balance, repayment history, and the age of receivables (Mulyadi, 2016). Studies of receivable management in Indonesian companies show that payments made in instalments or after the agreed term increase the risk of late collection and require procedures that monitor each customer's position (Yuliati & Badruzzaman, 2023).

2.3 Accounts Receivable Subsidiary Ledger

The receivables subsidiary ledger, or receivable card, is an accounting record that details the changes in and balance of the receivable of each debtor and serves as the source for preparing statements of account (Mulyadi, 2016). Complete records allow a company to analyse customer payment behaviour, identify collection problems, and support the audit process; auditors rely on the ledger detail and the invoice trail when testing receivable balances (Ningsih & Purwanti, 2022; Faza & Kirana, 2026). The components recorded include sales information (date, invoice number, item details, and billed amount), payment information (date, amount, and payment method), and the ending balance and settlement status (Ludfi et al., 2022). Visual and digital learning materials on subsidiary ledgers for trading companies emphasise the same components because they are the minimum needed to trace a balance back to its transactions (Hafidz & Putri, 2024).

2.4 Internal Control over Receivables and Spreadsheet Risk

Internal control over receivables aims to ensure that every credit sale is recorded, that every payment is applied to the correct customer, and that balances are complete and accurate. Weaknesses observed in practice include inconsistent collection reporting, infrequent verification of invoices, and the absence of formal procedures (Zahura & Hamdani, 2024), as well as weak monitoring that allows bad debts to accumulate (Ariyati, 2019). Master data such as customer names and codes are a particular concern: if a customer can be represented in more than one way, payments may be applied to the wrong account (Romney & Steinbart, 2018).

When the receivables ledger is kept in a spreadsheet, an additional layer of risk arises. Studies of spreadsheet errors show that mechanical errors (such as wrong cell references), logic errors, and omissions (such as formulas not extended to new rows) are frequent and that developers tend to overestimate the accuracy of their workbooks (Panko, 1998; Powell et al., 2008). Simple Excel-based accounting tools can nevertheless serve small businesses well when they are structured carefully and reviewed regularly (Novita & Wulanditya, 2020).

2.5 Revenue Recognition and the Timing of Posting

The point at which a receivable is posted depends on when revenue is recognised. Under the revenue standard adopted in Indonesia, which follows IFRS 15, revenue from the sale of goods is recognised when control of the goods passes to the customer, usually on delivery, and a receivable is recognised at the same time if the customer has not yet paid (Kieso et al., 2017). For a trading company such as CV SMN, the invoice date is therefore a practical proxy for the recognition date, provided that invoices are issued when goods are delivered. When payments arrive through several channels, including cash, bank transfer, and digital payment, revenue and receivables must be reconciled regularly so that each payment is matched with the invoice it settles (Fila & Suhartini, 2025). Cut-off is particularly important

at year end: invoices dated in December but delivered in January, or payments received in January for December invoices, must be assigned to the correct period for the receivable balance to be fairly stated.

3. RESEARCH METHOD

3.1 Research Design

This study uses a qualitative descriptive approach with a single case study design (Yin, 2018). This design was chosen because the aim is to describe in detail the revenue posting procedure as it is carried out in a real work context (Sugiyono, 2019).

3.2 Research Object and Data Collection

The object of the study is the receivables subsidiary ledger of CV SMN, a trading company dealing in local food products and a client of KJA Arif, Wahyudi & Lukman. The client's name is anonymised for confidentiality. CV SMN has several types of receivables, namely trade receivables, employee receivables, related-party receivables, and other receivables; this study focuses on trade receivables for 2024. Data were collected through participant observation while the first author carried out the posting and through documentation of the operating revenue recapitulation, the list of customer names, customer payment information, and the KJA's working papers. The procedure and the obstacles were also discussed in informal interviews with the field supervisor at the KJA.

The first author's role was that of an accounting intern under the supervision of the KJA's field supervisor. His tasks included receiving the client's data, setting up customer sheets from the office template, posting invoices and payments, preparing the recapitulation, and reporting discrepancies to the supervisor. This position gave direct access to the working process but also means that the description reflects the perspective of a participant; to limit this bias, the procedure as observed was compared with the office template and with the final working papers reviewed by the supervisor.

