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DESIGN OF A FINANCIAL REPORTING MODEL ACCORDING TO EMKM SAK BASED ON MICROSOFT EXCEL

One Lisman[1], Syarief Hidayat[2], Muhammad Taofik Ismail[3], Fahmi Damarjati[4]
[1234]Sangga Buana YPKP University
Email: onelisman949@gmail.com[1], syarief.hidayat@usbypkp.ac.id[2], muhammad.taofik@usbypkp.ac.id[3], fahmi.damarjati@usbypkp.ac.id[4]
Alamat: Jl. PH.H. Mustofa No.68, Cikutra, Kec. Cibeunying Kidul, Kota Bandung, Jawa Barat 40124
Koresprodensi Penulis: onelisman949@gmail.com

Abstrak

Penelitian ini menunjukkan bahwa permasalahan pencatatan keuangan pada UMKM Ranah Community Cell yang masih dilakukan secara manual dan tidak konsisten dapat menyebabkan kerugian finansial serta meningkatkan potensi terjadinya fraud. Penelitian ini bertujuan untuk merancang model pelaporan keuangan berbasis Microsoft Excel yang sesuai dengan Standar Akuntansi Keuangan Entitas Mikro, Kecil, dan Menengah (SAK EMKM).

Model tersebut dirancang untuk memudahkan pencatatan transaksi harian serta penyusunan laporan laba rugi, laporan posisi keuangan, dan catatan atas laporan keuangan secara otomatis. Hasil penelitian menunjukkan bahwa model ini efektif dalam meningkatkan sistematika pencatatan, mengotomatisasi penyusunan laporan, serta memperkuat pengendalian internal sehingga dapat membantu mencegah terjadinya fraud dan kerugian.

Penerapan model ini terbukti praktis, efisien, dan mudah dioperasikan oleh UMKM, serta mendukung pengambilan keputusan yang lebih baik dan meningkatkan akuntabilitas usaha.

Kata kunci: Laporan Keuangan, SAK EMKM, Microsoft Excel

Abstract

This study shows that the problem of financial recording in MSMEs Ranah Community Cell, which is still manual and inconsistent, causes financial losses and potential fraud. The purpose of the study is to design a Microsoft Excel-based financial reporting model that complies with the Financial Accounting Standards for Micro, Small, and Medium Entities (SAK EMKM). This model is designed to facilitate the recording of daily transactions, the preparation of bad reports, financial position reports, and notes to financial statements automatically. The results of the study indicate that this model is effective in improving the systematization of recording, automating report preparation, and strengthening internal controls, thereby preventing fraud and losses. The implementation of this model has proven practical, efficient, and easy to operate by MSMEs, supporting better decision-making and business accountability.

Keywords: Financial Reports, MSME SAK, Microsoft Excel

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) play a strategic role as one of the main pillars of the Indonesian economy. According to national data, the number of MSMEs in Indonesia has reached approximately 65.5 million, representing 99.9% of the total domestic business sector. This sector also contributes significantly to the national Gross Domestic Product (GDP), amounting to 61%, equivalent to an economic value of IDR 9,300 trillion (Perbanas, 2025). This empirical data confirms that the dynamics of MSME economic activity have a direct impact on stability, employment, and macroeconomic growth.

However, despite their massive economic contribution, the majority of MSMEs in Indonesia still face a classic managerial obstacle: a lack of understanding and awareness of the importance of preparing systematic, structured financial reports in accordance with applicable accounting standards. Many local businesses employ a conventional, manual, and rudimentary financial recording system, limited to a summary of nominal cash inflows (income) and outflows (expenses). The weakness of this unintegrated recording system results in a lack of accurate information about the business's assets, liabilities, capital, and actual profitability. This poor financial governance ultimately leads to various negative impacts, such as difficulty in obtaining

access to external financing from banking institutions (bankable), the risk of financial leakage due to fraud, and management's inability to make data-driven strategic business decisions.

