Design and Implementation of Umkm Financial Report Information System Based On Microsoft Excel and Vba at Polimart Polimdo

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ABSTRACT : *The rapid development of information technology has an impact on the process of making business financial reports, but computerized accounting records are still difficult to find in micro, small and medium enterprises (UMKM). The use of technology in processing business transactions can help business actors in carrying out their operational activities. UMKM requires computer-based accounting processing, so that the information presented is more, fast, accurate and timely. To implement a perfect accounting system that is in sync with the needs of business actors, researchers and business actors need to solve the problem by designing a financial report information system using Microsoft Excel and VBA software. The purpose of this research is to design a financial report information system for MSMEs based on Microsoft Excel and VBA in order to facilitate the management of business finances at Polimart Polimdo. The type of research used is the development of a software information system System Development life Cycle (SDLC) with data analysis techniques using the Waterfall method which has sequential stages, namely Requirement, Design, Implementation, Verification and Maintenance. Data collection techniques are obtained through observation, interviews and documentation. The results of the study indicate that using the Microsoft Excel and VBA applications can facilitate MSMEs in making financial reports so that business actors can monitor the development of their business at any time.*

Keywords: Design, Information system, MSME Financial Report, Microsoft Excel and VBA

I.   INTRODUCTION

One of the main goals of a business entity is to generate profit. Without profit, the entity will not be able to survive for a long time. Before starting a business, the first step that must be taken is to think about the risks, potential profits to be obtained, how to achieve the entity's goals, and by managing the main components in the business, namely finance. The application of accounting is one of the control functions that must be carried out by the entity, especially for entities that still have difficulty managing business expenses with personal expenses. Business entities have the most fatal risk of bankruptcy. One of the causal factors is errors in financial management where financial or accounting recording and reporting are not carried out. Therefore, the application of accounting is very necessary. For maximum results, it is better to apply accounting in accordance with applicable accounting standards.

There are 4 (four) main functions of accounting in business, namely financial control, company operations, reporting and planning. Accounting activities are part of the daily operations of an entity, while accounting reports provide the information needed to assess company performance (Madcoms, 2017: 3). To meet the needs of entities in implementing accounting, the Financial Accounting Standards Board (DSAK) has ratified the Financial Accounting Standards for Micro, Small and Medium Entities (SAK EMKM) and this standard is effective as of January 1, 2018. SAK EMKM is a stand-alone financial accounting standard that can be used by entities that meet the definition of Entities Without Public Accountability (ETAP) which is significant as in SAK ETAP and the definition of characteristics in Law No. 20 of 2008 concerning Micro, Small and Medium Enterprises (MSMEs). With the issuance of this SAK EMKM, it is hoped that it can help MSMEs in Indonesia, especially entities that are classified as micro entities that will develop their businesses by using the application of accounting as a basis for banks or other financial institutions to be able to provide loans.

Micro, Small and Medium Enterprises (MSMEs) is a term based on the Law as a designation for Types of Business Enterprises. According to Gunartin in his journal article on strengthening MSMEs as a pillar of building the nation's economy, he stated that the development and growth of MSMEs need to be continuously improved because of their role in providing jobs that will directly reduce unemployment which will lead to overcoming poverty. In addition, MSMEs are also seen as economic actors who are quite flexible in adapting to various changes in the business climate that occur, so that they are still able to provide a positive contribution to

the country's economy. There are so many types of MSMEs that grow in Indonesia that have a positive impact on the country, and it would be very good if these MSMEs could survive and develop as pillars of the economy in Indonesia. However, until now there are still MSMEs that still carry out accounting manually, this requires a lot of manpower, besides being inefficient, it can also increase the risk of errors in recording and reporting the accounting made, the impact of which can be detrimental to the MSME itself, especially if the accounting carried out does not meet the EMKM SAK. Based on the statement above, it is important for MSMEs to implement accounting in accordance with applicable standards to support the sustainability of a business. Therefore, the ease of carrying out accounting is very much needed, one of which is by utilizing current technological advances. Because technology has become one of the important needs for individuals and groups, almost all activities carried out by humans use currently developing technology. Because it can make it easier for humans to carry out activities, especially in completing work. Likewise, in the field of accounting, it is currently inseparable from the development of communication and computer technology, especially in the form of applications for accounting. The use of manual accounting is currently a tiring choice for developing business entities. The applications circulating among the general public that can be used as financial data processing applications for entities, one of which is the Microsoft Office application which contains data and number processing applications, namely Microsoft Excel. Generally, Microsoft Excel is often used to process simple financial data. However, Microsoft Excel also has additional editor facilities that make Microsoft Excel a number processing program that is able to design a data and number processing application program according to user needs. For example, such as the Visual Basic Editor and Macro facilities which are built-in facilities that can create data and number processing program applications, especially accounting application programs that are more optimal. The impact of which, in addition to facilitating users, services using applications can have an impact on customer satisfaction because of the right and fast service so that customers are satisfied and return to shop, as well as proper accounting recording and reporting so that it can increase sales turnover and profit from the business itself. UMKM Polimart Polimdo is one of the retail business entities that still applies manual accounting. This UMKM is still classified as a Small and Medium Enterprise (SME) that sells daily necessities in the Manado State Polytechnic environment. In addition to the application of accounting that is still manual, this Polimart Polimdo UMKM has also not implemented accounting that meets SAK EMKM. Where the financial report only consists of 1 (one) report, namely a summary of incoming and outgoing cash flows, which should be based on SAK EMKM at least 3 (three) reports. Which consists of; Profit and Loss Report, Financial Position Report and Notes to the Financial Statements (CaLK).

