

**A Report on Evaluation of Loan Amortization Schedule**

**Submitted BY**

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Subject: Submission a report on “**A Report on Evaluation of Loan Amortization Schedule”.**

Dear Sir,

We are hereby submitting our report on “A Report on Evaluation of Loan Amortization Schedule” as a work of our BBA program. We have given our utmost effort in making the report as informative as possible.

We are very grateful since your proper guidance helped us through to make the report as precise as possible. We hope we have been successful in following your instructions and we will also be available for any arisen clarifications or queries. Your support in this regard will be highly appreciated.

Sincerely Yours,

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**Acknowledgement**

First of all, we would like to express our gratitude to almighty Allah for enabling us to complete this report on “**A Report on Evaluation of Loan Amortization Schedule”**. Successfully completion of any type of report requires help from a number of persons. We have also taken help from different people for the preparation of the report. Now there is a little effort to show our deep gratitude to that helpful person. We convey our sincere gratitude to our course instructor **Md. Mahbub-E-Noor**, Assistant Professor of department of CSE, University of Barisal. Without her kind direction and proper guidance this study would have been a little success. In every phase of the report, her supervision and guidance shaped this report to be completed perfectly.

**Bona Fide Certificate**

This is certified that this report titled “**A Report on Evaluation of Loan Amortization Schedule”** is the bona fide work Md. Fahim Ahmed**.** Certified further, that to the best of my knowledge the work shown herein does not part of any other report or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

Signature

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**Executive Summary**

The loan amortization schedule is a vital financial tool that outlines the repayment structure for a loan over its term. It details each payment, breaking down how much goes toward the principal and how much is allocated to interest. This schedule typically includes key information such as the total loan amount, the interest rate, and the duration of the loan, which is usually measured in years.

As borrowers make regular payments, the schedule illustrates how the outstanding balance decreases over time, showing a gradual reduction in interest expenses as more of each payment is applied to the principal. This transparency allows borrowers to plan their finances effectively, anticipate future obligations, and understand the total cost of borrowing. Additionally, the schedule can help borrowers evaluate the potential benefits of making extra payments toward the principal, providing insight into the advantages of early payoff options. Overall, the loan amortization schedule is an essential resource for managing debt and facilitating informed financial decision-making.

# Chapter 1: Introduction

## 1.1 Introduction of the report

In the realm of personal finance and loan management, the loan amortization schedule is often hailed as an essential tool for borrowers. However, there are compelling arguments against relying solely on this structure, which can lead to financial miscalculations and missed opportunities.

## 1.2 Complexity and Misunderstanding

One significant drawback of loan amortization schedules is their complexity. Many borrowers struggle to fully comprehend the intricacies of how payments are allocated between principal and interest. This confusion can lead to a false sense of security, where borrowers believe they are making progress when, in reality, a substantial portion of their early payments is being consumed by interest. This lack of clarity can distort financial planning, causing individuals to underestimate the long-term costs of their loans.

## 1.3 Psychological Impact

The psychological burden of a fixed amortization schedule can also be detrimental. Knowing that a large portion of one’s income must go to servicing debt can create stress and anxiety, which can affect overall financial well-being. This mental toll can lead borrowers to avoid addressing their financial situations altogether, instead of seeking alternative solutions that might offer more flexibility and relief.

## 1.4 Limited Focus on Total Cost

Finally, amortization schedules often encourage a narrow focus on monthly payments rather than the total cost of the loan over its lifetime. Borrowers may be lured by lower monthly payments, but these can sometimes come with longer loan terms or higher interest rates, leading to a much larger total repayment amount. Without considering the full financial picture, borrowers may end up paying significantly more over time than they initially anticipated.