The Indonesian Institute of Accountants (IAI) has actually issued the Financial Accounting Standards for Micro, Small, and Medium Entities (SAK EMKM) as a standard guideline explicitly designed to simplify the preparation of financial reports for small businesses (IAI, 2018). SAK EMKM reduces the complexity of conventional accounting standards by requiring only three main financial report components: the Statement of Financial Position (Balance Sheet), the Income Statement, and the Notes to the Financial Statements (CALK). Although this accounting regulation has been implemented, its utilization at the MSME field level is still very minimal due to the constraint of limited human resource competency in understanding the logic of double-entry bookkeeping.

To bridge the gap between the SME Financial Accounting Standards (SAK) regulations and the technical limitations of MSMEs, accounting digitization through the use of data processing software is a crucial solution. Microsoft Excel is one of the most ideal and applicable computer-based spreadsheet applications for small and medium-sized businesses due to its widespread availability, low operational costs, and high flexibility of spreadsheet formulas. Through the integration of automatic functions and formulas in Excel—such as the use of SUM, SUMIF, SUMIFS, VLOOKUP, and the IF logic function—the process of compiling transactions from the general journal into the general ledger, trial balance, and producing the Statement of Financial Position and Profit and Loss Statement can automatically run efficiently without requiring an in-depth understanding of accounting from its users (Kristanto, 2018; Marwanta, 2020).

Previous research has extensively examined the design of spreadsheet-based accounting systems for MSMEs. Research conducted by Prasetyo (2021) demonstrated that digitizing financial reports using Excel significantly improves reporting efficiency and financial data accuracy in the trading sector. Furthermore, a study by Utami and Wijaya (2023) confirmed that computer-automated standardized accounting based on the MSME Financial Accounting Standards (SAK MSME) has been shown to facilitate MSMEs' application for business credit to formal financial institutions. However, most previous studies have focused on theoretical modeling or applications for large-scale manufacturing MSMEs, with few exploring practical implementation specifically for local culinary and service micro-enterprises in suburban areas characterized by highly dynamic daily cash flows.

Therefore, this study aims to fill the gap (research gap) by designing, building, and implementing a financial reporting application system based on SAK EMKM using Microsoft Excel in real terms on two MSME case study objects with different operational characteristics, namely 'MSME Bubur Sumsum Mas Agus' (representing the daily culinary sector) and 'Ranah Komunika Cell' (representing the service and retail trade sector). The scientific novelty of this study lies in the development of a specially designed user-friendly accounting spreadsheet model with interactive menus and integrated automatic formulas that are tailored to the characteristics of daily transactions of micro MSMEs, so as to minimize input errors (human error) by non-accounting operators. Through this approach, the ultimate goal of writing this scientific article is to produce a draft of an applicable, valid, and accountable financial reporting design model that can be adopted independently by small business actors to improve their managerial class and economic competitiveness.

Research Method

The approach applied in this research uses qualitative methods that are exploratory, interpretative, interactive, and constructive in nature to explore and deeply understand the meaning behind an economic event in a business entity. Based on its use, this research is classified as applied research because the researcher's main focus is to solve real financial problems faced by the object of study. To achieve this goal, the researcher integrated research and development (R&D) methods, defined as methods for producing a specific product while simultaneously testing its effectiveness so that it can be operated functionally. The final product developed from this series of R&D procedures is a structured financial reporting system based on Microsoft Excel designed to be operated independently by business actors.

The research location is specifically focused on the Ranah Komunika Cell MSME, Jalan Kopo Katapang No. 112, Bandung, a small business entity engaged in the sales of mobile phone credit, data vouchers, and digital wallet services. The object in this qualitative research is placed in a real condition (natural setting) without any form of manipulation, intervention, or engineering of laboratory conditions from the researcher, so that the operational situation continues as it is both before, during, and after the observation process is carried out. Primary data sources are obtained directly from the research site from May to August 2025 through in-depth interviews and observations of the manual process of processing transaction data. The parties who act as key informants and primary data sources are the owners of the Ranah Komunika Cell MSME, namely Mr. Haidar Nurjaman and Mrs. Rahma Fauziah. Meanwhile, secondary data is collected from additional documents such as internal transaction records, existing financial reports, and

supporting literature in the form of journals, scientific articles, books, and previous final assignments.