"For this client we keep one sheet for every customer, because they have many regular buyers who pay at different times. The recap sheet is what we use for the balance sheet and the notes." (Field supervisor)

3.3 Data Analysis

The analysis was descriptive and qualitative and involved data reduction, data display, and conclusion drawing. The posting stages observed were mapped in a flow diagram, and each component of the subsidiary ledger and each obstacle found was then compared with the concepts of credit sales, receivables, subsidiary ledgers, and internal control described in the literature review.

4. RESULTS AND DISCUSSION

4.1. Results

The procedure for posting revenue to CV SMN's receivables subsidiary ledger consists of four main stages, plus the handling of obstacles that may arise at the input or recapitulation stage, as summarised in Figure 1.

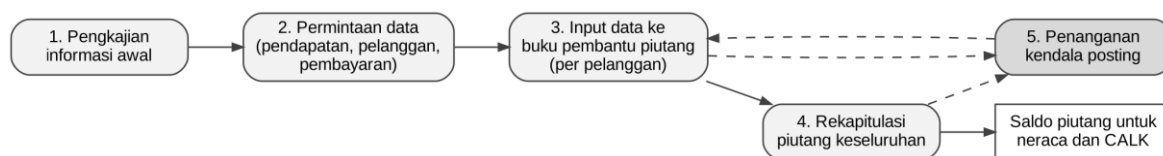


Figure 1. Flow of the Revenue Posting Procedure to the Receivables Subsidiary Ledger

Source: Compiled by the authors (2024)

4.1.1. Reviewing Initial Information

The first stage is to understand the client's characteristics: the company name, types of revenue, categories of receivables managed, and the period being worked on. For CV SMN, the work focused on trade receivables for 2024. The company name, type of receivable, and period must be stated as a heading at the top of the subsidiary ledger template so that each working paper can be identified clearly when it is reviewed by a supervisor or auditor (Figure 2 shows this heading: the company name, "Piutang Penjualan" (sales receivables), and "Tahun 2024").

"Before you post anything, make sure you know which receivable you are working on and for which year. This client also has employee and related-party receivables, and those must not be mixed with trade receivables." (Field supervisor)

This stage may appear administrative, but it embodies an important control: by defining the scope of the ledger before any data are entered, it prevents receivables of different natures from being combined. Mixing trade receivables with employee or related-party receivables would distort both the trade receivable balance and the analysis of customer payment behaviour, and it would complicate the disclosure of related-party balances in the notes to the financial statements (Kieso et al., 2017).

4.1.2. Requesting Data

Requesting data provides the foundation for the following stages because it involves collecting source documents relevant to revenue and other financial transactions. The three groups of data requested from the client are summarised in Table 1.

Table 1. Data Requested for Posting Revenue to the Receivables Subsidiary Ledger

Type of data	Content	Use in posting
Operating revenue data	Transaction date, invoice number/transaction code, item details, and billed amount	Record the receivable arising from each sale
Customer list	Customer names based on transaction data	Ensure that each transaction can be traced to the correct customer
Customer payment information	Date, method, and amount of payment	Match payments with the related receivables and update their status

Source: Compiled by the authors (2024)

Each group of data serves a distinct control purpose. Revenue data establish the completeness of the receivables recorded; the customer list establishes the identity of the accounts to which transactions are posted; and payment information establishes which receivables have been settled. If any one of the three is incomplete, the ledger will either understate receivables (missing invoices), misstate individual customer balances (wrong customer), or overstate outstanding balances (missing payments).

"We ask the client for three things: the revenue recap, the list of customers, and the payment data. If the payment data are late, the balances will look larger than they really are, so we wait until all three are complete." (Field supervisor)

4.1.3. Entering Data into the Receivables Subsidiary Ledger

The subsidiary ledger is prepared in Microsoft Excel because of its flexibility in processing data through automatic formulas, its adjustable format, and its reusable templates. The approach used is one sheet per customer, so that all of a customer's transactions are recorded in one place and the risk of mixing data between customers is reduced. The general appearance of the ledger is shown in Figure 2, and its columns are summarised in Table 2.

Data are entered in four steps. First, the sales information is entered, consisting of the transaction date, invoice number or transaction code, item details (item code, item name, quantity, and selling price), and the billed amount (Figure 3). The transaction date determines the period and due date, while the invoice number provides an audit trail to the supporting documents (Ningsih & Purwanti,

2022). The total of each component is calculated with the =SUM function and placed above the relevant column so that it is easy to read and reference.

