SPV Reporting Tool
VBA Code User Guide

Last Updated: December, 2009

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WPI

SPV Reporting Tool

Excel VBA Functionalities

Golden Copy

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Golden Copy - Introduction

This portion of the User Guide will go through troubleshooting techniques for certain errors as well as the procedure to modify the code in various situations. In order to understand what changes will cause errors in the code, this page will breakdown the basic functionalities of the Golden Copy. The following table sequentially lists the actions that occur to produce the Golden Copy and which module the code resides in.

Golden Copy Report Process Flow

	Action	Description	Module
1.	User Input of date via Show Calendar button	The SPV data from this date will be imported to Excel. The calendar exists in the VBA component of Excel	Calendar, UserForm1, CONTROL_MainImport
2.	User Input click 'Create Golden Copy' button	This button will run the macros that generate the report.	CONTROL_MainImport
3a.	Open Main report webpage	An Internet Explorer window will open, direct itself to the website of the ASIA report based on the date entered.	CONTROL_MainImport
3b.	Open Sub reports on the webpage	A link within the Main report is triggered to display the Sub reports .	CONTROL_MainImport
3c.	Import to Excel	All data on the webpage is pasted into the HTMLScrape tab	CONTROL_MainImport
4.	Place Main and Sub reports to the Main and Sub tabs	The macro counts how many data rows of the Main/Sub report exist and pastes them into the Main /Sub report where there is an empty row.	HTMLScrape

Golden Copy - Introduction

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Golden Copy Report Process Flow cont'd

	Action	Description	Module
5.	Repeat 3-4 for EMEA and GLOBAL reports	All data on the HTMLScrape tab is deleted before reuse.	CONTROL_MainImport, HTMLScrape
6.	Reformat Main tab data	The SPV Name data in the Main report is formatted as merged cell. To allow for data mappings this merged cell is unmerged and the resulting empty columns are deleted.	MainCleanSheet
7.	Fill the Golden Copy tab	Formulas that point to data in the Main and Sub tabs are entered for each SPV trade.	GoldenCopy
8.	Fill the Matured tab	This copies the Golden Copy tab and filters the trades to only display trades that have matured on or before the current date.	MaturedTabCreate
9.	Create new workbook with only the Golden Copy and Matured tab	The Golden Copy and Matured tab are both copied and pasted into a new workbook as values. This means there will be no formulas in the cells.	SaveNewWorkbook
10.	Create a Summary tab in the new workbook	The Summary tab consists of two tables. The bottom table has formulas that count the number of trades in the report against the number of trades listed in the static table above.	SummaryTab

Golden Copy Output Changes - Opening the VBA Editor

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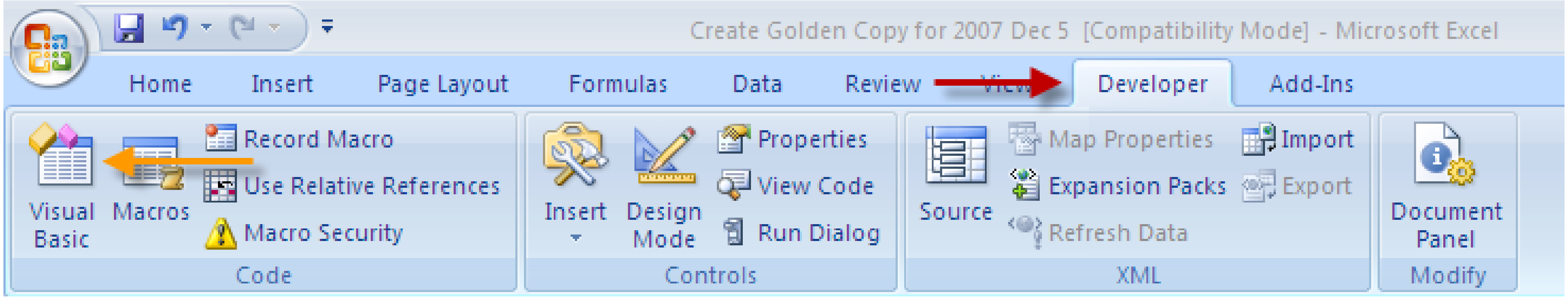
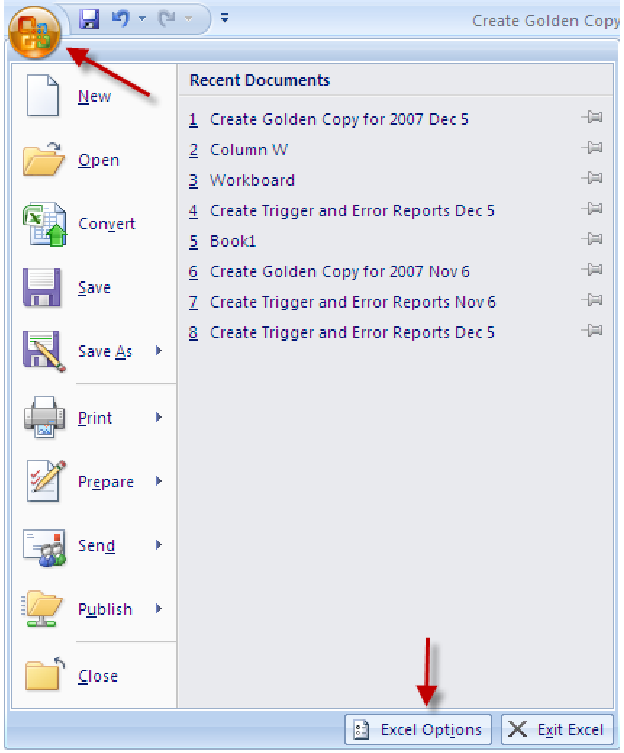
The following slides describe how changes in the actually Golden Copy report can be made. Changes can only be made if the data is still available in the import of data. These changes will need to be implemented in the VBA code. The following steps will describe how to open the VBA editor

- To open the VBA editor
  - Go to the tab Developer > Visual Basic



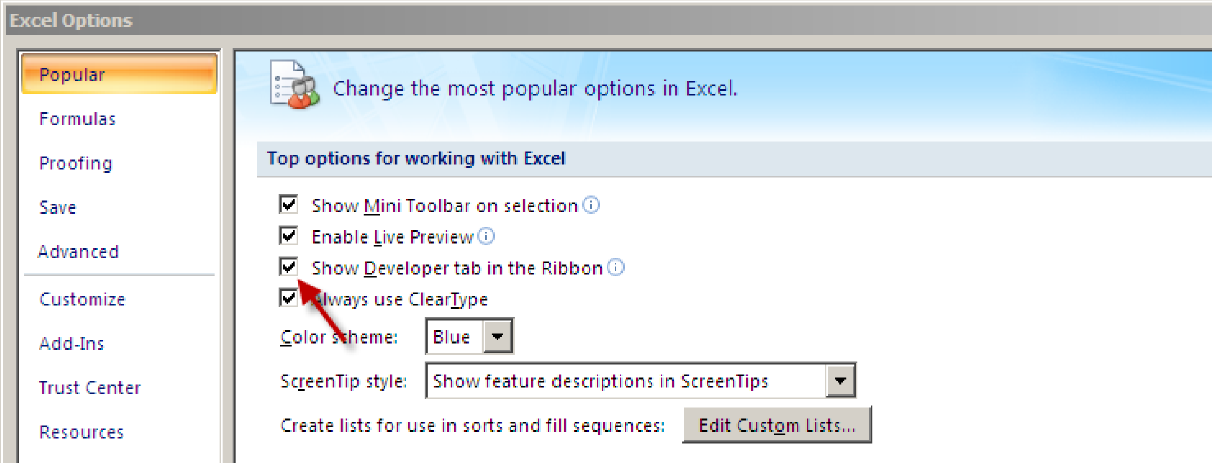
Golden Copy Output changes – Add a column in the Golden Copy

- If the Developer tab is not available:
  - Click on the Microsoft Office button> Excel Options > In the Popular field check the Show Developer tab in Ribbon box



Recent Documents

1 Create Golden Copy for 2007 Dec 5
2 Column W
3 Workboard
4 Create Trigger and Error Reports Dec 5
5 Book1
6 Create Golden Copy for 2007 Nov 6
7 Create Trigger and Error Reports Nov 6
8 Create Trigger and Error Reports Dec 5



Change the most popular options in Excel.

Top options for working with Excel

☑ Show Mini Toolbar on selection
☑ Enable Live Preview
☑ Show Developer tab in the Ribbon
☑ Always use ClearType

Color scheme: Blue

ScreenTip style: Show feature descriptions in ScreenTips

Create lists for use in sorts and fill sequences: Edit Custom Lists...

Golden Copy Output changes – Add a column to the Golden Copy

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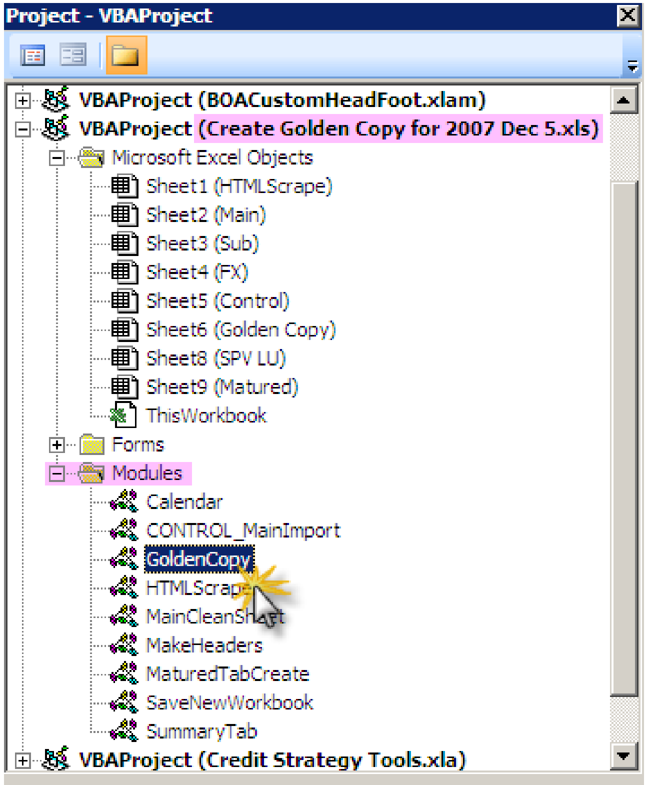
Scenario 1: Add a column in the Golden Copy

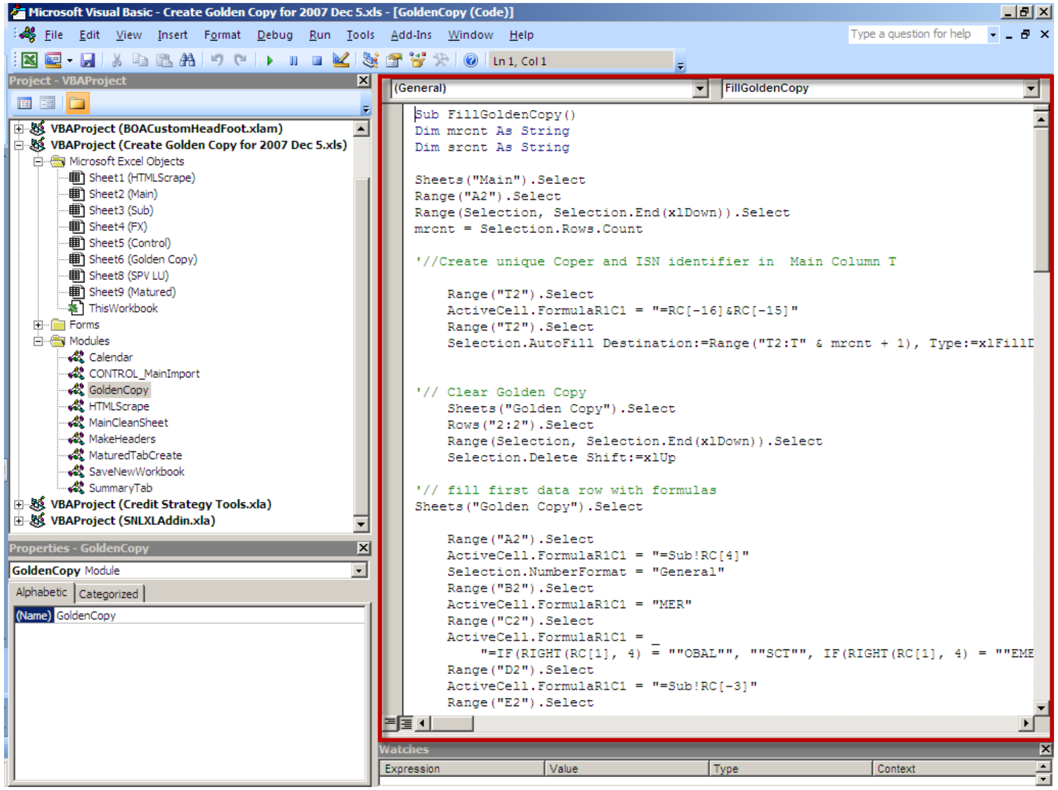
To add a column to the Golden Copy tab, modifications to the VBA macro need to be made.