In fact, this SME has the potential to grow. Some of the problems encountered include the difficulty of obtaining accounting applications because it requires a large cost to buy them, the owner is inconsistent in managing finances, lack of awareness to create financial reports in accordance with SAK EMKM, difficulty in obtaining capital loans from banks or other financial institutions because they are not yet able to account for financial reports that are generally accepted or in accordance with SAK EMKM. This can hinder the development of this SME. Therefore, to make it easier for Polimart Polimdo SMEs to carry out financial management in accordance with SAK EMKM, the author wants to create a financial recording and reporting application using the Microsoft Excel program based on SAK EMKM with the title "Design and Implementation of Financial Report Information Systems for SMEs Based on Microsoft Excel and VBA at Polimart Polimdo"

II.   RESEARCH METHOD

The software information system design model used in this study is the System Development Life Cycle (SDLC) with the Waterfall Model. The Waterfall method in its development has sequential stages (Y. Bassil, 2012), namely Requirement, Design, Implementation, Verification and Maintenance. The following is the waterfall model stage flow in creating an information system:
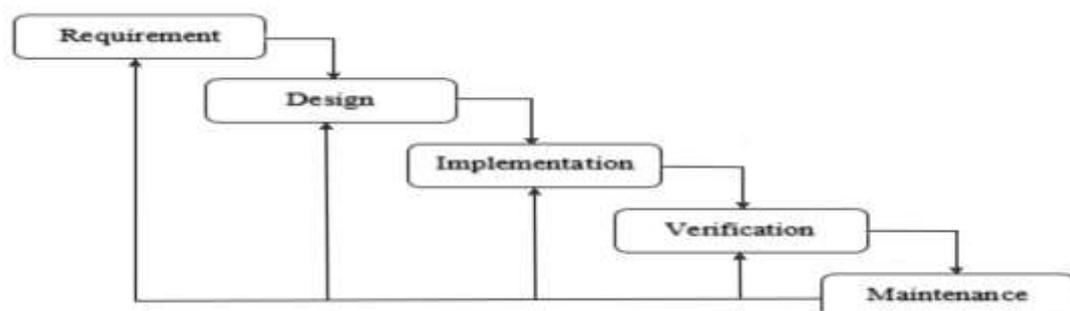
Figure 1. Waterfall Model System Development Stage Flow

III.   RESULTS AND DISCUSSION

Based on the processed data, it can be explained that the implementation of accounting reporting carried out by Polimart Polimdo is not in accordance with SAK EMKM which requires entities to present financial reports consisting of: (1) Financial Position Report; (2) Profit and Loss Report; and (3) Notes to the financial statements, which contain additional and detailed specific relevant items. However, the financial report produced by Polimart Polimdo only consists of 1 report, namely the cash inflow and outflow recapitulation report. This also does not meet the requirements for fair presentation stated in SAK EMKM, namely "fair presentation requires honest presentation of the effects of transactions, events, and other conditions that are in accordance with the definition and criteria for recognizing assets, liabilities, income, and expenses. Disclosure is required when compliance with certain requirements in the EMKM SAK is inadequate for users to understand the effects of transactions, events and other conditions on the entity's financial position and performance. The objectives of fair presentation are relevant, accurate representation, comparability and understandability". So that the report made by Polimart Polimdo has not met the requirements for fair presentation of the EMKM SAK because it has not presented a financial position report in the form of assets, liabilities and capital which are very necessary to be able to find out relevant information, accurate representation, comparability and understandability. Based on the results of the analysis above, the author will continue this research to provide a solution for Polimart Polimdo to be able to carry out application-based financial management in accordance with the EMKM SAK. This data will be processed using a tool, namely the Microsoft Excel VBA Macro program which is more efficient and effective in terms of time with the following application description.