CV. [REDACTED]																				
Piutang Penjualan																				
Tahun 2024																				
										362	724,000	20,067,030			15,312,000					
No	Tgl Inv	Kode Transaksi	Kode Barang	Nama Barang	Qty	Harga Jual	Rupiah	Pembayaran			Saldo	Keterangan								
								Tanggal Pembayaran	Rupiah Pembayaran	Kas/Bank										
										Saldo Awal	-									
1	01-Jan-24	80718/JL/UTM/0124	SWG	HM SWIFT G	27	53,000.00	1,442,660	01-Jan-24	1,442,000		660	belum lunas								
2	26-Jan-24	81826/JL/UTM/0124	HMI	HM IBP	27	49,000.00	1,333,290	26-Jan-24	1,333,290	kas	660									
3	26-Jan-24	81826/JL/UTM/0124	SWG	HM SWIFT G	27	53,000.00	1,442,660	26-Jan-24	1,441,710		1,610	belum lunas								
4	27-Jan-24	81832/JL/UTM/0124	SNF	SLICE NON FAT	6	55,000.00	330,000	27-Jan-24	330,000	kas	1,610									
5	30-Jan-24	81988/JL/UTM/0124	SWG	HM SWIFT G	27	53,000.00	1,442,660	30-Jan-24	1,442,660	kas	1,610									
6	30-Jan-24	81988/JL/UTM/0124	OT	OTAK	30	33,000.00	990,000	30-Jan-24	990,340	kas	1,270									
7	01-Mar-24	83231/JL/UTM/0324	HM969	HEAT MEAT 969	27	52,000.00	1,415,440	01-Mar-24	1,415,000	kas	1,710									
8	01-Mar-24	83258/JL/UTM/0324	PRS	PARU SWIFT	57	42,000.00	2,412,480				2,414,190	belum lunas								
9	04-Mar-24	83371/JL/UTM/0324	SWG	HM SWIFT G	27	55,000.00	1,497,100	04-Mar-24	1,497,000		2,414,290	belum lunas								

Figure 2. CV SMN Receivables Subsidiary Ledger

Source: KJA AWL working papers (2024)

Table 2. Columns of a Customer Sheet in the Receivables Subsidiary Ledger

Group	Column	Function
Sales information	No., invoice date, transaction code, item code, item name, quantity, selling price, amount	Records the receivable arising from each sale and provides an audit trail to the invoice
Payment information	Payment date, payment amount, cash/bank	Records settlements and the channel through which cash was received
Balance and status	Balance, remarks (status)	Shows the running balance after each transaction and whether it is paid, unpaid, or partially paid
Column totals	Placed above each column	Provide totals of quantities, amounts billed, and payments for the recapitulation sheet

Source: Compiled by the authors from the working papers (2024)

CV. SMN							
Piutang Penjualan							
Tahun 2024							
						362	724,000
						20,067,030	
No	Tgl Inv	Kode Transaksi	Kode Barang	Nama Barang	Qty	Harga Jual	Rupiah
1	01-Jan-24	80718/JL/UTM/0124	SWG	HM SWIFT G	27	53,000.00	1,442,660
2	26-Jan-24	81826/JL/UTM/0124	HMI	HM IBP	27	49,000.00	1,333,290
3	26-Jan-24	81826/JL/UTM/0124	SWG	HM SWIFT G	27	53,000.00	1,442,660
4	27-Jan-24	81832/JL/UTM/0124	SNF	SLICE NON FAT	6	55,000.00	330,000
5	30-Jan-24	81988/JL/UTM/0124	SWG	HM SWIFT G	27	53,000.00	1,442,660

Figure 3. Sales Information in the Receivables Subsidiary Ledger

Source: KJA AWL working papers (2024)

"The invoice number is the most important column for me, because when the auditor or the client asks about a balance, that is how we find the original invoice." (Field supervisor)

Second, the payment data are entered, consisting of the payment date, the amount received according to the transfer receipt, cash receipt, cheque, or deposit slip, and the payment method (cash or bank) (Figure 4). Payment amounts are also totalled with =SUM and placed above the column. Recording the payment method helps trace cash inflows through the various channels and supports the reconciliation of receipts with the cash book and bank statements (Fila & Suhartini, 2025).