- Open VBA. In the left hand panel :
  - Expand the VBA Project for the file you have open (In this case its Create Golden Copy for 2007 Dec 5)
  - Expand the Modules folder
  - Select the GoldenCopy Module and window will open in the right pane



Project - VBAProject

- VBAProject (BOACustomHeadFoot.xlam)
- VBAProject (Create Golden Copy for 2007 Dec 5.xls)
  - Microsoft Excel Objects
    - Sheet1 (HTMLScrape)
    - Sheet2 (Main)
    - Sheet3 (Sub)
    - Sheet4 (FX)
    - Sheet5 (Control)
    - Sheet6 (Golden Copy)
    - Sheet8 (SPV LU)
    - Sheet9 (Matured)
    - ThisWorkbook
  - Forms
  - Modules
    - Calendar
    - CONTROL_MainImport
    - GoldenCopy
    - HTMLScrape
    - MainCleanSheet
    - MakeHeaders
    - MaturedTabCreate
    - SaveNewWorkbook
    - SummaryTab
- VBAProject (Credit Strategy Tools.xla)



Microsoft Visual Basic - Create Golden Copy for 2007 Dec 5.xls - [GoldenCopy (Code)]

Project - VBAProject

- VBAProject (BOACustomHeadFoot.xlam)
- VBAProject (Create Golden Copy for 2007 Dec 5.xls)
  - Microsoft Excel Objects
    - Sheet1 (HTMLScrape)
    - Sheet2 (Main)
    - Sheet3 (Sub)
    - Sheet4 (FX)
    - Sheet5 (Control)
    - Sheet6 (Golden Copy)
    - Sheet8 (SPV LU)
    - Sheet9 (Matured)
    - ThisWorkbook
  - Forms
  - Modules
    - Calendar
    - CONTROL_MainImport
    - GoldenCopy
    - HTMLScrape
    - MainCleanSheet
    - MakeHeaders
    - MaturedTabCreate
    - SaveNewWorkbook
    - SummaryTab
- VBAProject (Credit Strategy Tools.xla)
- VBAProject (SNLXLAddin.xla)

Properties - GoldenCopy

GoldenCopy Module

Alphabetic | Categorized

(Name) GoldenCopy

(General) | FillGoldenCopy

```
Sub FillGoldenCopy()
Dim mrcnt As String
Dim srcnt As String

Sheets("Main").Select
Range("A2").Select
Range(Selection, Selection.End(xlDown)).Select
mrcnt = Selection.Rows.Count

'//Create unique Coper and ISN identifier in  Main Column T

    Range("T2").Select
    ActiveCell.FormulaR1C1 = "=RC[-16]&RC[-15]"
    Range("T2").Select
    Selection.AutoFill Destination:=Range("T2:T" & mrcnt + 1), Type:=xlFillD


'// Clear Golden Copy
    Sheets("Golden Copy").Select
    Rows("2:2").Select
    Range(Selection, Selection.End(xlDown)).Select
    Selection.Delete Shift:=xlUp

'// fill first data row with formulas
Sheets("Golden Copy").Select

    Range("A2").Select
    ActiveCell.FormulaR1C1 = "=Sub!RC[4]"
    Selection.NumberFormat = "General"
    Range("B2").Select
    ActiveCell.FormulaR1C1 = "MER"
    Range("C2").Select
    ActiveCell.FormulaR1C1 = _
        "=IF(RIGHT(RC[1], 4) = ""OBAL"", ""SCT"", IF(RIGHT(RC[1], 4) = ""EME
    Range("D2").Select
    ActiveCell.FormulaR1C1 = "=Sub!RC[-3]"
    Range("E2").Select
```

Watches

Expression	Value	Type	Context

Golden Copy Output changes – Add a column in the Golden Copy

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The code listed in the right field is that part of the macro that creates the Golden Copy report. Formulas are placed into the first row of the report and then copied and pasted for all other rows.

Underneath the text '// fill first data row with formulas begins the automatic entry of formulas.

- To add a column after column B and before column C:
  - Find the line of code that says Range("C2").Select.
    Above this line enter: Range("C2").Select
    ActiveCell.FormulaR1C1 = " **Enter formula here**"
  - The formula that can be entered is simply an formula that can be entered in the cell of an worksheet, however, if quotes are used in the formula they need to be written as 2 quotes in the VBA code.
    Ex: cell formula =IFERROR(S2*U2, "ERROR") VBA formula =IFERROR(RC[-3]*RC[-1], ""ERROR"")
  - For each Range("**C**2").Select expression that follows until '// copy lines for the number of sub trades, the letter needs to be changed to the next letter in the alphabet.
    Ex: previous expression: Range ("D2").Select new expression: Range("E2").Select
    Range("Z2").Select new expression: Range("AA2").Select
    Range("AB2").Select new expression: Range("AC2").Select
  - Scroll down to the text '// Header for Golden Copy
  - Find the line of code that says Range("C1").Select.
    Above this line enter: Range("C1").Select
    ActiveCell.FormulaR1C1 = " **Enter column header name here**"
  - For each Range("**D**1").Select expression that follows until '// copy lines for the number of sub trades, the letter needs to be changed to the next letter in the alphabet.

Golden Copy Output changes – Add a column in the Golden Copy

- To add a column after column C and before column D cont'd:
    - Open the MaturedTabCreate Module
    - Scroll down and find the text at the bottom that says :

```
Sheets("Golden Copy").Select
Range("AB1").Select
Range(Selection, Selection.End(xlDown)).Delete
```

- Edit the Range("AB1").Select line in the same manner that it was edited before. The letter was changed to the next letter of the alphabet. This line will now say Range("AC1").Select (This command deletes the last entry of the Golden Copy which was the Transaction Description Column because it was used to create the matured tab but is now no longer needed.)
- Save changes. The added column will now appear in the Golden Copy when it is run.

Depending on the location of the added column, these changes may affect other aspects of the program. For example, the Summary tab works by comparing certain columns in the Golden Copy. If these columns move in position due to adding/deleting columns, the Summary tab will need to be updated to point to the correct values. These changes will need to be made in the SummaryTab module.

Golden Copy Output changes – Delete a column to the Golden Copy

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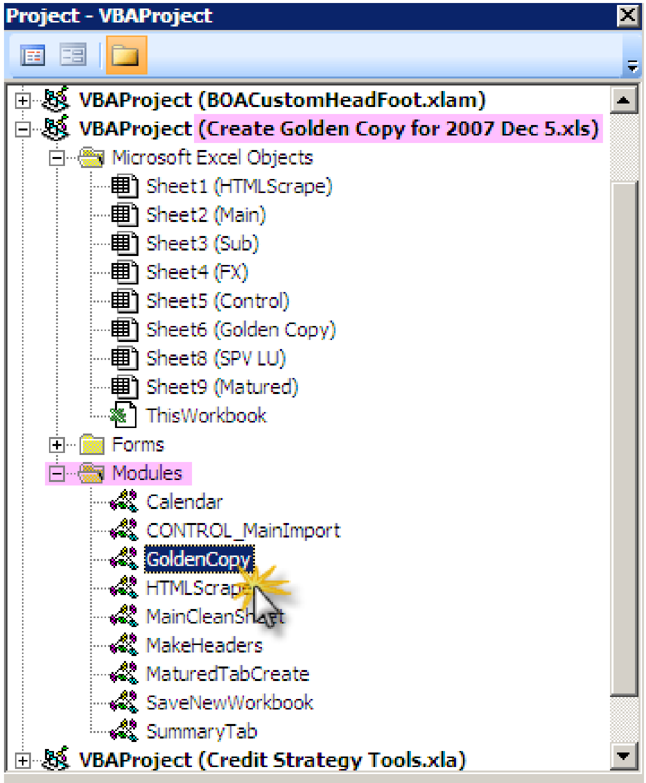
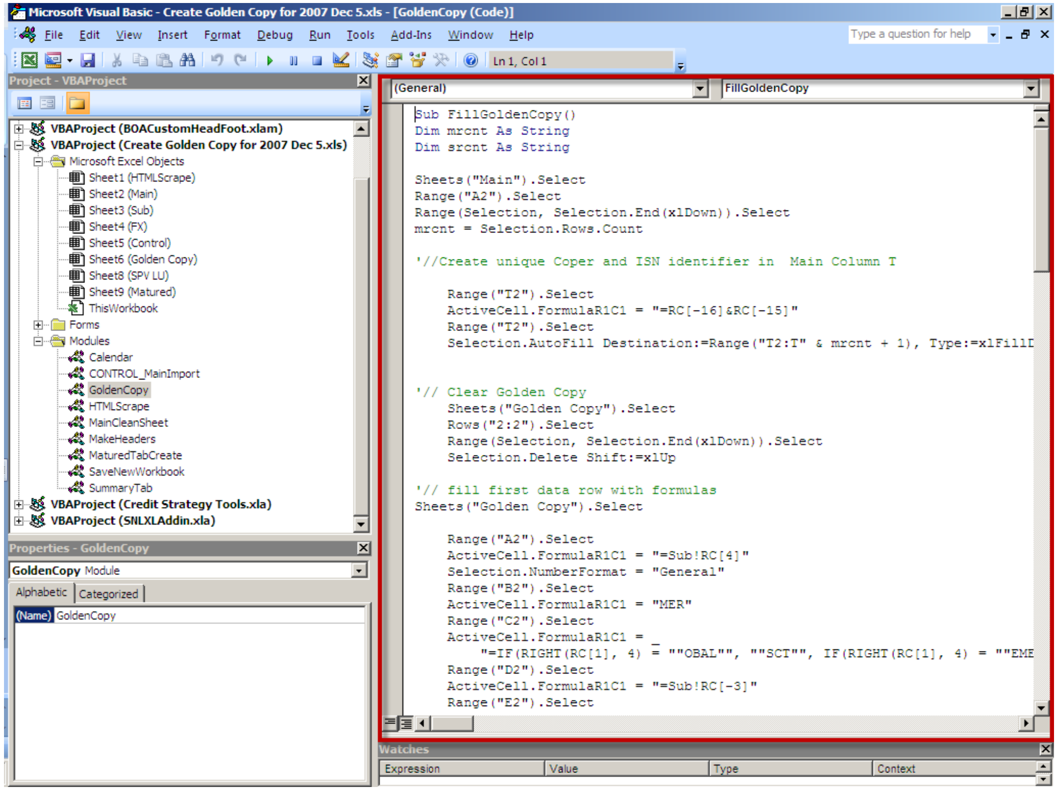
Scenario 2: Delete a column in the Golden Copy

To deletea column to the Golden Copy tab, modifications to the VBA macro need to be made.

- Open VBA. In the left hand panel :
  - Expand the VBA Project for the file you have open (In this case its Create Golden Copy for 2007 Dec 5)
  - Expand the Modules folder
  - Select the GoldenCopy Module and window will open in the right pane





```
Sub FillGoldenCopy()
Dim mrcnt As String
Dim srcnt As String

Sheets("Main").Select
Range("A2").Select
Range(Selection, Selection.End(xlDown)).Select
mrcnt = Selection.Rows.Count

'//Create unique Coper and ISN identifier in  Main Column T

    Range("T2").Select
    ActiveCell.FormulaR1C1 = "=RC[-16]&RC[-15]"
    Range("T2").Select
    Selection.AutoFill Destination:=Range("T2:T" & mrcnt + 1), Type:=xlFillD


'// Clear Golden Copy
    Sheets("Golden Copy").Select
    Rows("2:2").Select
    Range(Selection, Selection.End(xlDown)).Select
    Selection.Delete Shift:=xlUp

'// fill first data row with formulas
Sheets("Golden Copy").Select

    Range("A2").Select
    ActiveCell.FormulaR1C1 = "=Sub!RC[4]"
    Selection.NumberFormat = "General"
    Range("B2").Select
    ActiveCell.FormulaR1C1 = "MER"
    Range("C2").Select
    ActiveCell.FormulaR1C1 = _
        "=IF(RIGHT(RC[1], 4) = ""OBAL"", ""SCT"", IF(RIGHT(RC[1], 4) = ""EME
    Range("D2").Select
    ActiveCell.FormulaR1C1 = "=Sub!RC[-3]"
    Range("E2").Select
```

Golden Copy Output changes – Delete a column in the Golden Copy

The code listed in the right field is that part of the macro that creates the Golden Copy report. Formulas are placed into the first row of the report and then copied and pasted for all other rows.

Underneath the text '// fill first data row with formulas begins the automatic entry of formulas.

- To delete column C:
  - Find the consecutive lines of code that says Range("C2").Select.
    ActiveCell.FormulaR1C1 = "Formula"

    and delete them
  - For each Range("D2").Select expression that follows until '// copy lines for the number of sub trades, the letter needs to be changed to the previous letter in the alphabet.

    Ex: previous expression: Range ("D2").Select new expression: Range("C2").Select
    Range("Z2").Select new expression: Range("Y2").Select
    Range("AB2").Select new expression: Range("AA2").Select
  - Scroll down to the text '// Header for Golden Copy
  - Find the line of code that says Range("C1").Select.
    ActiveCell.FormulaR1C1 = " Header name"

    and delete them
  - For each Range("D1").Select expression that follows until '// copy lines for the number of sub trades, the letter needs to be changed to the previous letter in the alphabet.

Golden Copy Output changes – Delete a column in the Golden Copy

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- To delete column C cont'd:
  - Open the MaturedTabCreate Module
  - Scroll down and find the text at the bottom that says :

```
Sheets("Golden Copy").Select
Range("AB1").Select
Range(Selection, Selection.End(xlDown)).Delete
```

  - Edit the Range("AB1").Select line in the same manner that it was edited before. The letter was changed to the *previous* letter of the alphabet. This line will now say Range("AA1").Select (This command deletes the last entry of the Golden Copy which was the Transaction Description Column because it was used to create the matured tab but is now no longer needed.)
  - Save changes. The deleted column no longer appear in the Golden Copy when it is run.

Depending on the location of the added column, these changes may affect other aspects of the program. For example, the Summary tab works by comparing certain columns in the Golden Copy. If these columns move in position due to adding/deleting columns, the Summary tab will need to be updated to point to the correct values. These changes will need to be made in the SummaryTab module.