1. **Accounting Policy**

The accounting policies applied in the Roch Store Manado online shop are as follows:

A. General
   1) Paired System, with an accrual basis.
   2) The annual accounting period (January 1 to December 31) is divided into 12 monthly periods.
   3) Reporting is done at the end of each month.
   4) Transaction recording using a general journal.
   5) Currency using Rupiah.
B. Purchases
   1) Payment using bank account transfers.
   2) Transaction documents with cash notes and invoice notes.
C. Sales Each sale is supported by a transaction document note.
D. Inventory Assessment Inventory assessment uses the Perpetual recording method with the First In First Out (MPKP) cost flow method.

2. Accounting Cycle with Microsoft Excel
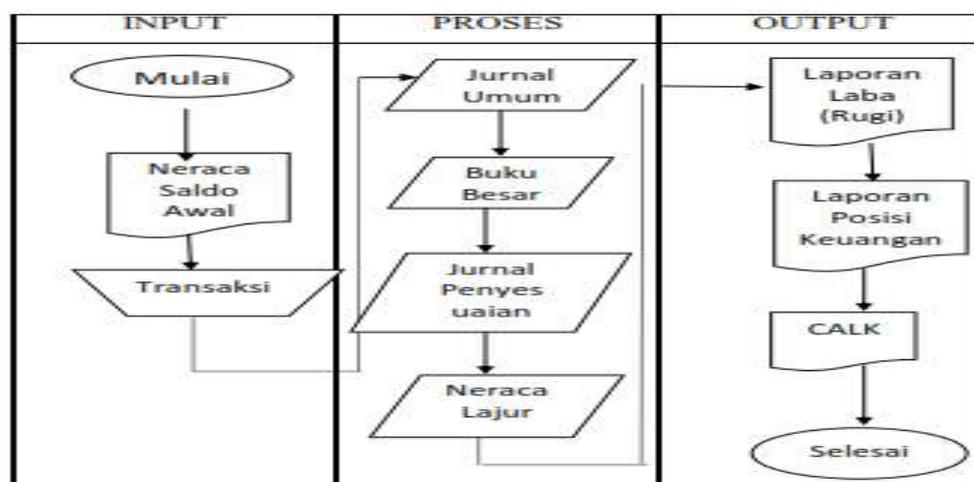
Figure 2. Design of Accounting Cycle in Application

Description of application design flow: (1) Inputting the initial balance of the previous month; (2) Transactions that occur that are supported by evidence of sales notes or invoices are inputted into the general journal with the required data according to the general journal format, (3) At the end of the month, adjustments or checks are

made to the remaining assets, inventory, equipment and the adjustments will be recorded in the general journal (adjustments); (4) Furthermore, the data that has been inputted into the general journal (including adjustments) will automatically accumulate into accounts or accounts that can be seen in the general ledger, and inventory mutation data and remaining inventory balances can be seen on the inventory card without having to edit or input them again; (5) Furthermore, the data will be accumulated with the initial balance data and can be seen as a whole in the trial balance; and (6) The balance sheet data will produce financial report output in the form of a financial position report, profit and loss report and notes to the financial report, to be used for decision making by the owner of Polimart Polimdo.

3. Application Design with Microsoft Excel

A. Main Menu Design

The main menu is used as the initial display of this MSME financial report application which contains several sub-menus. The purpose of this main menu is to make it easier to open the required data. This main menu consists of several sub-menus, namely profile, account list, general journal, ledger, balance sheet, profit and loss, balance sheet, cash flow and Calk.

Figure 3. Main Menu Design

To create a Main Menu like the picture above, here are the steps:

1) Open the Microsoft Excel application and run it then replace Sheet1 with the name Home, create a display like the image above. After finishing creating Home on sheet1. Also do it on the next sheet according to the design format to be run.
2) Change the color as desired with Ctrl + A and click fill color and select the desired color as the background on the main menu display / home do the same on each subsequent menu sheet.
3) Then Insert the icon image that will be used as an icon on each sub menu, make sure the icon image to be used is saved on the Device or device you are using. Click insert then select picture then select the icon image to be used and click insert / Ok.
4) Next, create an Assign Macro on each icon that will be run as a button to connect to each existing sheet.
5) Next we will add a command format to connect to each Sheet with the Format: If you have finished designing the menu like image 3 then save the workbook with the extension name Excel Macro Enabled

B. Account List Design

This account list table will store account code data and account names to be used in recording transactions. Here are the steps:

1) Click cells B1-B7, type the entity name and address.
2) Highlight cells B8-F8, then click the Merge & Center icon, and type List of Account Names.
3) Add a back button to the menu by creating a button like the one on the main menu display.
4) Then create a table of account names as below and fill it with
5) the nominal amount for each account. Filling in this initial balance will greatly affect the process of creating a ledger.