The data collection procedure was carried out using triangulation techniques, a strategy that combines various data collection techniques and available data sources to test and ensure the consistency, completeness, reliability, and validity of information from the same source. This triangulation implementation included three main instruments. First, passive participant observation was conducted by researchers directly present at the business location to observe daily financial recording activities without actively participating in business decision-making. Second, in-depth semi-structured interviews were conducted with business owners to explore their understanding of the benefits of financial reports, daily recording mechanisms, and to identify gaps in the current system that lacked internal controls that could trigger fraud and financial losses. Third, documentation was carried out by collecting physical evidence of past transactions, including sales receipts, purchase receipts, invoices, proof of expenses, and daily cash reports.

The preparation and design procedures for this financial system are carried out through several systematic phases before the product is fully implemented. The preparation stage begins with collecting all transaction evidence, classifying accounting accounts, determining the reporting period, mapping the flow of business cash inflows and outflows, creating spreadsheet templates in Microsoft Excel, and providing education or basic training on using Excel for business actors. After thorough preparation, the development stage moves to the reporting system design process that refers to a structured R&D cycle, which includes: (1) a needs study to identify weaknesses in the existing financial reporting system; (2) an initial design to determine the report structure and Excel spreadsheet format; (3) implementation in the form of compiling a reporting system based on SAK EMKM into Excel; and (4) an evaluation in the form of a direct trial by MSME actors to obtain feedback. In the digital service sales transaction data input section, Point of Sale (POS) system logic is also integrated so that each sale is recorded automatically and in detail, while also functioning as an internal control instrument to reduce the risk of unrecorded transactions and fraud by employees.

The data analysis instrument in this qualitative research is based on the process of systematically searching and compiling data from interviews, field notes, and documentation to produce easily understood conclusions. In the development of Microsoft Excel spreadsheets, number processing is driven by empirical accounting formulas to ensure accurate mathematical

calculations automatically when input is entered. The success indicator of this financial reporting system is evaluated based on the conformity of its output format with the Financial Accounting Standards for Micro, Small, and Medium Entities (SAK EMKM). This indicator is measured through the system's ability to present structured information into three main output components: the Income Statement, the Statement of Financial Position (Balance Sheet), and the Notes to the Financial Statements (CALK). The fixed empirical accounting formulas embedded in the formula codes of the =SUM and =SUMIF functions in this Microsoft Excel spreadsheet system follow the standard accounting equations as follows:

Net Profit = Revenue − Expenses

Assets = Liabilities + Equity

The format for compiling accounts and visualizing transaction data which are input and output indicators in the Microsoft Excel system being developed can be shown in the design structure of Table 1 and Table 2 below:

Table 1 Daily Transaction Input Sheet Design Format

Date	Transaction Description	Debit Account	Credit Account	Nominal Income	Nominal Production	Ending balance
DD/MM/2025	(Product/service type)	(Account Name)	(Account Name)	Rp xxx	Rp xxx	Rp xxx

Table 2 Classification of Account List Indicators Based on EMKM SAK Standards

Account Code	Account Name	Account Type	Description of SAK EMKM
1-xxxx	What	Asset	Balance Sheet Components / Financial Position
1-xxxx	Accounts receivable	Asset	Balance Sheet Components / Financial Position
1-xxxx	Merchandise Inventory	Asset	Balance Sheet Components / Financial Position
3-xxxx	Owner's Capital	Equity	Balance Sheet Components / Financial Position

Account Code	Account Name	Account Type	Description of SAK EMKM
4-xxxx	Sales Revenue	Income	Components of the Income Statement
5-xxxx	Electricity and Water Expenses	Burden	Components of the Income Statement

RESULTS AND DISCUSSION

The existing financial control system at Ranah Komunika Cell before the system intervention revealed fundamental weaknesses in the internal control function. Based on initial observations and in-depth interviews with the business owners (Mr. Haidar Nurjaman and Ms. Rahma Fauziah), the entity lacked a standardized transaction recording system and had not yet prepared financial reports in accordance with the Financial Accounting Standards for Micro, Small, and Medium Entities (SAK EMKM). Daily recording activities were inconsistent due to the use of fragmented media, such as conventional notebooks, mobile note-taking apps, and simply relying on employee memory. The direct impact of this lack of data integration was the loss of the transaction audit trail and the emergence of information asymmetry between the owner and six operational employees spread across various branches (Kopo, Banjaran, and Kadatuan). The owner only received real cash deposits without any control instruments to verify the conformity of actual transaction volumes in the field.