Golden Copy - HTML changes

If changes in the HTML Trigger report occur, this affects many aspects of the Golden Copy macros. The following modules will need to be edited:

- CONTROL_MainImport
- HTMLScrape
- MakeHeaders
- GoldenCopy
- MainCleanSheet

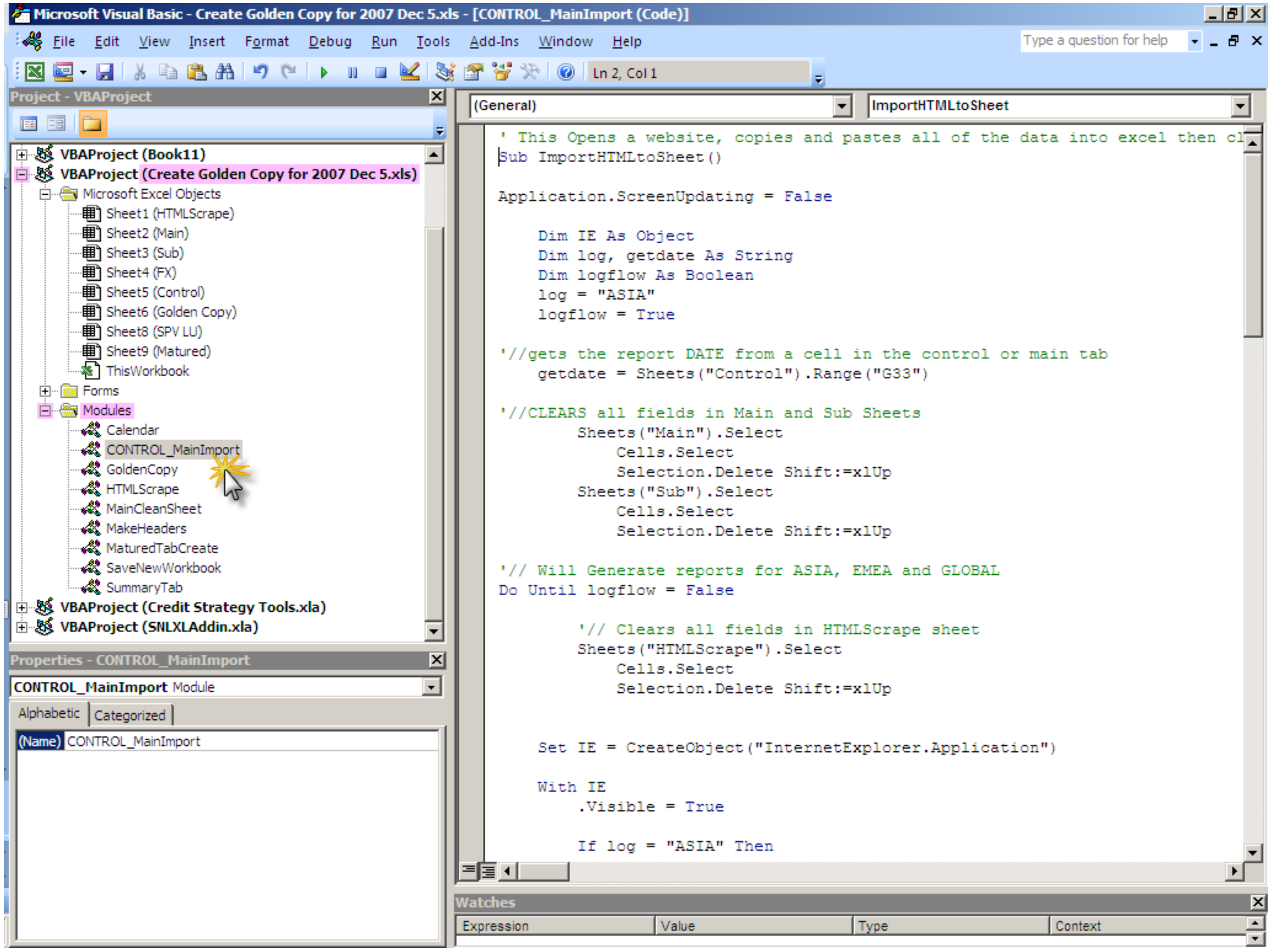
While many changes can occur, this user guide will only go over changes in the URL of the Trigger reports, new columns, deleted columns.

HTML changes – New URL of Trigger Reports

If the Trigger reports are moved to a new URL, changes need to be made to the VBA code.

- Open VBA. In the left hand panel :
  - Expand the VBA Project for the file you have open (In this case its Create Golden Copy for 2007 Dec 5)
  - Expand the Modules folder
  - Select the CONTROL_MainImport module and window will open in the right pane

The code listed in the right field is the part of the macro that opens the Internet Explorer window and navigates to the page where the HTML Trigger report exists for ASIA, EMEA, and GLOBAL.



(Name) CONTROL_MainImport

```
' This Opens a website, copies and pastes all of the data into excel then cl
Sub ImportHTMLtoSheet()

Application.ScreenUpdating = False

    Dim IE As Object
    Dim log, getdate As String
    Dim logflow As Boolean
    log = "ASIA"
    logflow = True

'//gets the report DATE from a cell in the control or main tab
    getdate = Sheets("Control").Range("G33")

'//CLEARS all fields in Main and Sub Sheets
        Sheets("Main").Select
            Cells.Select
            Selection.Delete Shift:=xlUp
        Sheets("Sub").Select
            Cells.Select
            Selection.Delete Shift:=xlUp

'// Will Generate reports for ASIA, EMEA and GLOBAL
Do Until logflow = False

        '// Clears all fields in HTMLScrape sheet
        Sheets("HTMLScrape").Select
            Cells.Select
            Selection.Delete Shift:=xlUp


    Set IE = CreateObject("InternetExplorer.Application")

    With IE
        .Visible = True

        If log = "ASIA" Then
```

HTML changes – New URL of Trigger Reports

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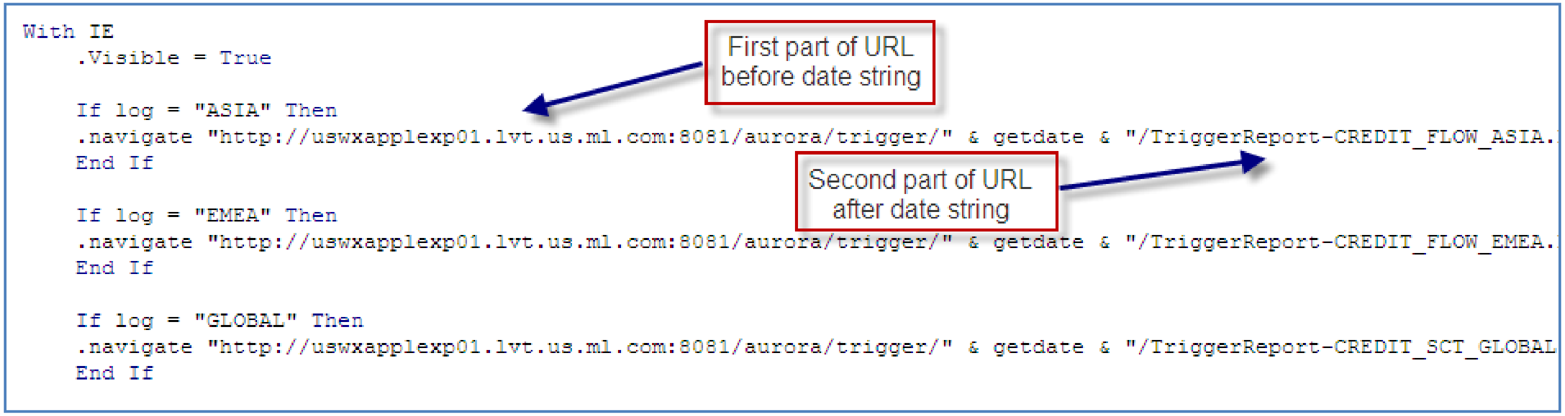
Scroll down to the line of text that says If log = “ASIA” Then
.navigate “http://use...trigger/” & getdate & “/Trigger...”
This part of the code directs the program to the ASIA trigger report found at the listed URL. There in a & getdate & interrupting the URL because this is the user input date string that will concatenate the two URL parts and be navigated to as one string. These commands similarly exist for the other two reports in the lines that follow.

- To modify the URL:
  - Enter ASIA URL up to the section that has a date string after .navigate “
  - Enter the rest of the URL after the date string after & getdate & “
  - Make sure to close the URL fields with quotations marks after they are entered.
  - Follow the same steps for the EMEA and GLOBAL URLs



```
With IE
    .Visible = True

    If log = "ASIA" Then
    .navigate "http://uswxapplexp01.lvt.us.ml.com:8081/aurora/trigger/" & getdate & "/TriggerReport-CREDIT_FLOW_ASIA.
    End If

    If log = "EMEA" Then
    .navigate "http://uswxapplexp01.lvt.us.ml.com:8081/aurora/trigger/" & getdate & "/TriggerReport-CREDIT_FLOW_EMEA.
    End If

    If log = "GLOBAL" Then
    .navigate "http://uswxapplexp01.lvt.us.ml.com:8081/aurora/trigger/" & getdate & "/TriggerReport-CREDIT_SCT_GLOBAL
    End If
```

First part of URL before date string

Second part of URL after date string

Note: These URL change instructions assume that the date string will be the unique identifier between different reports and that the date string in the URL will be in the format YYYYMMDD

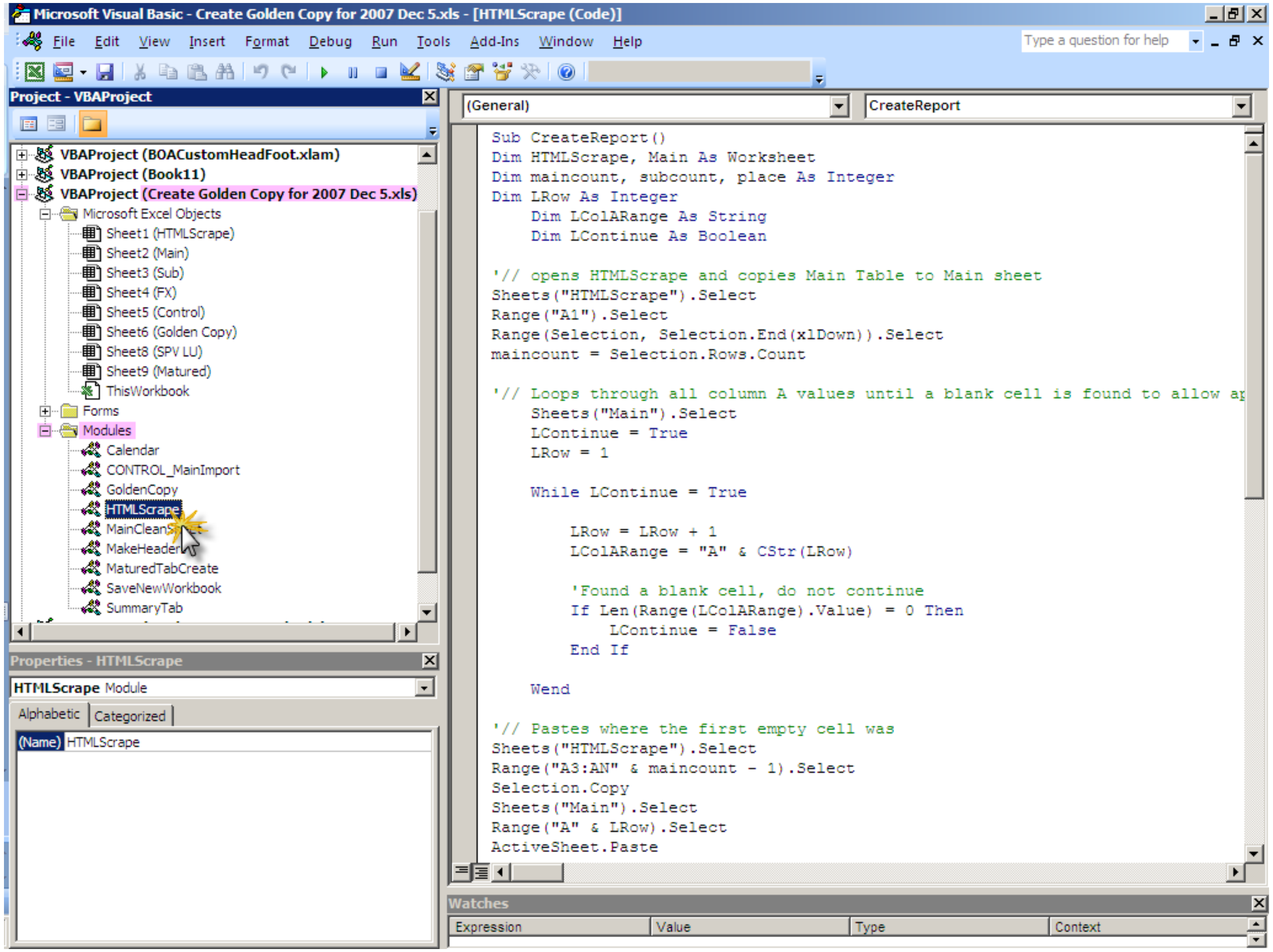
HTML changes – New Column in Main Report

If a new column is added to the **Main** report of the HTML Trigger report, changes need to be made in the following modules:

HTMLScrape
MakeHeaders
GoldenCopy
MainCleanSheet

- First, Open VBA. In the left hand panel :
  - Expand the VBA Project for the file you have open (In this case its Create Golden Copy for 2007 Dec 5)
  - Expand the Modules folder
  - Select the HTMLScrape module and window will open in the right pane

The HTMLScrape module holds the raw copy of the HTML page. It takes the Main/Sub report fields and pastes it in the Main/Sub tab



```
Sub CreateReport()
Dim HTMLScrape, Main As Worksheet
Dim maincount, subcount, place As Integer
Dim LRow As Integer
    Dim LColARange As String
    Dim LContinue As Boolean

'// opens HTMLScrape and copies Main Table to Main sheet
Sheets("HTMLScrape").Select
Range("A1").Select
Range(Selection, Selection.End(xlDown)).Select
maincount = Selection.Rows.Count

'// Loops through all column A values until a blank cell is found to allow ap
    Sheets("Main").Select
    LContinue = True
    LRow = 1

    While LContinue = True

        LRow = LRow + 1
        LColARange = "A" & CStr(LRow)

        'Found a blank cell, do not continue
        If Len(Range(LColARange).Value) = 0 Then
            LContinue = False
        End If

    Wend

'// Pastes where the first empty cell was
Sheets("HTMLScrape").Select
Range("A3:AN" & maincount - 1).Select
Selection.Copy
Sheets("Main").Select
Range("A" & LRow).Select
ActiveSheet.Paste
```

HTML changes – New Column in Main Report

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HTMLScrape modifications:

- Under the text '// Pastes where the first empty cell was the line Range("A3:AN" & maincount - 1).Select needs to be edited. If one column was added, AN needs to more forward one letter to be AO.