	15,312,000	
Pembayaran		
Tanggal Pembayaran	Rupiah Pembayaran	Kas/Bank
01-Jan-24	1,442,000	
26-Jan-24	1,333,290	kas
26-Jan-24	1,441,710	
27-Jan-24	330,000	kas
30-Jan-24	1,442,660	kas

Figure 4. Payment Information in the Receivables Subsidiary Ledger

Source: KJA AWL working papers (2024)

Third, the ending balance of the receivable is calculated for each transaction line as the previous balance plus the amount billed minus the payment (Figure 5). A zero balance after payment indicates a transaction settled immediately, while a remaining balance indicates a credit transaction still to be collected. Fourth, the payment status is recorded in one of three categories: paid, unpaid, or partially paid (Ludfi et al., 2022). The status facilitates the setting of collection priorities and prevents customers who have already paid from being billed again.

Saldo	Keterangan
-	
660	belum lunas
660	
1,610	belum lunas
1,610	
1,610	
1,270	
1,710	
2,414,190	belum lunas
2,414,290	belum lunas

Figure 5. Ending Balance and Receivable Status in the Receivables Subsidiary Ledger

Source: KJA AWL working papers (2024)

The working papers also reveal a practical issue that the status column helps to expose. In several lines of Figure 2, the customer paid a slightly rounded-down amount (for example, an invoice of IDR 1,442,660 settled with a payment of IDR 1,442,000), leaving a residual balance of a few hundred rupiah that is marked as unpaid. Over a year, such residuals accumulate in the running balance. The status logic therefore needs a clear policy, agreed with the client, on whether small rounding differences are written off as sales discounts or kept as receivables. The logic for assigning status is summarised in Table 3.

“Some customers round down when they transfer, so a few hundred rupiah stay open. We mark it as unpaid first and ask the client whether it should be written off, so the balance is not wrong at the end of the year.” (Field supervisor)

Table 3. Logic for Assigning Payment Status

Condition	Status	Follow-up
Payment = amount billed (balance becomes zero)	Paid	No further collection
No payment recorded	Unpaid	Include in collection list according to due date
0 < payment < amount billed	Partially paid	Collect the remaining balance; confirm whether a small residual is a rounding difference to be written off

Source: Compiled by the authors (2024)

4.1.4. Overall Receivables Recapitulation

After all customer sheets have been completed, a recapitulation sheet is prepared containing the customer name, total billed, total payments, and the ending balance of each customer (Figure 6). Total billed and total payments are taken from the total row of each customer sheet using cell-reference formulas (=), so that changes in a customer sheet are reflected automatically in the recapitulation. The grand total is calculated with =SUM and placed at the top. In the working paper shown in Figure 6, the totals for 2024 are IDR 115,514,878,576.70 billed, IDR 101,614,360,579 received, and an ending balance of IDR 13,900,517,998; the ending balance equals total billed minus total received, which provides a simple arithmetic check of the recapitulation.

CV. SMN				
Rekap Piutang				
Tahun 2024		115,514,878,576.70	101,614,360,579	13,900,517,998
No	Nama Pelanggan	TAGIHAN	PEMBAYARAN	SALDO
1	ABAH AZIZ	203,592,080	87,488,540	116,103,540
2	ALEX	73,376,660	Rp 59,873,100	13,503,560
3	AMIN	185,950,480	Rp 155,413,440	30,537,040

Figure 6. CV SMN Receivables Recapitulation

Source: KJA AWL working papers (2024)

The ending balance in this recapitulation is the amount presented in the statement of financial position and in the notes to the financial statements. The recapitulation sheet thus functions as a control account that connects the subsidiary ledger with the general ledger, consistent with the function of subsidiary ledgers described by Mulyadi (2016). The recapitulation also provides the basis for analysing customer payment patterns, for example to identify customers who consistently pay on time and those who are frequently in arrears. The billed total in Figure 6 shows a fractional amount (IDR 0.70), which indicates that some selling prices or amounts are calculated with decimals; rounding amounts to whole rupiah at the line level would prevent such fractions from appearing in reported balances.

“The total in the recap must agree with the trade receivables in the trial balance. If it does not, we go back to the customer sheets, usually the problem is one sheet whose formula did not reach the last row.” (Field supervisor)

4.1.5. Obstacles in the Posting Process and Their Solutions

Three main obstacles were found during posting; they are summarised with their causes and solutions in Table 4.