# Chapter 2: Prepare a Schedule

Creating a loan amortization schedule in Excel using VBA involves several steps. Below is a guide to help you set up the schedule programmatically:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Loan Amount** | **Number of Year** | **interest Rate** | **Monthly Payment** | **Total Payment** | **Full Name** |
| 100000 | 5 | 10 | 10000 | 600000 | Fahim Ahmed |
| 100000 | 5 | 10 | 10000 | 600000 | Fahim Ahmed |
| 15000 | 2 | 8 | 1200 | 28800 | Rafi |
| 1500000 | 13 | 6 | 90000 | 14040000 | Rafi |

* **Step-by-Step Guide to Creating a Loan Amortization Schedule Using VBA**
* **Step 1: Open Excel and Access the VBA Editor**

1. Open Microsoft Excel.

2. Press `ALT + F11` to open the VBA editor.

* **Step 2: Insert a New Module**

1. In the VBA editor, right-click on any of the items in the "Project Explorer" window.

2. Select `Insert > Module`. This will create a new module where you can write your code.

* **Step 3: Write the VBA Code**

1. Copy and paste the following VBA code into the new module:

Option Explicit

Dim End Position As Long

Dim number of Year As Integer

Dim Interest Rate, loan Amount, Monthly Payment, Total Payment As Double

Dim myvariable As String

Private Sub CommandButton1\_Click()

Interest Rate = Val(TextBox3.Text)

Number of Year = Val(TextBox2.Text)

loanAmount = Val(TextBox1.Text)

Monthly Payment = (loanAmount \* InterestRate) / 100

Total Payment = MonthlyPayment \* numberofYear \* 12

Label7.Caption = (MonthlyPayment)

Label8.Caption = (TotalPayment)

End Sub

Private Sub CommandButton2\_Click()

Dim wks. As Worksheet

Dim Add New As Range

Set wks. = Sheet1

Set Add New = wks.Range("A65536").End(xlUp).Offset(1, 0)

Add New. Offset(0, 0).Value = TextBox1.Text

Add New. Offset(0, 1).Value = TextBox2.Text

Add New. Offset(0, 2).Value = TextBox3.Text

Add New. Offset(0, 3).Value = Label7.Caption

Add New. Offset(0, 4).Value = Label8.Caption

Add New. Offset(0, 5).Value = TextBox4.Text

Add New. Offset(0, 6).Value = TextBox5.Text

'ListBox1.AddItem (vbTab + TextBox1.Text + vbTab + vbTab + vbTab + TextBox2.Text + vbTab + vbTab + vbTab + TextBox3.Text + vbTab + vbTab + vbTab + Label7.Caption + vbTab + vbTab + vbTab + Label8.Caption + vbTab + vbTab + vbTab + TextBox4.Text + vbTab + vbTab + vbTab + TextBox5.Text)

End Sub

Private Sub CommandButton3\_Click()

TextBox4.Text = ""

TextBox5.Text = ""

TextBox1.Text = ""

TextBox2.Text = ""

TextBox3.Text = ""

Label7.Caption = ""

Label8.Caption = ""

ListBox1.Clear

End Sub

Private Sub CommandButton4\_Click()

Dim iExit As Integer

iExit = MsgBox("Confirm if you Want to exit", vbQuestion + vbYesNo, "calculate Loan")

If iExit = vbYes Then

Unload Me

End If

End Sub

Private Sub TextBox1\_Change()

Static EndText As String

Static Secondtime As Boolean

If Not Secondtime Then

With TextBox1

If .Text Like "\*[!0-9.]\*" Or .Text Like "\*.\*.\*" Then

Beep

Secondtime = True

.Text = EndText

.SelStart = EndPosition

Else

EndText = .Text

End If

End With

End If

Secondtime = False

End Sub

Private Sub TextBox2\_Change()

Static EndText As String

Static Secondtime As Boolean

If Not Secondtime Then

With TextBox2

If .Text Like "\*[!0-9.]\*" Or .Text Like "\*.\*.\*" Then

Beep

Secondtime = True

.Text = EndText

.SelStart = EndPosition

Else

EndText = .Text

End If

End With

End If

Secondtime = False

End Sub

Private Sub TextBox3\_Change()