Open the MakeHeaders module to make modifications:

- If a new column is being added after the second column and before the third column:
    - Find the line of code that says '//Headers for Main sheet directly at the top
    - Find the line of code that says Range("C2").Select. before '// Headers for Sub Sheet

      Above this line enter: Range("C2").Select
      ActiveCell.FormulaR1C1 = " **Enter header name here**"
    - For each Range("C2").Select expression that follows until '// copy lines for the number of sub trades, the letter needs to be changed to the next letter in the alphabet.

      Ex: previous expression: Range ("D2").Select new expression: Range("E2").Select
      Range("Z2").Select new expression: Range("AA2").Select
      Range("AB2").Select new expression: Range("AC2").Select

HTML changes – New Column in Main Report

Open the GoldenCopy module to make modifications:

- Find the text '//Create unique Coper and ISN identifier in Main Column S which is in the beginning of the code.
- This section of the code adds a unique identifier column to the Main tab which concatenates the data in column D and column E of the Main tab and reports in in the last column. Because a new column has been added to the Main report, the location of this new column needs to be moved forward.
  - For the two lines that say Range(“S2”).Select, the S needs to be replaced with the next column letter, T.

Additionally, the formulas that create the Golden Copy are conditional on the location of the data in the Main and Sub reports. This means that an added or removed column in the report can cause incorrect data mappings. For Example: A field in the Golden Copy points to column G in the Main report that holds the Issue Date. If a new column is added in the Main report before column C, this means that each succeeding column is relocated the following column. Therefore the Issue date in column G is now in column H but the Golden Copy field is still pointing to column G and is retrieving incorrect data.

This means that for every field in the Golden Copy, if it is referencing data in front of the added column, the data mappings should still be correct. For every field in the Golden Copy that is referencing data after the column **addition**, the formulas have to be updated like so:

previous formula: ActiveCell.FormulaR1C1 = "=Sub!RC[4]“

new formula :   ActiveCell.FormulaR1C1 = "=Sub!RC[5]"

previous formula :   ActiveCell.FormulaR1C1 = "=Sub!RC[-3]“

new formula :   ActiveCell.FormulaR1C1 = "=Sub!RC[-2]“

HTML changes – New Column in Main Report

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The reason the number after C is being changed is because the C4 means look up the value four columns ahead of the formula's location. If a new column is added the value would have moved to the fifth column ahead of the formula's location.

This step could potentially involve lots of changes and so it is recommended that a good level of testing accompanies these changes to verify not only that the program doesn't create errors, but also that the correct data is placed in the right spots.

Open the MainCleanSheet module to make modifications (***Only If a new column is being added before the Status column. If not, these can be ignored***):

- Find the expression Columns("B:B").Select and change both letters to the next letter if only one column is being added
- Find the expression Columns("C:W").Select and change both letters to the next letter if only one column is being added

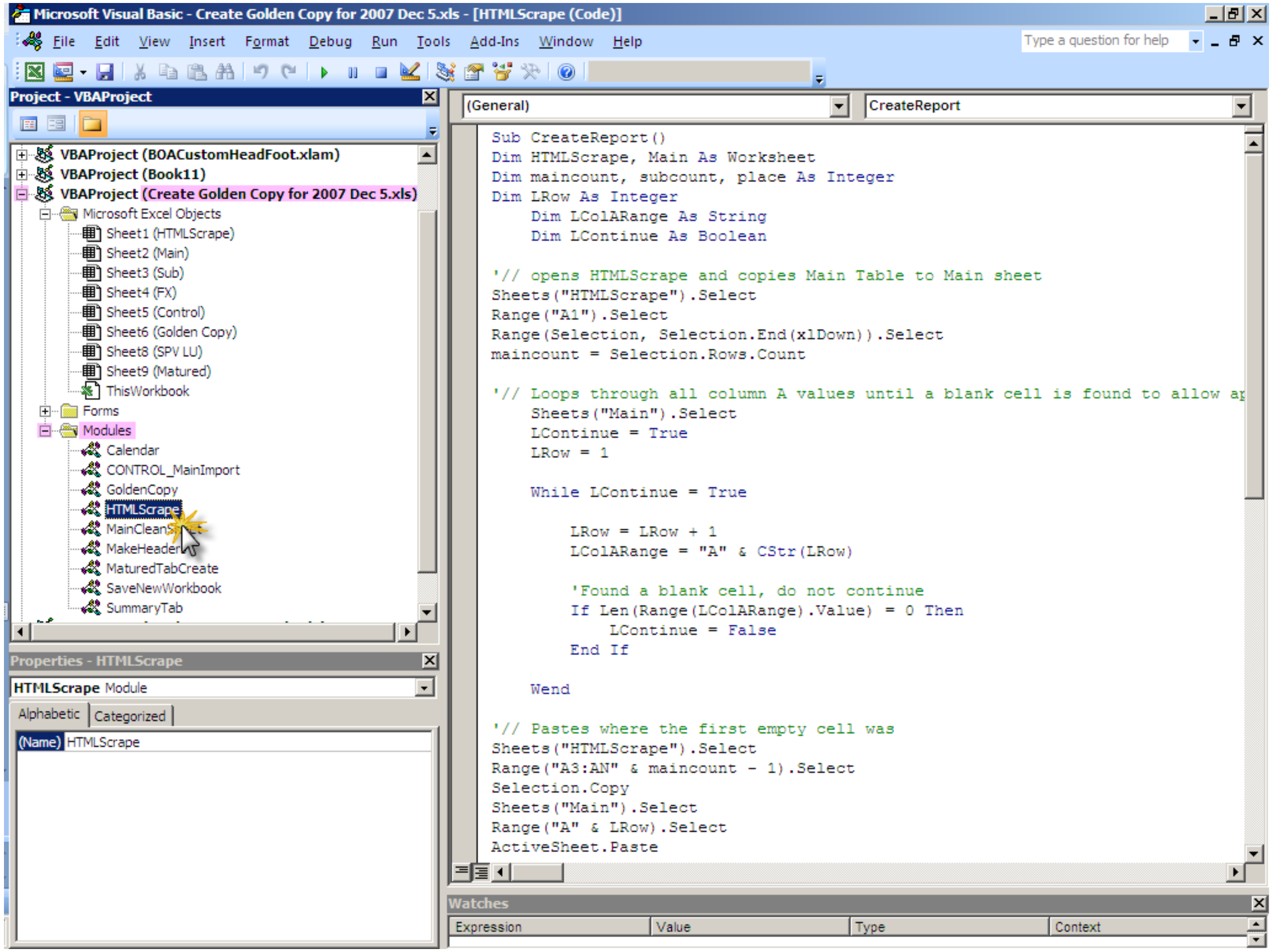
HTML changes – Remove Column in Main Report

If a column is removed in the **Main** report of the HTML Trigger report, changes need to be made in the following modules:

HTMLScrape
MakeHeaders
GoldenCopy
MainCleanSheet

- First, Open VBA. In the left hand panel :
  - Expand the VBA Project for the file you have open (In this case its Create Golden Copy for 2007 Dec 5)
  - Expand the Modules folder
  - Select the HTMLScrape module and window will open in the right pane

The HTMLScrape module holds the raw copy of the HTML page. It takes the Main/Sub report fields and pastes it in the Main/Sub tab



```
Sub CreateReport()
Dim HTMLScrape, Main As Worksheet
Dim maincount, subcount, place As Integer
Dim LRow As Integer
    Dim LColARange As String
    Dim LContinue As Boolean

'// opens HTMLScrape and copies Main Table to Main sheet
Sheets("HTMLScrape").Select
Range("A1").Select
Range(Selection, Selection.End(xlDown)).Select
maincount = Selection.Rows.Count

'// Loops through all column A values until a blank cell is found to allow ap
    Sheets("Main").Select
    LContinue = True
    LRow = 1

    While LContinue = True

        LRow = LRow + 1
        LColARange = "A" & CStr(LRow)

        'Found a blank cell, do not continue
        If Len(Range(LColARange).Value) = 0 Then
            LContinue = False
        End If

    Wend

'// Pastes where the first empty cell was
Sheets("HTMLScrape").Select
Range("A3:AN" & maincount - 1).Select
Selection.Copy
Sheets("Main").Select
Range("A" & LRow).Select
ActiveSheet.Paste
```

HTML changes – Remove Column in Main Report

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HTMLScrape modifications:

- Under the text '// Pastes where the first empty cell was the line Range("A3:AN" & maincount - 1).Select needs to be edited. If one column was removed, AN needs to more backwards one letter to be AM.

Open the MakeHeaders module to make modifications:

- If the third column is being removed:
  - Find the line of code that says '//Headers for Main sheet directly at the top
  - Find the line of code that says Range("C2").Select. before '// Headers for Sub Sheet
    ActiveCell.FormulaR1C1 = “Header Name”
    delete these two lines completely
  - For each Range(“D2”).Select expression that follows until '// copy lines for the number of sub trades, the letter needs to be changed to the next letter in the alphabet.

Ex: previous expression:	Range (“D2”).Select	new expression: Range(“C2”).Select
	Range(“Z2”).Select	new expression: Range(“Y2”).Select
	Range(“AB2”).Select	new expression: Range(“AA2”).Select

HTML changes – Remove Column in Main Report

Bank of America Merrill Lynch

Open the GoldenCopy module to make modifications:

- Find the text '//Create unique Coper and ISN identifier in Main Column S which is in the beginning of the code.
- This section of the code adds a unique identifier column to the Main tab which concatenates the data in column D and column E of the Main tab and reports in in the last column. Because a column has been removed to the Main report, the location of this new column needs to be moved backward.
  - For the two lines that say Range("S2").Select, the S needs to be replaced with the previous column letter, R.

Additionally, the formulas that create the Golden Copy are conditional on the location of the data in the Main and Sub reports. This means that an added or removed column in the report can cause incorrect data mappings. For Example: A field in the Golden Copy points to column G in the Main report that holds the Issue Date. If a new column is added in the Main report before column C, this means that each succeeding column is relocated the following column. Therefore the Issue date in column G is now in column H but the Golden Copy field is still pointing to column G and is retrieving incorrect data.

This means that for every field in the Golden Copy, if it is referencing data in front of the added column, the data mappings should still be correct. For every field in the Golden Copy that is referencing data after the column **deletion**, the formulas have to be updated like so:

```
previous formula:    ActiveCell.FormulaR1C1 = "=Sub!RC[4]“
new formula :        ActiveCell.FormulaR1C1 = "=Sub!RC[3]"

previous formula :   ActiveCell.FormulaR1C1 = "=Sub!RC[-3]“
new formula :        ActiveCell.FormulaR1C1 = "=Sub!RC[-4]“
```

HTML changes – Remove Column in Main Report

Bank of America Merrill Lynch

The reason the number after C is being changed is because the C4 means look up the value four columns ahead of the formula's location. If a column is removed the value would have moved to the third column ahead of the formula's location.

This step could potentially involve lots of changes and so it is recommended that a good level of testing accompanies these changes to verify not only that the program doesn't create errors, but also that the correct data is placed in the right spots.