Table 4. Obstacles in Posting Revenue to the Receivables Subsidiary Ledger and Their Solutions

Obstacle	Cause	Solution applied
Duplicate customer names	Several customers have similar names, for example two customers named "Bu Siti"	Rename the sheets with distinguishing information such as address or customer code (for example, "Bu Siti Surabaya" and "Bu Siti Malang")
Misspelled customer names	Different spellings or names similar to those of other customers	Confirm names with the client's sales/administration staff and apply a naming standard based on official documents (invoices or contracts)
Ending receivable balance does not agree	Formula not extended to the last transaction, formula not adjusted when a sheet is copied, or input errors	Recheck the opening balance, transactions, and ending balance; update the formulas; and match with supporting documents

Source: Compiled by the authors (2024)

The first and second obstacles relate to the integrity of customer master data. In accounting information systems, master data that are not unique and consistent are a major source of posting errors, so input controls in the form of unique customer codes and naming standards are required (Romney & Steinbart, 2018). The working papers show that this solution has been adopted: the sheet tabs carry a sequential customer number in addition to the name, and general (walk-in) customers are labelled explicitly (for example, "312. JERY (UMUM)" and "183. UMUM"), as visible in Figure 2 and Figure 6.

"There are buyers whose names are almost the same, and in the client's recap they are sometimes written differently. When I am not sure, I ask the client's admin which customer it is, and we number the sheets so the same name cannot be used twice." (First author, internship notes)

The third obstacle relates to the reliability of spreadsheet formulas. Because each debtor has a different transaction pattern, copying a format from another sheet must always be followed by a check of the formula range. This finding is consistent with the spreadsheet-error literature, which identifies omitted ranges and incorrect references as among the most frequent errors (Panko, 1998; Powell et al., 2008), and it reinforces the recommendations of Zahura and Hamdani (2024) regarding routine verification and formal procedures, as well as the view of Faza and Kirana (2026) that errors in receivable accounts reduce the quality of the financial statements.

4.2. Discussion

The procedure documented in this study shows how a small accounting services office translates the textbook concept of a receivables subsidiary ledger into a practical workbook. Three design choices stand out. First, the one-sheet-per-customer structure makes each customer's account self-contained, which simplifies the preparation of statements of account and reduces the risk of mixing data, at the cost of a large number of sheets that must be kept consistent. Second, placing totals above each column and linking them to the recapitulation sheet creates a clear control-account relationship between the detail and the summary (Mulyadi, 2016). Third, the status column turns the ledger into a working tool for collection rather than merely a record of balances (Suryaningrum, 2024).

The obstacles show where this design is vulnerable. Because the customer sheets are created by copying a template, every new sheet inherits the formulas of the template, and any change in the number of transaction rows requires the user to extend the formulas manually. A periodic review that compares the recapitulation with the general ledger, checks each sheet's balance formula, and tests a sample of balances against invoices and payment evidence is therefore essential. These checks correspond to the verification and review controls recommended in studies of receivable management (Ariyati, 2019; Yuliati & Badruzzaman, 2023).

The ledger as currently designed does not age the receivables. Because each line already contains the invoice date, an aging schedule could be added by calculating the number of days between the invoice date and the reporting date for each open balance and grouping the results into age bands.

Such a schedule would support both the collection effort and the estimation of an allowance for expected credit losses (Kieso et al., 2017). Given that the 2024 ending balance amounts to almost IDR 13.9 billion, information on the age of these receivables would be valuable for management and for the preparation of the financial statements.

4.2.1. Linking the Subsidiary Ledger to the General Ledger and the Notes

The subsidiary ledger supports two journal entries that recur throughout the year. A credit sale is recorded by debiting trade receivables and crediting sales revenue for the invoiced amount, and a collection is recorded by debiting cash or bank and crediting trade receivables. The subsidiary ledger mirrors these entries at the level of individual customers: the "amount" column corresponds to the debits to receivables, and the payment column corresponds to the credits. At any date, therefore, the sum of the balances in all customer sheets should equal the balance of the trade receivables account in the general ledger (Mulyadi, 2016; Romney & Steinbart, 2018).