Static EndText As String

Static Secondtime As Boolean

If Not Secondtime Then

With TextBox3

If .Text Like "\*[!0-9.]\*" Or .Text Like "\*.\*.\*" Then

Beep

Secondtime = True

.Text = EndText

.SelStart = EndPosition

Else

EndText = .Text

End If

End With

End If

Secondtime = False

End Sub

Private Sub UserForm\_Initialize()

ListBox1.AddItem ("Loan Amount" + vbTab + "Number of Interest" + vbTab + "Interest Rate" + vbTab + "Monthly Payment" + vbTab + "Total Payment")

End Sub

* **Step 4: Run the Code**

1. Close the VBA editor to return to Excel.

2. Press `ALT + F8` to open the "Macro" dialog box.

3. Select `Create Amortization Schedule` and click `Run`.

4. Follow the prompts to input the loan amount, interest rate, loan term, and payment frequency.

* **Step 5: Review the Amortization Schedule**

Once the code runs, a new worksheet named "Amortization Schedule" will be created, containing the payment schedule with all relevant details, including payment number, payment date, total payment, principal payment, interest payment, and remaining balance.

* **Additional Tips**
* \*\*Save Your Workbook\*\*: Save your Excel workbook as a macro-enabled file (`. xlxm`) to retain the VBA code.
* \*\*Modify for Different Scenarios\*\*: You can adjust the code to accommodate different payment frequencies or additional calculations as needed.

This method automates the creation of a loan amortization schedule, making it easier and faster to generate detailed financial insights.

# Conclusions & Recommendation

In conclusion, creating a loan amortization schedule using VBA in Excel is an efficient way to manage and understand loan repayments. This method allows for automated calculations and a structured presentation of how each payment contributes to reducing both principal and interest over the loan term. By leveraging VBA, users can easily customize their schedules based on specific loan parameters, enhancing their financial planning and decision-making.

**Recommendations:**

1. **Understand Your Loan Terms**: Before running the VBA program, ensure you have a clear understanding of your loan amount, interest rate, loan term, and payment frequency. This will help you input accurate data for a precise amortization schedule.
2. **Customize the Code**: Feel free to modify the VBA code to include additional features, such as options for extra payments, variable interest rates, or different payment frequencies. This flexibility can provide a more comprehensive financial analysis.
3. **Visualize Data**: After generating the schedule, consider creating charts or graphs to visualize the breakdown of payments over time. This can help you better understand the impact of interest and principal payments on your overall loan.
4. **Regularly Update Your Schedule**: If your financial situation changes (e.g., making extra payments or refinancing), update the amortization schedule accordingly. This will ensure you always have an accurate picture of your loan status.
5. **Educate Yourself on Financial Concepts**: Familiarize yourself with key financial concepts related to loans, such as the time value of money, interest calculations, and the implications of different loan structures. This knowledge will empower you to make informed decisions.

By implementing these recommendations, you can effectively utilize your loan amortization schedule as a strategic tool for managing debt and enhancing your overall financial health.

# References:

1. **Books**:
   * *The Basics of Finance: An Introduction to Financial Markets, Business Finance, and Portfolio Management***.**
   * *Personal Finance for Dummies* by Eric Tyson
2. **Websites**:
   * **Investopedia**: Amortization
   * **NerdWallet**: Loan Amortization Explained
3. **Excel Resources**:
   * *Excel 2021 VBA and Macros* by Bill Jelen and Tracy Syrstad
   * Online tutorial: Excel VBA Programming for Dummies
4. **Financial Calculators**:
   * **Bankrate**: Loan Calculator - A useful tool for understanding loan payments and amortization.
   * **Calculator.net**: Amortization Calculator - Provides a detailed breakdown of loan amortization.
5. **Online Courses:**
   * **Coursera**: Courses on personal finance and Excel can provide deeper insights into managing loans and using financial tools.
   * **Udemy**: Various courses on Excel VBA programming that can help enhance your skills in automating tasks.

These references can help deepen your understanding of loan amortization, personal finance, and the technical aspects of using Excel and VBA effectively.