Open the MainCleanSheet module to make modifications (***Only If a column is being removed before the Status column. If not, these can be ignored***):

- Find the expression Columns("B:B").Select and change both letters to the previous letter if only one column is being removed
- Find the expression Columns("C:W").Select and change both letters to the previous letter if only one column is being added

HTML changes – Add a Column in Sub Report

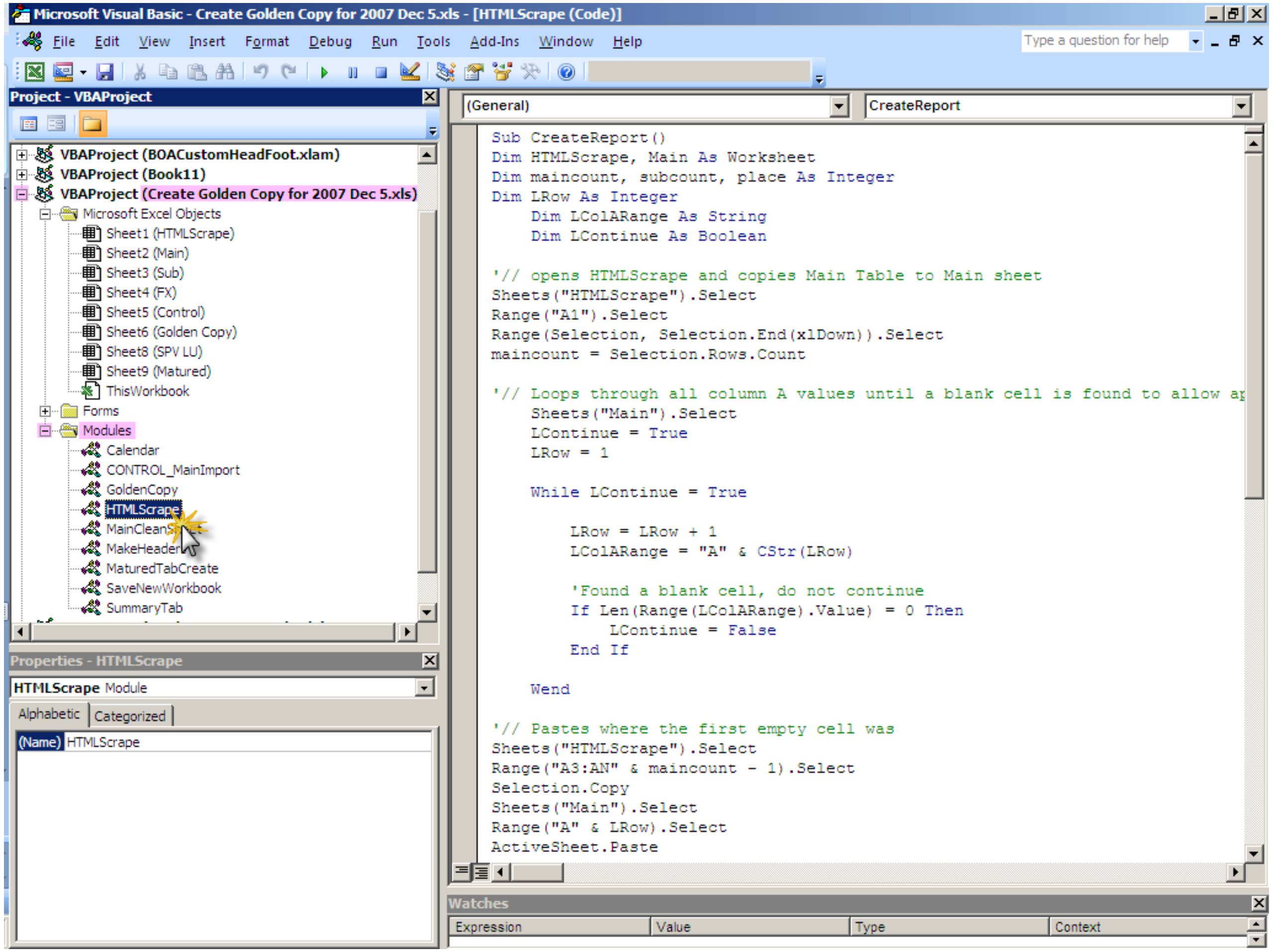
Bank of America Merrill Lynch

If a column is added in the **Sub** report of the HTML Trigger report, changes need to be made in the following modules:

HTMLScrape
MakeHeaders
GoldenCopy
MainCleanSheet

- First, Open VBA. In the left hand panel :
    - Expand the VBA Project for the file you have open (In this case its Create Golden Copy for 2007 Dec 5)
    - •Expand the Modules folder
    - Select the HTMLScrape module and window will open in the right pane

The HTMLScrape module holds the raw copy of the HTML page. It takes the Main/Sub report fields and pastes it in the Main/Sub tab



```
Sub CreateReport()
Dim HTMLScrape, Main As Worksheet
Dim maincount, subcount, place As Integer
Dim LRow As Integer
    Dim LColARange As String
    Dim LContinue As Boolean

'// opens HTMLScrape and copies Main Table to Main sheet
Sheets("HTMLScrape").Select
Range("A1").Select
Range(Selection, Selection.End(xlDown)).Select
maincount = Selection.Rows.Count

'// Loops through all column A values until a blank cell is found to allow ap
    Sheets("Main").Select
    LContinue = True
    LRow = 1

    While LContinue = True

        LRow = LRow + 1
        LColARange = "A" & CStr(LRow)

        'Found a blank cell, do not continue
        If Len(Range(LColARange).Value) = 0 Then
            LContinue = False
        End If

    Wend

'// Pastes where the first empty cell was
Sheets("HTMLScrape").Select
Range("A3:AN" & maincount - 1).Select
Selection.Copy
Sheets("Main").Select
Range("A" & LRow).Select
ActiveSheet.Paste
```

HTML changes – Add a Column in Sub Report

HTMLScrape modifications:

- •Under the text '// Pastes where the first empty cell was the line Range("A3:AN" & maincount - 1).Select needs to be edited. If one column was added, AN needs to more forwards one letter to be AO.
- •Under the text ‘//Pastes in Sub Report find the line Range("B" & maincount + 3 & ":W" & subcount).Select. if one column was added, W needs to more forwards one letter to be X.

Open the MakeHeaders module to make modifications:

•If a column is being added after the second and before the third:

- •Find the line of code that says '//Headers for Main sheet directly at the top
- •Starting after the ActiveCell.FormulaR1C1 = “SPV Identifier” expression, for each Range(“**Y**1”).Select expression that follows until '// copy lines for the number of sub trades, the letter needs to be changed to the next letter in the alphabet.

  Ex: previous expression: Range (“D1”).Select new expression: Range(“E1”).Select
  Range(“Z1”).Select new expression: Range(“AA1”).Select
  Range(“AB1”).Select new expression: Range(“AC1”).Select
- • Find the line of code that says Range("C2").Select. before '// Headers for Sub Sheet

  Above this line enter: Range("C2").Select
  ActiveCell.FormulaR1C1 = “ **Enter header name here**”
- •For each Range(“**C**2”).Select expression that follows until '// copy lines for the number of sub trades, the letter needs to be changed to the next letter in the alphabet.

  Ex: previous expression: Range (“D2”).Select new expression: Range(“E2”).Select
  Range(“Z2”).Select new expression: Range(“AA2”).Select
  Range(“AB2”).Select new expression: Range(“AC2”).Select

HTML changes – Add a Column in Sub Report

Additionally, the formulas that create the Golden Copy are conditional on the location of the data in the Main and Sub reports. This means that an added or removed column in the report can cause incorrect data mappings. For Example: A field in the Golden Copy points to column G in the Main report that holds the Issue Date. If a new column is added in the Main report before column C, this means that each succeeding column is relocated the following column. Therefore the Issue date in column G is now in column H but the Golden Copy field is still pointing to column G and is retrieving incorrect data.

This means that for every field in the Golden Copy, if it is referencing data in front of the added column, the data mappings should still be correct. For every field in the Golden Copy that is referencing data after the column **addition**, the formulas have to be updated like so:

```
previous formula:   ActiveCell.FormulaR1C1 = "=Sub!RC[4]“
new formula :       ActiveCell.FormulaR1C1 = "=Sub!RC[5]"

previous formula :  ActiveCell.FormulaR1C1 = "=Sub!RC[-3]“
new formula :       ActiveCell.FormulaR1C1 = "=Sub!RC[-2]“
```

HTML changes – Add a Column in Sub Report

Bank of America Merrill Lynch

The reason the number after C is being changed is because the C4 means look up the value four columns ahead of the formula's location. If a column is added the value would have moved to the fifth column ahead of the formula's location.

This step could potentially involve lots of changes and so it is recommended that a good level of testing accompanies these changes to verify not only that the program doesn't create errors, but also that the correct data is placed in the right spots.

Open the MainCleanSheet module to make modifications:

- Find the expression Columns("C:W").Select and change the second letter, W, to the next letter if only one column is being added

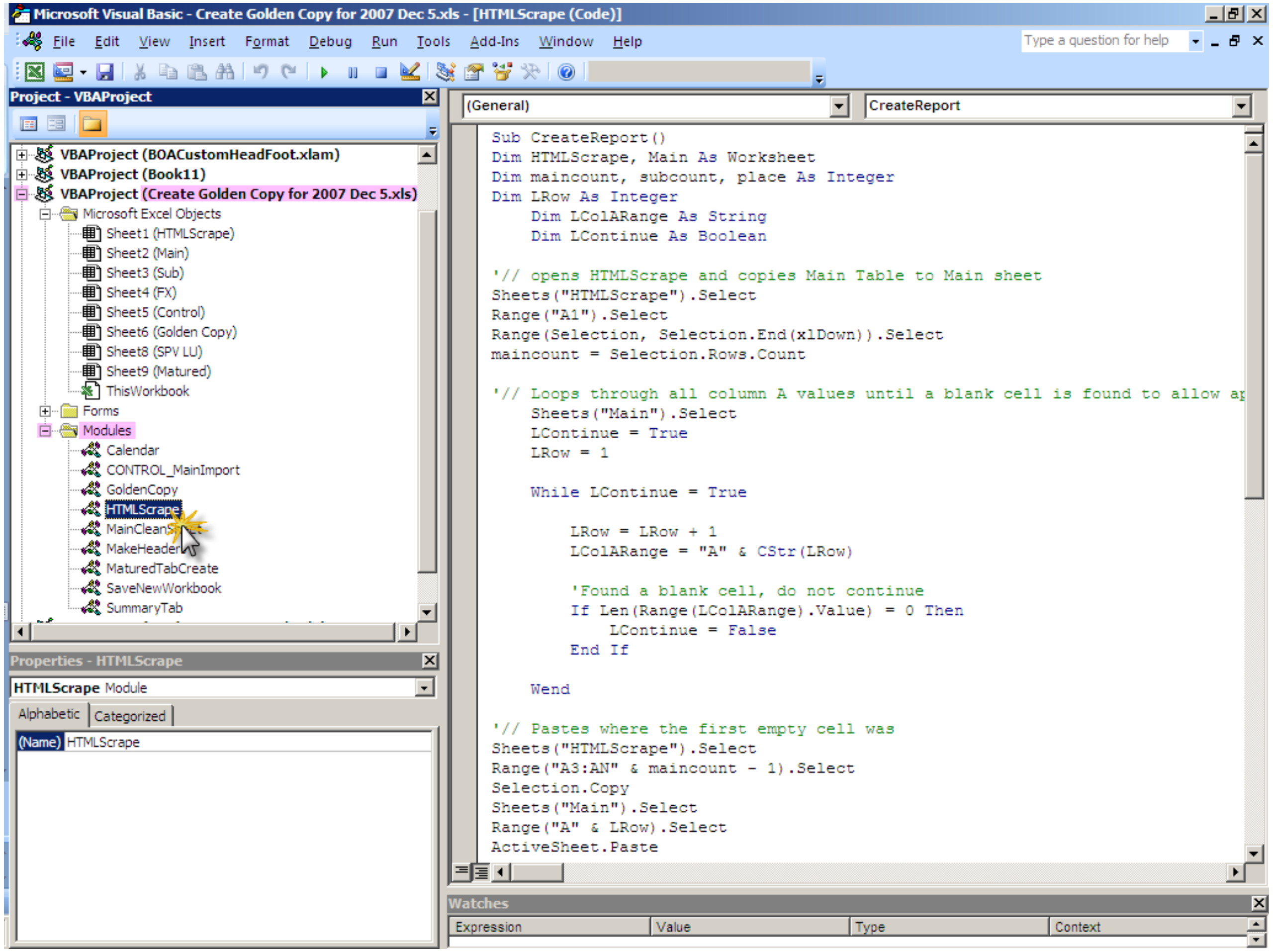
HTML changes – Remove a Column in Sub Report

If a column is removed in the **Sub** report of the HTML Trigger report, changes need to be made in the following modules:

HTMLScrape
MakeHeaders
GoldenCopy
MainCleanSheet

- First, Open VBA. In the left hand panel :
  - Expand the VBA Project for the file you have open (In this case its Create Golden Copy for 2007 Dec 5)
  - Expand the Modules folder
  - Select the HTMLScrape module and window will open in the right pane

The HTMLScrape module holds the raw copy of the HTML page. It takes the Main/Sub report fields and pastes it in the Main/Sub tab



```
Sub CreateReport()
Dim HTMLScrape, Main As Worksheet
Dim maincount, subcount, place As Integer
Dim LRow As Integer
    Dim LColARange As String
    Dim LContinue As Boolean

'// opens HTMLScrape and copies Main Table to Main sheet
Sheets("HTMLScrape").Select
Range("A1").Select
Range(Selection, Selection.End(xlDown)).Select
maincount = Selection.Rows.Count

'// Loops through all column A values until a blank cell is found to allow ap
    Sheets("Main").Select
    LContinue = True
    LRow = 1

    While LContinue = True

        LRow = LRow + 1
        LColARange = "A" & CStr(LRow)

        'Found a blank cell, do not continue
        If Len(Range(LColARange).Value) = 0 Then
            LContinue = False
        End If

    Wend

'// Pastes where the first empty cell was
Sheets("HTMLScrape").Select
Range("A3:AN" & maincount - 1).Select
Selection.Copy
Sheets("Main").Select
Range("A" & LRow).Select
ActiveSheet.Paste
```

HTML changes – Remove a Column in Sub Report

HTMLScrape modifications:

- Under the text '// Pastes where the first empty cell was the line Range("A3:AN" & maincount - 1).Select needs to be edited. If one column was removed, AN needs to more bakcwards one letter to be AM.
- Under the text '//Pastes in Sub Report find the line Range("B" & maincount + 3 & ":W" & subcount).Select. if one column was removed, W needs to more backwards one letter to be V.

Open the MakeHeaders module to make modifications:

- If the third column is being removed:
    - Find the line of code that says '//Headers for Main sheet directly at the top
    - Starting after the ActiveCell.FormulaR1C1 = "SPV Identifier" expression, for each Range("Y1").Select expression that follows until '// copy lines for the number of sub trades, the letter needs to be changed to the previous letter in the alphabet.

Ex: previous expression:	Range ("D1").Select	new expression: Range("C1").Select
	Range("Z1").Select	new expression: Range("Y1").Select
	Range("AB1").Select	new expression: Range("AA1").Select

- Find the line of code that says Range("C2").Select. before '// Headers for Sub Sheet
  ActiveCell.FormulaR1C1 = " Header Name"

  delete these two lines.
- For each Range("C2").Select expression that follows until '// copy lines for the number of sub trades, the letter needs to be changed to the previous letter in the alphabet.