POLIMART POLIMDO
Neraca Saldo
31/12/2023

Kode Akun	Nama Akun	Debet	Kredit
1110	Kas	20.000.000	
1111	Bank	10.000.000	
1112	Piutang Usaha	10.000.000	
1113	Persediaan Barang	7.500.000	
1115	Perlengkapan	6.000.000	
1210	Peralatan Toko	10.000.000	
1211	Akum. Peny. Peralatan Toko		1.000.000
2111	Hutang Usaha		
3111	Modal Pemilik		62.500.000
4000	Pendapatan Penjualan		
5000	Harga Pokok Penjualan		
5100	Beban Gaji		
5200	Beban Transportasi		
5300	Beban Telepon		
5400	Beban Umum Lain lain		
5300	Beban Transportasi		
5.400	Beban Telepon		
5.500	Beban listrik		
	TOTAL	63.500.000	63.500.000

C.   General Journal Design

This General Journal is created to record transactions that occur, with a double-entry system. The general journal is also used to record adjustment data at the end of the period.

Figure 5. General Journal Design

D. General Ledger Design

This General Ledger will later be used to accommodate the balance of each account according to the transaction data in the general journal and adjustments.
1)   In cells A1-H5, create a passage with the name and address of the entity.
2)   Highlight A6-H6 and A7-H7 and create Merge & Center then type GENERAL LEDGER and Period.
3)   Create a table as shown in Figure 4.19 in cells A11-H78.
4)   Create a back button icon to the menu as before with a hyperlink.
5)   Next, create a combo box to filter account data, by selecting the Developer toolbar, clicking insert, selecting Combo Box (Form Control).
6)   Next, right-click on the combo box and click format control. The format control window will appear. In the Input range, fill in Cells C12-C53 on the Account List sheet, for the Cell link, fill in Cell D10. Then check 3-D Shading and click OK.
7)   In cell G10, type Account Code, and in cell H10, type the formula =VLOOKUP(D10;account_number;2;0).
8)   Highlight cells A11-H11, then click the Data toolbar and click the filter icon.
9)   In the beginning balance row in cell G13, enter the formula: =VLOOKUP(H10;'Account List'!B12:F53;4;0).
10) In cell H13, enter the formula =VLOOKUP(H10;'Account List'!B12:F53;5;0).
11) In the Date column after the beginning balance row (A14), enter the formula: =IF(H10=General_Journal!B24;General_Journal!A24;"").
12) The description column is filled in manually.
13) The Account Number column is filled with the formula =H10.

14) The Account Name column is filled with the formula:
    =IF(H10=General_Journal!B24;General_Journal!E24;"").
15) The Debit column is filled with the formula: =IF(H10=General_Journal!B24;General_Journal!F24;"0").
16) The Credit column is filled with the formula: =IF(H10=General_Journal!B24;General_Journal!G24;"0").
17) In the Debit Balance Column below the initial balance row, fill in the formula =IF(G24-H24+E25-F25>0;G24-H24+E25-F25;0) and the Credit Balance with the formula =IF(H24-G24+F25-E25>0;H24-G24+F25-E25;0)

Figure 6. General Ledger Design

E. Worksheet Sheet Design

A trial balance sheet or commonly called a working paper is a tool in the accounting cycle process to facilitate the preparation of financial reports. The following is a display of a trial balance sheet that has been designed with an excel macro:

Figure 7. Trial Balance Design

The steps to create a trial balance are as follows:
1) Open sheet 6 and change the name to Trial Balance, and create a trial balance table like Figure 7 above. 2. In cell A1, type the Company Name followed in cell A2 by the Trial Balance account name, then place it in the middle with the merge cell command.
2) Type or enter the initial balance data taken from the account list table.
3) Next, type the formula to enter the balance in the Journal Recap column of the account in the work sheet using the following formula: Debit using the formula =SUMIF(NOREK_JU;A6;JU_Debet) Credit using the formula =SUMIF(NOREK_JU;A6;JU_Kredit) Then copy the debit and credit formula to the last line.
4) In the Adjustment column, enter the following formula: Debit =SUMIF(NOREK_JU;C6;JU_De bet) and On credit =SUMIF(NOREK_JU;C6;JU_Kredit) Then copy the debit and credit formula up to the last row
5) In the Trial Balance column After Adjustments enter the following formula: On debit =IF((C6-D6)+(E6-F6)>0;(C6-D6)+(E6-F6);0) Then copy the debit and credit formula up to the last row On credit = =IF((D6-C6)+(F6-E6)>0;(D6-C6)+(F6-E6);0) Then copy the debit and credit formulas to the last row
6) In the Profit and Loss column, enter the following formula: In debit =IF(LEFT(A6;1)>="4";G6;0) In credit =IF(LEFT(A6;1)>="4";H6;0)
7) In the Balance Sheet account column, enter the following formula: In debit =IF(LEFT(A6;1)<="3";G6;0) and In credit = =IF(LEFT(A6;1)<="3";H6;0)
8) To calculate the total nominal balance on the Balance Sheet by entering the formula =SUM by blocking all rows in each account on the Balance Sheet.

F. Profit and Loss Report Design

Profit and loss is a financial report of a business that presents all income and expenses, and shows the profit or loss of a business that is run. Below is the display of the profit and loss report on the Polimart Polimdo business.

Figure 8. Profit and Loss Report Design

The steps required to create a profit and loss report are as follows:
1) Create a profit and loss report format, then type the business name, Profit and Loss and accounting period as in the table above
2) Type the account code and account name
3) Then fill in the account balance by typing = in the account balance then bring the smart to the balance sheet in the profit and loss column in the account in question and press enter Do the method in point 3 to fill in the other account balances
4) To fill in gross profit by using the formula = sum (revenue balance - cost of goods sold balance)
5) To fill in total expenses use the formula = sum ( )
6) While calculating gross profit use the formula = income - gross profit

G. Balance Sheet Menu Design

The balance sheet or commonly known as the financial position report is a list that shows the financial position, namely the composition and amount of assets, liabilities, and equity of a particular entity on a certain date. The following is the Balance Sheet display on Polimart polimdo

POLIMART POLIMDO Neraca Minggu, 31 Desember 2023			
Aktiva			
No.Akun	**Nama Akun**	**(Rp.)**	
	Aktiva lancar		
1110	Kas	19.150.000	
1111	Bank	10.000.000	**HOME**
1112	Piutang Usaha	8.200.000	
1113	Persediaan Barang	25.980.000	
1115	Perlengkapan	6.150.000	
	Total Aktiva lancar	**69.480.000**	
	Aktiva tetap		
1210	Peralatan Toko	10.000.000	
1211	Akum. Peny. Peralatan Toko	-1.000.000	
	Total Aktiva Tetap	**9.000.000**	
	Total aktiva	**78.480.000**	
Pasiva			
	Hutang Lancar		
2111	Hutang dagang	1.550.000	
	Total Hutang		
3111	Modal Pemilik	76.930.000	
	Total pasiva	**78.480.000**	

Figure 8. Income Statement Design

To Create a balance sheet or financial position report format
1. Create a passage, report name and period as in the table above
2. Add a menu/home button icon
3. Add a print preview button icon with
4. To move to another sheet, use the assign macro instruction
5. Next, enter the account code and account name Asset, as in the Balance sheet column on the Balance Sheet sheet. Create as in Figure 8.
6. In the balance column, enter the ending balance data for the asset accounts from the Balance Sheet sheet. And add up each current asset and fixed asset using the SUM function, do the same for the Liabilities and Equity balances.
7. Total assets and total liabilities must be the same.

IV. CONCLUSION

Design of a financial report information system model created using Microsoft Excel and VBA which will be applied to Polimart Polimdo. This system is able to meet the needs of MSMEs in terms of recording and reporting finances more efficiently and accurately. This system has an interface that is easy to understand by users, including those without a technical background, VBA Allows automation of several important functions, which reduces manual workload and improves operational efficiency, the information system that will be managed using Microsoft Excel and VBA can help users in completing the Recording of Financial Reports in the form of Profit and Loss Reports and Balance Sheet Reports fairly and accountably, so that information users can know for sure the profit or loss of the entity, the number of assets owned, income, operating profit, and financial position of the entity, which will be used in the decision-making process and can increase the level of accuracy of the financial reports to be reported. The use of Microsoft Excel and VBA technology as a basic

platform makes the cost of implementing this system relatively low and affordable for MSMEs such as Polimart, without requiring additional investment in special hardware or software.

V. ACKNOWLEDGEMENTS

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