The lack of verification controls resulted in significant financial losses for Ranah Komunika Cell, amounting to Rp7,000,000 in September 2024 and Rp5,000,000 in April 2025. These consecutive losses were caused by fraudulent acts in the form of diverting consumer payment funds by employees to personal digital wallets and misuse of company credit/token balances. Theoretically, this finding strengthens the internal control framework according to COSO (2013) and the concept of Romney & Steinbart (2022), which emphasizes that the lack of standardized recording and weak verification activities will open up gaps in financial information distortion and vulnerability to theft of entity assets. This also emphasizes that indicators of MSME success cannot be measured intuitively only based on the availability of physical cash balances in digital wallets or counter drawers.

To address these issues, an automated accounting system based on Microsoft Excel was designed that integrates the data flow from transaction input to financial report output. The automation procedure is executed by embedding empirical accounting formulas as fixed

mathematical calculation instruments. To determine business profitability performance, the following empirical Net Profit formula is implemented:

Net Profit = Gross Revenue − Cost of Goods Sold (COGS) − Operating Expenses

Meanwhile, to ensure the balance of financial position and accuracy of the preparation of the balance sheet (worksheet), the system is locked with an empirical formula of the basic accounting equation:

Assets = Liabilities + Equity

All mathematical functions within the Excel sheet are automatically operated using a combination of reference logic formulas such as =SUM, =SUMIF, and =SUMIFS. These formulas are used to precisely transfer balances from the Daily Transaction sheet to the General Journal, General Ledger, and Trial Balance, ultimately resulting in the three main SAK EMKM reports, reducing human error.

The input data architecture begins with data standardization through the Account List and the July 2025 Daily Transaction worksheet. The transaction data entry structure designed to replace the manual book method is presented in Table 3.

Table 3 Sample Visualization of Daily Transaction Input for the Cell Communications Realm (July 2025 Period)

Date	Proof No.	Information	Account Code	Debit (Rp)	Credit (Rp)	Ending Balance (Rp)
01/07/2025	20250701-001	Axis 3GB Sales	1-010 (What)	15.300	-	198.719.900
01/07/2025	20250701-001	HPP Axis 3GB	5-001 (HPP)	12.400	-	-
01/07/2025	20250701-001	Goods Preparation	1-017 (Persd.)	-	12.400	35.604.500
01/07/2025	20250702-002	Telkomsel Voucher 2.5GB	1-010 (What)	16.000	-	198.719.900
01/07/2025	20250702-002	Admin Service Income	4-002 (Services)	-	2.000	6.350.000

Through the structured data input in Table 3, the =SUMIFS formula automatically performs recapitulation postings into the General Ledger worksheet and calculates end-of-period adjustments (such as straight-line depreciation of fixed assets and prepaid rent allocation). The

final result of this numerical processing directly generates the Profit and Loss Statement according to SAK EMKM. Ranah Komunika Cell's financial performance after the system implementation for the period July 2025 is shown in Table 4.

Table 4 Output of Profit and Loss Report for Ranah Komunika Cell Based on SAK EMKM

Financial Components	Account Details	Nominal Value (Rp)	Sub-Total / Total (Rp)
Income:	Sales of Merchandise	310.528.000	
	Service Income (Admin Fee)	6.350.000	
Gross Income			**316.878.000**
Selling Price	(FIFO method)		**(234.737.200)**
Dirty Bay			**82.140.800**
Operating Expenses:	Electricity, Water, and Internet Bills	1.300.000	
	Shop Rent Expense	3.000.000	
	Employee Salary Expense (6 People)	9.000.000	
	Counter Equipment Depreciation Expense	327.000	
	Vehicle Depreciation Expense	300.000	
	Building Depreciation Expense	833.333	
	Other Expenses	75.000	
Total Load			**(14.835.333)**
Net profit			**67.305.467**