Ex: previous expression:	Range ("D2").Select	new expression: Range("C2").Select
	Range("Z2").Select	new expression: Range("Y2").Select
	Range("AB2").Select	new expression: Range("AA2").Select

HTML changes – Remove a Column in Sub Report

Additionally, the formulas that create the Golden Copy are conditional on the location of the data in the Main and Sub reports. This means that an added or removed column in the report can cause incorrect data mappings. For Example: A field in the Golden Copy points to column G in the Main report that holds the Issue Date. If a new column is added in the Main report before column C, this means that each succeeding column is relocated the following column. Therefore the Issue date in column G is now in column H but the Golden Copy field is still pointing to column G and is retrieving incorrect data.

This means that for every field in the Golden Copy, if it is referencing data in front of the added column, the data mappings should still be correct. For every field in the Golden Copy that is referencing data after the column **deletion**, the formulas have to be updated like so:

```
previous formula:    ActiveCell.FormulaR1C1 = "=Sub!RC[4]“
new formula :        ActiveCell.FormulaR1C1 = "=Sub!RC[3]"

previous formula :   ActiveCell.FormulaR1C1 = "=Sub!RC[-3]“
new formula :        ActiveCell.FormulaR1C1 = "=Sub!RC[-4]“
```

HTML changes – Remove a Column in Sub Report

The reason the number after C is being changed is because the C4 means look up the value four columns ahead of the formula's location. If a column is removed the value would have moved back to the third column ahead of the formula's location.

This step could potentially involve lots of changes and so it is recommended that a good level of testing accompanies these changes to verify not only that the program doesn't create errors, but also that the correct data is placed in the right spots.

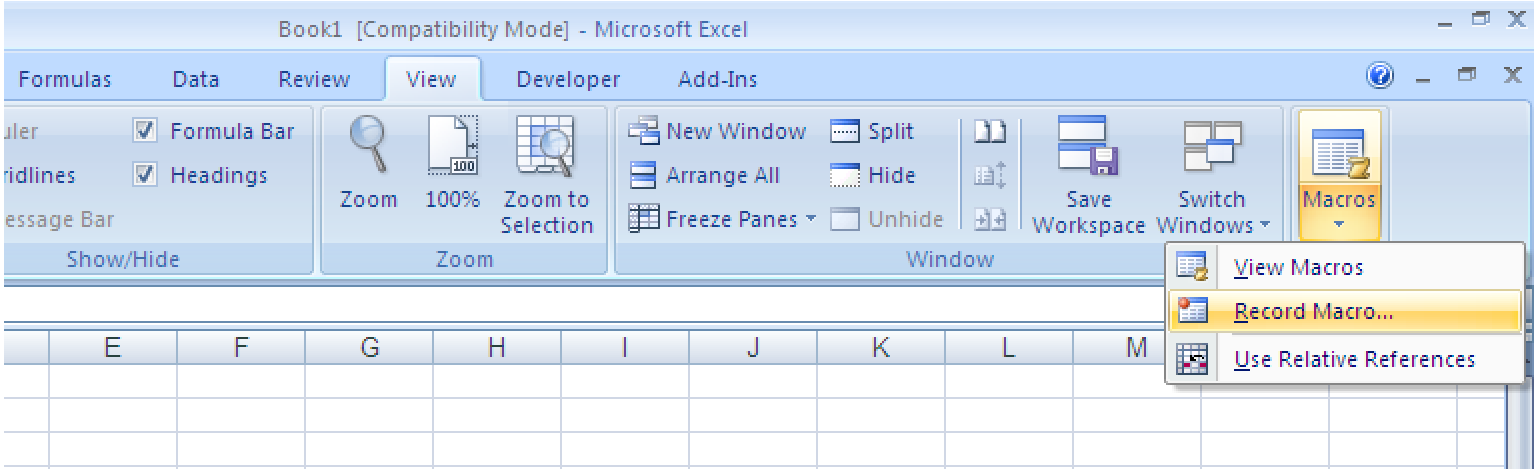
Open the MainCleanSheet module to make modifications:

- Find the expression Columns("C:W").Select and change the second letter, W, to the preious letter if only one column is being added

Formatting Changes – Record a Macro

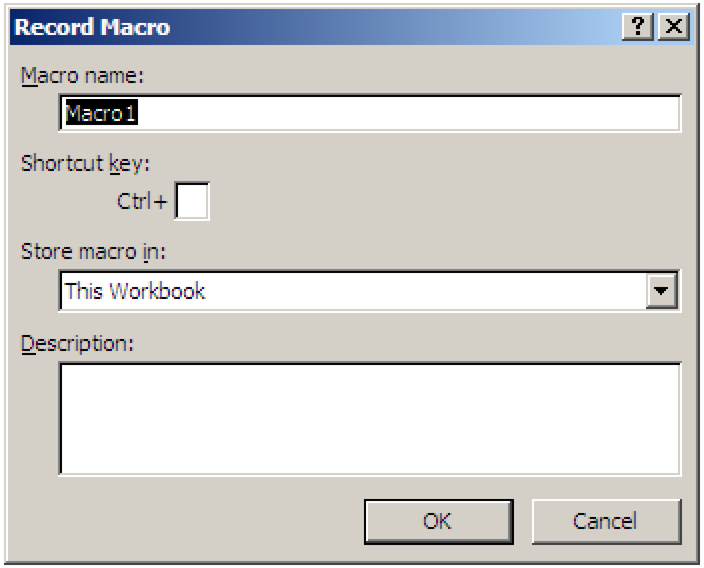
To apply formatting changes to any of the output reports (Golden Copy, Matured, Summary) this code can be entered in the SaveNewWorkbook module. If the user is unsure how to write the code to implement these changes, it is best to use the Record a Macro feature of Excel.

- In the View tab on the main toolbar, click on the arrow under Macros and then choose Record a macro.



Formatting Changes – Record a Macro

- You will now be prompted to name the Macro, then select OK.
- Apply all of the formatting changes desired. The macro is recording all of the actions.
- When you are done applying changes, click on the arrow under macros again and choose Stop Recording.
- Now, open VBA. In the left hand panel :
  - Expand the VBA Project for the file you have open (In this case its Create Golden Copy for 2007 Dec 5)
  - Expand the Modules folder
  - Select the Module1 module and window will open in the right pane
- Next to Sub will be the name you have chosen for the macro. The lines of code below it are the actions you applied to the sheets. Copy the name of the macro.
- Open the SaveNewWorkbook module.
- Before the line of code that says MsgBox "Report Completed Successfully.", enter Application.Run "**Name of Macro**"
- Save and close and the program will now apply your formatting changes.



Macro name: Macro1

Shortcut key: Ctrl+

Store macro in: This Workbook

Description:

SPV Reporting Tool

Excel VBA Functionalities

Golden Copy

Bank of America
Merrill Lynch

Trigger and Error Report vs Golden Copy

- The Trigger and Error Report file works very similarly to the Golden Copy. Each file contains macros that import data from the HTML sources and places it into a Main and Sub tab. After this the Golden Copy file provides data mappings to produce the Golden Copy reports. The Trigger and Error reports will have separate data mappings to produce those reports.
- For any troubleshooting issues regarding the import of data from HTML, explanations and troubleshooting guides can be seen in the Golden Copy section of this User Guide.

Error Report – Add a Column

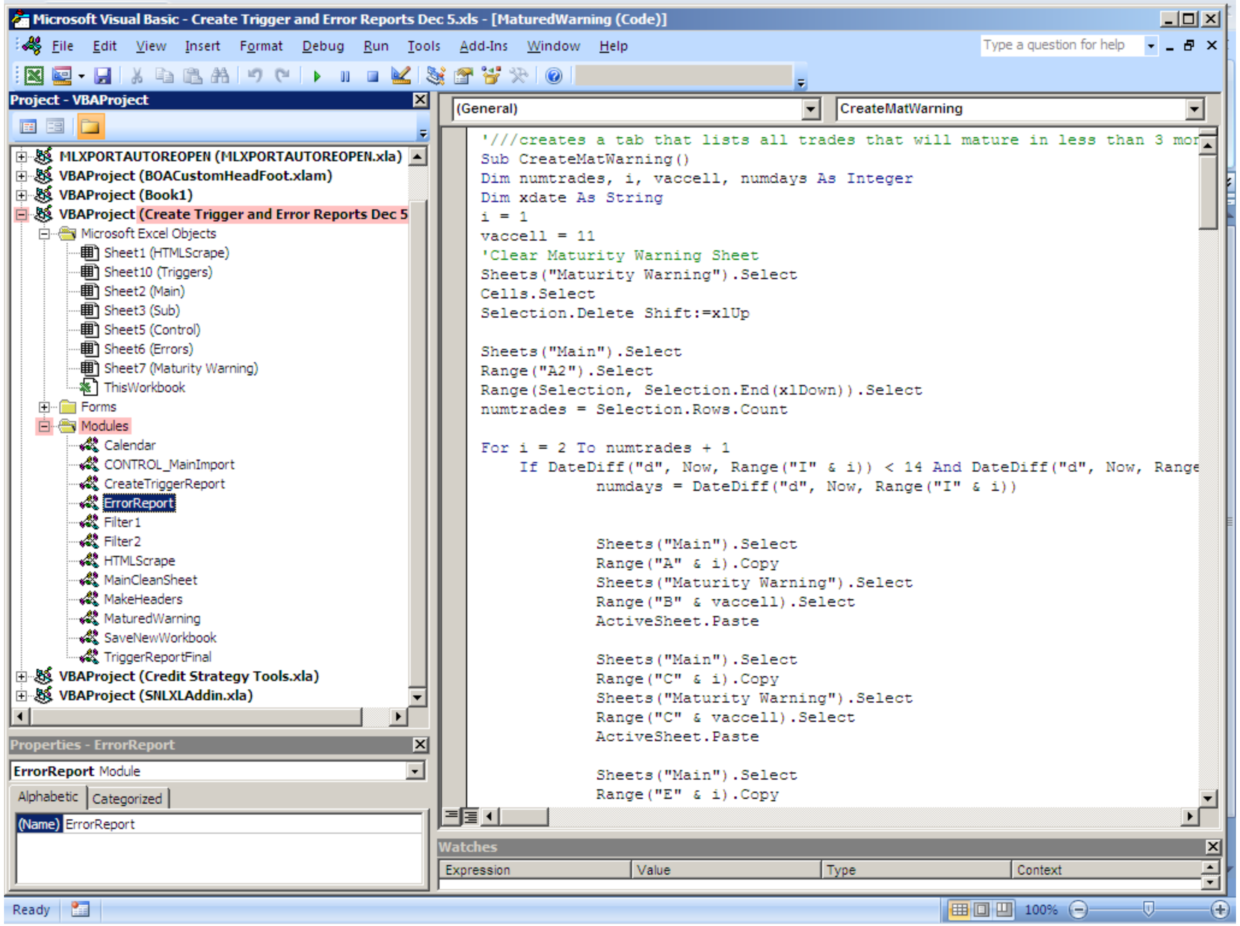
- If another field is desired in the Error Report summary, first open VBA. In the left hand panel :

- Expand the VBA Project for the file you have open

- Expand the Modules folder

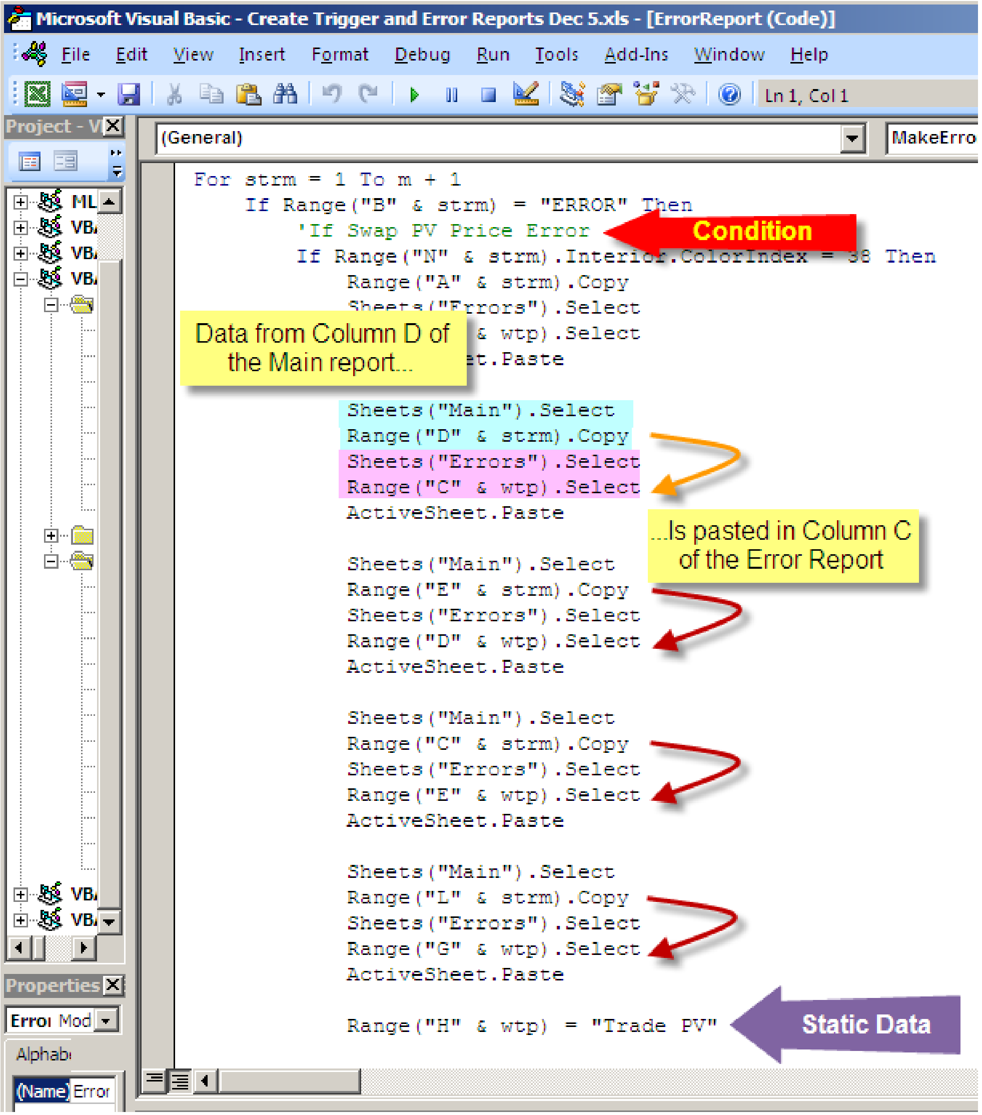
- Select the ErrorReport module and a window will open in the right pane