In practice, this equality is achieved through a reconciliation performed at the end of each month or, at minimum, at year end. The reconciliation compares the grand total of the recapitulation sheet with the trial balance and investigates any difference. Typical causes, observed during the internship, include invoices posted to a customer sheet but not included in the revenue recapitulation, payments recorded in the bank book but not yet applied to a customer, and customer sheets whose totals do not capture all rows. Each of these has a specific remedy: tracing invoice numbers between the revenue recapitulation and the customer sheets, matching bank mutations with customer payments, and extending the total formulas. The status column also helps, because a customer marked "paid" whose balance is not zero, or a customer marked "unpaid" whose balance is zero, signals an inconsistency that should be investigated.

"Every month we compare the recap with the receivables in the trial balance. Most differences come from payments that went into the bank but were not yet put on the right customer sheet." (Field supervisor)

The recapitulation also provides the information needed for the notes to the financial statements (CALK). The notes typically disclose the composition of receivables by type (trade, employee, related-party, and other receivables), the major debtors, and any allowance for impairment (Kieso et al., 2017). Because CV SMN has several types of receivables, keeping trade receivables in a separate ledger, as defined in the first stage, makes it straightforward to prepare the trade receivables line of the disclosure. The customer-level detail also allows the office to identify concentrations, for example when a small number of customers account for a large share of the outstanding balance, which is relevant both for disclosure and for the client's credit decisions.

4.2.2. Proposed Improvements to the Workbook

Based on the obstacles and the discussion above, several improvements can be made without changing the basic structure of the ledger. They are summarised in Table 5. The common principle is to move controls from the user's memory into the workbook itself, as recommended in studies of spreadsheet risk (Powell et al., 2008) and of internal control over receivables (Zahura & Hamdani, 2024).

These improvements are modest in cost because they use standard spreadsheet functions, yet they address the specific failure points observed in this case. They also make the workbook easier to hand over between staff, which matters in an accounting services office where the same client may be served by different interns or junior staff from year to year. Similar Excel-based designs for small businesses have shown that such structured templates can be maintained by users without accounting software (Novita & Wulanditya, 2020).

Table 5. Proposed Improvements to the Receivables Workbook

Area	Improvement	Expected benefit
Customer master data	A customer master sheet with a unique code, full name, and address for every customer; sheet names generated from the code	Prevents duplicate and misspelled customer names
Data entry	Drop-down lists for customer codes, payment method, and status	Reduces typing errors and inconsistent entries
Formulas	Totals calculated over whole columns or structured tables; formula cells protected	Prevents totals that miss new rows and accidental overwriting
Reconciliation	A control cell comparing the recapitulation total with the trial balance, flagged when the difference is not zero	Makes discrepancies visible immediately
Status	Status derived by formula from the balance, with a tolerance for agreed rounding differences	Ensures consistency between balances and status
Aging	Days outstanding calculated from the invoice date and grouped into age bands	Supports collection and estimation of expected credit losses

Source: Compiled by the authors (2024)

4.2.3. Comparison with Previous Studies

The findings of this case are consistent in several respects with earlier studies of receivable recording in Indonesian entities, while also adding detail on how such recording is carried out in practice by an accounting services office. [Ludfi et al. \(2022\)](#), in their study of a civil-servant cooperative, emphasise that receivable records must show each member's balance and repayment history; the customer sheets at CV SMN fulfil this requirement through the running balance and status columns. [Yulianti and Badruzzaman \(2023\)](#) found that payments made in instalments or after the agreed term complicate receivable management; at CV SMN, partial and rounded payments produce the same effect on a smaller scale, which is why the status logic and the treatment of residual balances matter.

The obstacles identified also echo the control weaknesses described in other studies. [Zahura and Hamdani \(2024\)](#), studying an accounting consulting firm, found that inconsistent collection reporting, irregular invoice verification, and the absence of formal procedures weakened internal control over receivables. At CV SMN, the problems of duplicate names and unextended formulas arise from the same root cause: the procedure depends on the care of individual staff rather than on documented standards built into the workbook. [Ariyati \(2019\)](#) links weak internal control over receivables to higher bad-debt risk; although this study does not measure bad debts, the size of the 2024 ending balance shows that the accuracy of customer-level records has material consequences.