Analysis of Table 4 shows that with a total gross revenue turnover of Rp316,878,000 and a COGS of Rp234,737,200, the company generated a gross profit of Rp82,140,800. After deducting accumulated monthly operating expenses of Rp14,835,333, Ranah Komunika Cell recorded a positive performance in the form of a Net Profit of Rp67,305,467 at the end of July 2025. This net profit figure is automatically transferred by the Excel system into the Statement of Changes in

Equity, thereby changing the owner's equity position from initial capital of Rp483,835,000 to final capital of Rp551,140,467.

The balance of the accounting financial position (accounting balance) at the end of the period is shown in the elements of the Financial Position Report (Balance Sheet) which are arranged systematically in Table 5.

Table 5 Financial Position Report (Balance Sheet) of Ranah Komunika Cell as of July 31, 2025

Asset Post	Nominal (Rp)	Liabilities + Equity Items	Nominal (Rp)
Current assets:		**Obligation:**	
Cash and cash equivalents	198.719.900	Trade Debt	0
Bank BCA	214.000.000	Bank Debt	0
Merchandise Inventory	**35.604.500**	**Total Liabilities**	**0**
Rent Paid in Advance	33.000.000		
Fixed assets:		**Equity:**	
Land & Building	300.000.000	Owner's Capital (Initial)	483.835.000
Counter & Vehicle Tools	37.620.000	Current year profit	210.850.933
Accumulated depreciation	(56.953.000)	Net Profit for the Month	67.305.467
		Total Equity	**761.991.400**
Total Assets	**761.991.400**	**Total Liabilities + Equity**	**761.991.400**

Table 5 confirms that this Excel-based financial statement model absolutely complies with the basic accounting equation, where the total value of the Assets component is in a balanced position with the sum of Liabilities and Equity at Rp761,991,400. To complement the transparency of information, the output of this system also provides Notes to the Financial Statements (CALK) that document the entity's important accounting policies, such as accrual-based revenue recognition, stock management using the FIFO (First In First Out) method, and the straight-line method for depreciation of fixed assets.

Through the implementation and simulation of this model, business owners responded positively and stated that the developed Excel application format was very user-friendly. This data integration has proven to have crucial managerial impacts. First, systematized recording prevents the loss of track of mobile phone credit and e-wallet operational transactions. Second, report preparation is automated, saving time and minimizing calculation errors. Third, this data transparency acts as a strong internal control tool to close employee fraud opportunities early because every shift in stock and cash is immediately recorded in the system. These empirical findings are consistent with the theory of Kieso et al. (2019) regarding the strategic function of financial reports and support the study by Hassan & Prasetya (2024) which states that optimizing standardized Microsoft Excel technology is the most practical, economical, and accountable solution for MSMEs in managing their finances professionally.

CONCLUSION

This research successfully designed and implemented a Microsoft Excel-based automated financial recording system model that aligns with SAK EMKM in Ranah Komunika Cell. This system intervention has proven successful in addressing fundamental weaknesses in the business's internal control function that previously triggered financial losses due to employee fraud of Rp7,000,000 in September 2024 and Rp5,000,000 in April 2025. Through standardization of daily transaction sheets integrated with empirical accounting formulas, business owners now have a strong control instrument (audit trail) to verify the conformity of mobile phone credit and e-wallet transaction volumes in the field in real-time. The simulation results for the July 2025 period showed positive business performance with a Net Profit of Rp67,305,467 and a balanced financial position of Rp761,991,400.

The managerial implications of this study confirm that the implementation of practical and economical accounting technology can improve information transparency, reduce human error, and strengthen internal control systems for MSMEs with multiple operational branches. However, this study has limitations because the developed model still relies on semi-manual data input into Excel spreadsheets, so the accuracy of its performance is highly dependent on user discipline in updating data. Future research agendas are recommended to develop this system towards a cloud-based application or integrate it with an automated Point of Sale (POS) system to minimize manual intervention and expand the scope of automation of entity asset monitoring.

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