The ErrorReport Module contains all the code that creates data mappings and formatting to the Error tab.



```
'///creates a tab that lists all trades that will mature in less than 3 mor
Sub CreateMatWarning()
Dim numtrades, i, vaccell, numdays As Integer
Dim xdate As String
i = 1
vaccell = 11
'Clear Maturity Warning Sheet
Sheets("Maturity Warning").Select
Cells.Select
Selection.Delete Shift:=xlUp

Sheets("Main").Select
Range("A2").Select
Range(Selection, Selection.End(xlDown)).Select
numtrades = Selection.Rows.Count

For i = 2 To numtrades + 1
    If DateDiff("d", Now, Range("I" & i)) < 14 And DateDiff("d", Now, Range
            numdays = DateDiff("d", Now, Range("I" & i))


            Sheets("Main").Select
            Range("A" & i).Copy
            Sheets("Maturity Warning").Select
            Range("B" & vaccell).Select
            ActiveSheet.Paste

            Sheets("Main").Select
            Range("C" & i).Copy
            Sheets("Maturity Warning").Select
            Range("C" & vaccell).Select
            ActiveSheet.Paste

            Sheets("Main").Select
            Range("E" & i).Copy
```

Error Report – Add a Column



```
For strm = 1 To m + 1
    If Range("B" & strm) = "ERROR" Then
        'If Swap PV Price Error
        If Range("N" & strm).Interior.ColorIndex = 38 Then
            Range("A" & strm).Copy
            Sheets("Errors").Select
                     & wtp).Select
                    et.Paste

            Sheets("Main").Select
            Range("D" & strm).Copy
            Sheets("Errors").Select
            Range("C" & wtp).Select
            ActiveSheet.Paste

            Sheets("Main").Select
            Range("E" & strm).Copy
            Sheets("Errors").Select
            Range("D" & wtp).Select
            ActiveSheet.Paste

            Sheets("Main").Select
            Range("C" & strm).Copy
            Sheets("Errors").Select
            Range("E" & wtp).Select
            ActiveSheet.Paste

            Sheets("Main").Select
            Range("L" & strm).Copy
            Sheets("Errors").Select
            Range("G" & wtp).Select
            ActiveSheet.Paste

            Range("H" & wtp) = "Trade PV"
```

Condition

Data from Column D of the Main report…

…Is pasted in Column C of the Error Report

Static Data

- Follow the code to the first line that says For strm = 1 To m + 1
- This piece of code says:
  - If the Swap PV is a Price Error, continue to the data mappings below
  - The data mappings pick one column of the Main report and places that data into one column of the Error Report. The chosen column is the letter that appears in the statement Range("D"….).Select

- To add a column to the Error report, enter the five lines below:

```
Sheets("Main").Select
Range("D") & strm).Copy
Sheets("Errors").Select
Range("C" & wtp).Select
ActiveSheet.Paste
```

with the appropriate letters representing where the data is coming from and where it will be pasted.

Error Report – Add a Column

- If the added column was inserted before a preexisting column, each:

```
Sheets(“Errors”).Select
Range(“C” & wtp).Select
```

expressions after the addition needs to be edited so that the C is now the next letter of the alphabet.

```
Ex: previous expression:  Range (“D1”).Select       new expression:  Range(“E1”).Select
                          Range(“Z1”).Select        new expression: Range(“AA1”).Select
                          Range(“AB1”).Select       new expression: Range(“AC1”).Select
```

- This process needs to be similarly repeated three more times.
- Find the line that says 'If Error downloading price
- To add a column to the Error report, enter the five lines below:

```
Sheets(“Sub”).Select
Range(“D”) & strs).Copy
Sheets(“Errors”).Select
Range(“C” & wtp).Select
ActiveSheet.Paste
```

with the appropriate letters representing where the data is coming from and where it will be pasted.

- If the added column was inserted before a preexisting column, each:

```
Sheets(“Errors”).Select
Range(“C” & wtp).Select
```

expressions after the addition needs to be edited so that the C is now the next letter of the alphabet.

- Follow these same steps after the 'If Error downloading rating and 'If Error in Fitch Current expressions

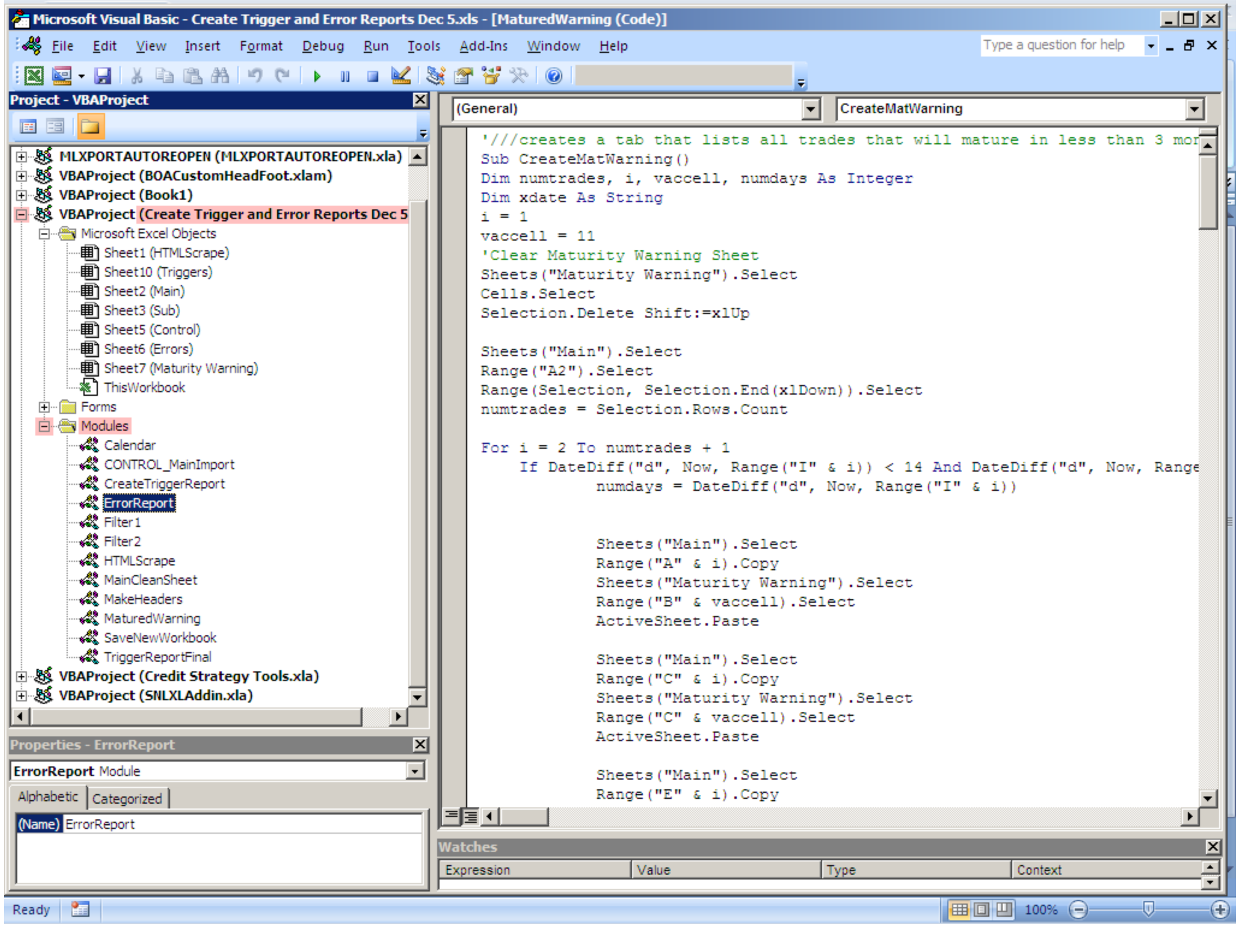
Error Report – Delete a Column

Bank of America Merrill Lynch

- If a field needs to be removed in the Error Report summary, first open VBA. In the left hand panel :

- Expand the VBA Project for the file you have open
- Expand the Modules folder
- Select the ErrorReport module and a window will open in the right pane

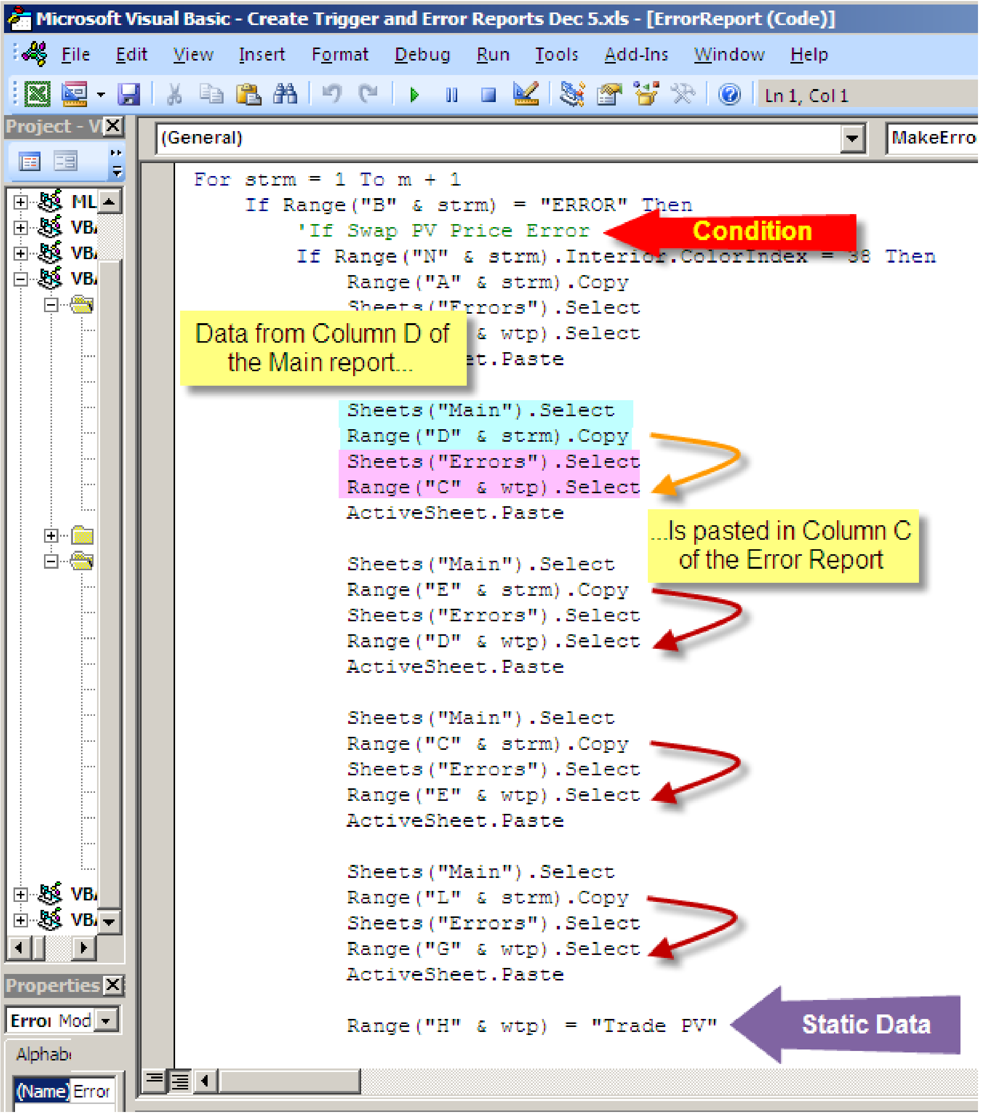
The ErrorReport Module contains all the code that creates data mappings and formatting to the Error tab.