Finally, the case adds to the literature on spreadsheet-based accounting in small entities. Studies of Excel tools for MSMEs have tended to focus on the design of templates ([Novita & Wulanditya, 2020](#)), whereas this study documents how a template is used over a full year with real volumes of transactions, revealing the operational problems that emerge only in use, such as naming conflicts among hundreds of customers and the gradual accumulation of rounding residuals. These are precisely the kinds of errors that the spreadsheet-risk literature predicts but that are rarely documented in accounting case studies ([Panko, 1998](#); [Powell et al., 2008](#)).

“The template itself is not the problem. The problems appear when there are hundreds of customers and a whole year of transactions, so the checking at the end is what keeps the numbers right.” (Field supervisor)

5. CONCLUSION

The procedure for posting revenue to CV SMN's receivables subsidiary ledger consists of four stages: reviewing initial information, requesting data, entering data into a subsidiary ledger organised as one

sheet per customer, and compiling the overall receivables recapitulation. Each customer sheet contains sales information, payment information, the running balance, and the payment status, with column totals linked to the recapitulation sheet. The ending balance in the recapitulation is the basis for presenting receivables in the statement of financial position and the notes to the financial statements.

The obstacles found were duplicate customer names, misspelled customer names, and discrepancies in ending receivable balances. These can be addressed by distinguishing sheet names, confirming and standardising customer names, and rechecking formulas and data against supporting documents.

Beyond the specific case, the study shows that the reliability of a spreadsheet-based receivables ledger rests on three layers of control. The first is the definition of scope and source data, which ensures that the right receivables are recorded from complete documents. The second is the structure of the workbook, in which customer-level sheets, column totals, and a linked recapitulation provide detail and a control total. The third is review, which reconciles the recapitulation with the general ledger, checks formulas, and resolves naming conflicts and residual balances. Weaknesses in any one layer cannot be fully compensated by the others, so all three must be maintained together.

5.1 Implications

In practical terms, the procedure can serve as training material for new accounting staff and as a routine reference for teams that manage receivables, both in accounting services offices and in small businesses. Companies are advised to provide training in receivables management, to verify data periodically against source data and the recapitulation, to agree a policy for small rounding differences, and to use the recapitulation to identify customers who are frequently in arrears as a basis for tightening credit terms or sending earlier payment reminders.

5.2 Limitations and Future Research

The study is limited to one client, one type of receivable (trade receivables), and one period (2024), and it focuses on the technical aspects of recording without analysing the age of receivables or the allowance for doubtful accounts. Future research could develop an aging analysis, test the effectiveness of the procedure across several clients, or compare it with database-based accounting applications.

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Abbreviations

KJA: Kantor Jasa Akuntansi (accounting services office)

MBKM: Merdeka Belajar Kampus Merdeka (Independent Learning, Independent Campus programme)

CALK: Catatan atas Laporan Keuangan (notes to the financial statements)

Authors' Contributions

MDH, SF, LS, and TA collected the data during the internship, prepared the working papers, and wrote the draft manuscript. DHS supervised, guided the conceptual framework, and reviewed and edited the manuscript. All authors have read and approved the final manuscript and the order of authors.

Conflict of Interest

All authors declare there were no financial or non-financial conflicts of interest that influenced this research.

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Availability of Data and Materials

The research data, consisting of working papers and client documents, are not publicly available in order to protect client confidentiality, but they are available from the corresponding author upon reasonable request and with the consent of the parties concerned.

REFERENCES

- Ariyati, A. (2019). Analisis pengendalian internal piutang usaha untuk meminimalkan piutang tak tertagih PT XYZ. *Jurnal Bina Akuntansi*, 6(2), 98–123. <https://doi.org/10.52859/jba.v6i2.64>
- Faza, A. R., & Kirana, N. W. I. (2026). Analisis efektivitas prosedur audit atas akun piutang dan dampaknya terhadap kualitas laporan keuangan klien KAP XYZ. *Jurnal Ekonomi Bisnis Manajemen dan Akuntansi (JEBISMA)*, 3(3). <https://doi.org/10.70197/jebisma.v3i3.188>
- Fila, L. F., & Suhartini, D. (2025). Analisis rekonsiliasi piutang dan pengakuan pendapatan pada penjualan e-commerce: Studi kasus. *Sosio e-Kons*, 17(3), 285–291. <https://doi.org/10.30998/sosioekons.v17i3.1050>
- Hafidz, S. K., & Putri, S. F. (2024). Transformasi pembelajaran AI dan AR untuk kecerdasan visual peserta didik pada materi buku besar pembantu perusahaan dagang. *Prosiding National Seminar on Accounting, Finance, and Economics (NSAFE)*, 4(1). <https://conference.um.ac.id/index.php/nsafe/article/download/9000/3111>
- Kieso, D. E., Weygandt, J. J., & Warfield, T. D. (2017). *Akuntansi keuangan menengah* (IFRS ed.). Salemba Empat.
- Ludfi, A., Malikha, P. L. N., & Pertiwi, D. A. (2022). Analisis penerapan akuntansi piutang pada KPRI Bahagia Depag Kabupaten Jombang. *ABIDUMASY: Jurnal Pengabdian kepada Masyarakat*, 3(2), 33–38. <https://doi.org/10.33752/abidumasy.v3i2.3341>
- Mulyadi. (2016). *Sistem akuntansi* (4th ed.). Salemba Empat.
- Ningsih, W. R., & Purwanti, M. (2022). Proses audit oleh KAP Hartman atas siklus pendapatan dan piutang di PT MUJU tahun 2020. *Prosiding FRIMA (Festival Riset Ilmiah Manajemen dan Akuntansi)*, 4, 252–266. <https://doi.org/10.55916/frima.v0i4.380>
- Novita, S. M., & Wulanditya, P. (2020). Desain Microsoft Excel for accounting bagi UMKM (Studi kasus pada LS Farm Mojokerto). *Jurnal Riset Terapan Akuntansi*, 4(2), 192–205. <https://doi.org/10.5281/zenodo.4275749>
- Nuzulita, N., & Mudjiumami, I. C. (2023). Efektifitas sistem informasi ditinjau dari dimensi kualitas pelayanan. *Indonesian Journal of Sustainability Policy and Technology*, 1(2), 70–81. <https://doi.org/10.61656/ijospat.v1i2.155>
- Panko, R. R. (1998). What we know about spreadsheet errors. *Journal of Organizational and End User Computing*, 10(2), 15–21. <https://doi.org/10.4018/joeuc.1998040102>
- Powell, S. G., Baker, K. R., & Lawson, B. (2008). A critical review of the literature on spreadsheet errors. *Decision Support Systems*, 46(1), 128–138. <https://doi.org/10.1016/j.dss.2008.06.001>
- Romney, M. B., & Steinbart, P. J. (2018). *Accounting information systems* (14th ed.). Pearson.
- Sugiyono. (2019). *Metode penelitian kuantitatif, kualitatif, dan R&D*. Alfabeta.
- Suryaningrum, D.H. (2024). *Modul Pengabdian Kepada Masyarakat: Pengembangan Program Casa UMKM Industri Aksesoris*, Universitas Pembangunan Nasional Veteran Jawa Timur. https://www.academia.edu/125625781/MODUL_PENGABDIAN KEPADA MASYARAKAT PENGEMBANGAN PROGRAM CASA UMKM INDUSTRI AKSESORIS

- Warren, C. S., Reeve, J. M., Duchac, J. E., Wahyuni, E. T., & Jusuf, A. A. (2017). *Pengantar akuntansi 1: Adaptasi Indonesia* (4th ed.). Salemba Empat.
- Wiyati, N. K. D. (2022). Arti penting manajemen dan pencatatan piutang pada usaha mikro berdasar akrual (accrual basis). *HIKMAYO: Jurnal Pengabdian Masyarakat Amayo*, 1(2). <https://doi.org/10.56606/hikmayo.v1i2.73>
- Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.). SAGE Publications.
- Yuliati, S., & Badruzzaman, F. H. (2023). Analisis pengelolaan piutang usaha pada PT. XYZ Bandung. *Referensi: Jurnal Ilmu Manajemen dan Akuntansi*, 11(2), 63–72. <https://doi.org/10.33366/ref.v11i2.5050>
- Zahura, D. A. T., & Hamdani, R. (2024). Analisis efektivitas pengendalian internal dalam proses penjualan dan penagihan piutang: Studi kasus pada perusahaan konsultan jasa akuntansi. *EKOMA: Jurnal Ekonomi, Manajemen, Akuntansi*, 4(2), 3557–3569. <https://doi.org/10.56799/ekoma.v4i2.6275>