- MLXPORTAUTOREOPEN (MLXPORTAUTOREOPEN.xla)
- VBAProject (BOACustomHeadFoot.xlam)
- VBAProject (Book1)
- VBAProject (Create Trigger and Error Reports Dec 5
  - Microsoft Excel Objects
    - Sheet1 (HTMLScrape)
    - Sheet10 (Triggers)
    - Sheet2 (Main)
    - Sheet3 (Sub)
    - Sheet5 (Control)
    - Sheet6 (Errors)
    - Sheet7 (Maturity Warning)
    - ThisWorkbook
  - Forms
  - Modules
    - Calendar
    - CONTROL_MainImport
    - CreateTriggerReport
    - ErrorReport
    - Filter1
    - Filter2
    - HTMLScrape
    - MainCleanSheet
    - MakeHeaders
    - MaturedWarning
    - SaveNewWorkbook
    - TriggerReportFinal
- VBAProject (Credit Strategy Tools.xla)
- VBAProject (SNLXLAddin.xla)

```
'///creates a tab that lists all trades that will mature in less than 3 mor
Sub CreateMatWarning()
Dim numtrades, i, vaccell, numdays As Integer
Dim xdate As String
i = 1
vaccell = 11
'Clear Maturity Warning Sheet
Sheets("Maturity Warning").Select
Cells.Select
Selection.Delete Shift:=xlUp

Sheets("Main").Select
Range("A2").Select
Range(Selection, Selection.End(xlDown)).Select
numtrades = Selection.Rows.Count

For i = 2 To numtrades + 1
    If DateDiff("d", Now, Range("I" & i)) < 14 And DateDiff("d", Now, Range
            numdays = DateDiff("d", Now, Range("I" & i))


            Sheets("Main").Select
            Range("A" & i).Copy
            Sheets("Maturity Warning").Select
            Range("B" & vaccell).Select
            ActiveSheet.Paste

            Sheets("Main").Select
            Range("C" & i).Copy
            Sheets("Maturity Warning").Select
            Range("C" & vaccell).Select
            ActiveSheet.Paste

            Sheets("Main").Select
            Range("E" & i).Copy
```

Error Report – Delete a Column


Microsoft Visual Basic - Create Trigger and Error Reports Dec 5.xls - [ErrorReport (Code)]
File Edit View Insert Format Debug Run Tools Add-Ins Window Help
Ln 1, Col 1
Project - V
ML
VB
VB
VB
VB
VB
Properties
Error Mod
Alphab
(Name) Error
(General)
MakeErro

```
For strm = 1 To m + 1
    If Range("B" & strm) = "ERROR" Then
        'If Swap PV Price Error
        If Range("N" & strm).Interior.ColorIndex = 38 Then
            Range("A" & strm).Copy
            Sheets("Errors").Select
                   & wtp).Select
                  et.Paste

            Sheets("Main").Select
            Range("D" & strm).Copy
            Sheets("Errors").Select
            Range("C" & wtp).Select
            ActiveSheet.Paste

            Sheets("Main").Select
            Range("E" & strm).Copy
            Sheets("Errors").Select
            Range("D" & wtp).Select
            ActiveSheet.Paste

            Sheets("Main").Select
            Range("C" & strm).Copy
            Sheets("Errors").Select
            Range("E" & wtp).Select
            ActiveSheet.Paste

            Sheets("Main").Select
            Range("L" & strm).Copy
            Sheets("Errors").Select
            Range("G" & wtp).Select
            ActiveSheet.Paste

            Range("H" & wtp) = "Trade PV"
```

Condition

Data from Column D of the Main report...

...Is pasted in Column C of the Error Report

Static Data

- Follow the code to the first line that says For strm = 1 To m + 1
- This piece of code says:
  - If the Swap PV is a Price Error, continue to the data mappings below
  - The data mappings pick one column of the Main report and places that data into one column of the Error Report. The chosen column is the letter that appears in the statement Range("D"….).Select

- To remove a column from the Error report, enter the five lines below that correspond to that field. If you want to remove the third column look for a C in the second Range expression:

```
Sheets("Main").Select
Range("D") & strm).Copy
Sheets("Errors").Select
Range("C" & wtp).Select
ActiveSheet.Paste
```

And delete all of these lines

Error Report – Delete a Column

- If the removed column preceded other columns, for each:

```
Sheets("Errors").Select
Range("D" & wtp).Select
```

expressions after the removal needs to be edited so that the D is now the previous letter of the alphabet.

Ex: previous expression: Range ("D1").Select   new expression: Range("C1").Select
Range("Z1").Select   new expression: Range("Y1").Select
Range("AB1").Select   new expression: Range("AA1").Select

- This process needs to be similarly repeated three more times.
- Find the line that says 'If Error downloading price
- To remove a column from the Error report, find the five lines below:

```
Sheets("Sub").Select
Range("D") & strs).Copy
Sheets("Errors").Select
Range("C" & wtp).Select
ActiveSheet.Paste
```

with the appropriate letters representing where the data is coming from and where it will be pasted. And delete them

- If the removed column preceded other columns, for each:

```
Sheets("Errors").Select
Range("D" & wtp).Select
```

expressions after the addition needs to be edited so that the D is now the previous letter of the alphabet.

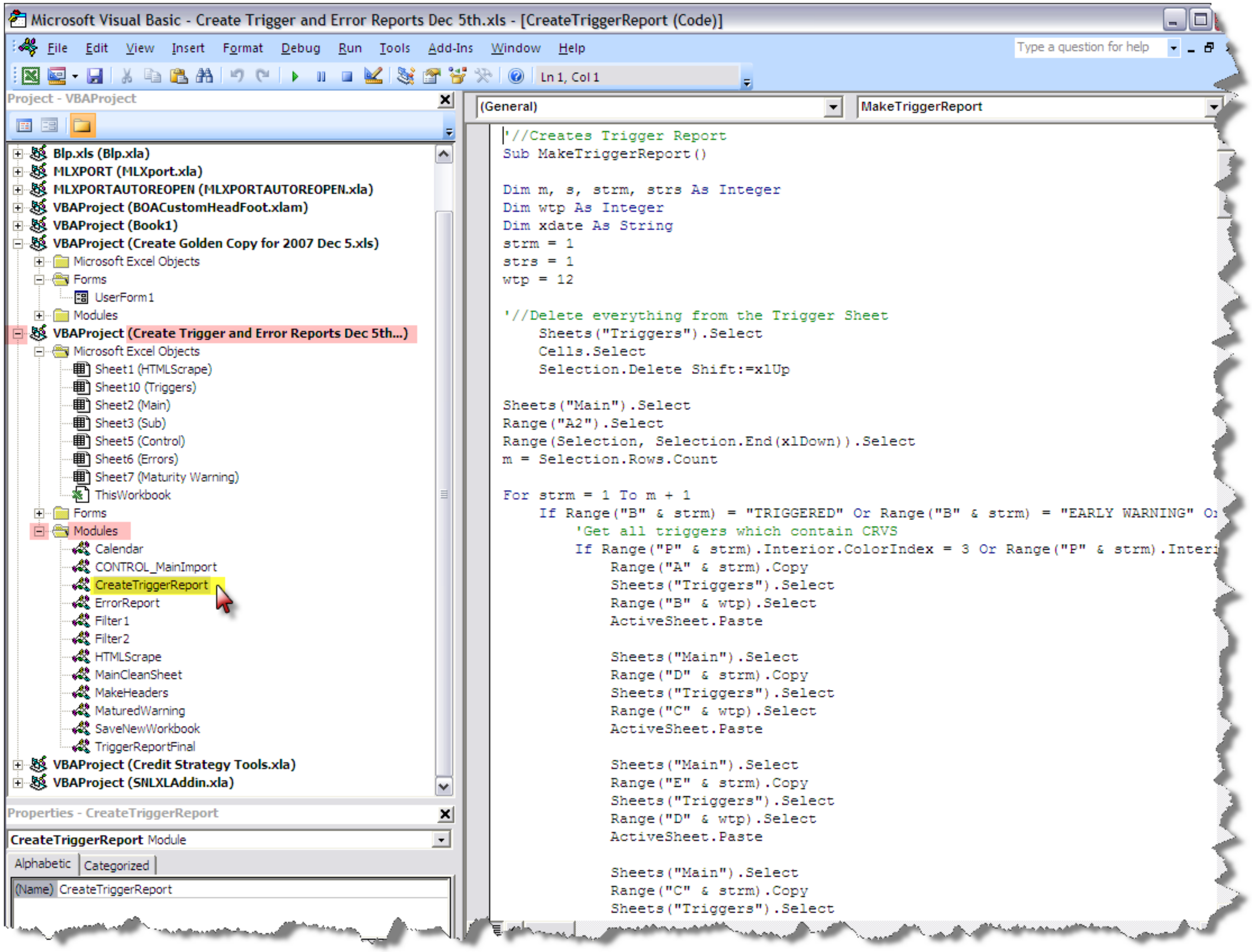
- Follow these same steps after the 'If Error downloading rating and 'If Error in Fitch Current expressions

Trigger Report – Add a Column

1. Expand the VBA Project for the file you have open

2. Expand the Modules folder

3. Select the *CreateTriggerReport* module and a window will open in the right pane (This module contains all the code that creates data mappings and formatting to the Trigger tab.)


Microsoft Visual Basic - Create Trigger and Error Reports Dec 5th.xls - [CreateTriggerReport (Code)]
File Edit View Insert Format Debug Run Tools Add-Ins Window Help
Type a question for help
Ln 1, Col 1
Project - VBAProject
(General)
MakeTriggerReport
Properties - CreateTriggerReport
Alphabetic Categorized

Blp.xls (Blp.xla)
MLXPORT (MLXport.xla)
MLXPORTAUTOREOPEN (MLXPORTAUTOREOPEN.xla)
VBAProject (BOACustomHeadFoot.xlam)
VBAProject (Book1)
VBAProject (Create Golden Copy for 2007 Dec 5.xls)
Microsoft Excel Objects
Forms
UserForm1
Modules
VBAProject (Create Trigger and Error Reports Dec 5th...)
Microsoft Excel Objects
Sheet1 (HTMLScrape)
Sheet10 (Triggers)
Sheet2 (Main)
Sheet3 (Sub)
Sheet5 (Control)
Sheet6 (Errors)
Sheet7 (Maturity Warning)
ThisWorkbook
Forms
Modules
Calendar
CONTROL_MainImport
CreateTriggerReport
ErrorReport
Filter1
Filter2
HTMLScrape
MainCleanSheet
MakeHeaders
MaturedWarning
SaveNewWorkbook
TriggerReportFinal
VBAProject (Credit Strategy Tools.xla)
VBAProject (SNLXLAddin.xla)

CreateTriggerReport Module

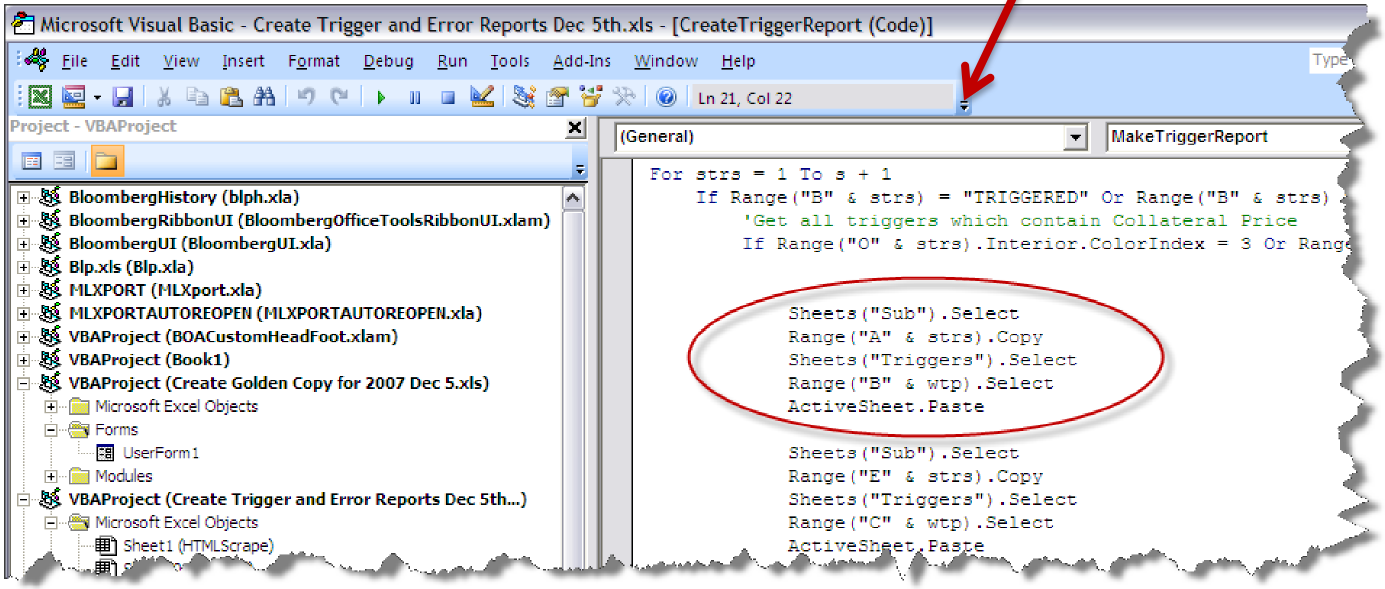
(Name) CreateTriggerReport

```
'//Creates Trigger Report
Sub MakeTriggerReport()

Dim m, s, strm, strs As Integer
Dim wtp As Integer
Dim xdate As String
strm = 1
strs = 1
wtp = 12

'//Delete everything from the Trigger Sheet
    Sheets("Triggers").Select
    Cells.Select
    Selection.Delete Shift:=xlUp

Sheets("Main").Select
Range("A2").Select
Range(Selection, Selection.End(xlDown)).Select
m = Selection.Rows.Count

For strm = 1 To m + 1
    If Range("B" & strm) = "TRIGGERED" Or Range("B" & strm) = "EARLY WARNING" O
        'Get all triggers which contain CRVS
        If Range("P" & strm).Interior.ColorIndex = 3 Or Range("P" & strm).Interi
            Range("A" & strm).Copy
            Sheets("Triggers").Select
            Range("B" & wtp).Select
            ActiveSheet.Paste

            Sheets("Main").Select
            Range("D" & strm).Copy
            Sheets("Triggers").Select
            Range("C" & wtp).Select
            ActiveSheet.Paste

            Sheets("Main").Select
            Range("E" & strm).Copy
            Sheets("Triggers").Select
            Range("D" & wtp).Select
            ActiveSheet.Paste

            Sheets("Main").Select
            Range("C" & strm).Copy
            Sheets("Triggers").Select
```

Trigger Report – Add a Column

1. If you want to add a column to the existing ones please follow the code to the first line that says
   For strm = 1 To m + 1

2. To add a column to the Trigger Report from the Main/Sub output sheet, enter code similar to this one:


Microsoft Visual Basic - Create Trigger and Error Reports Dec 5th.xls - [CreateTriggerReport (Code)]
File Edit View Insert Format Debug Run Tools Add-Ins Window Help
Type
Ln 21, Col 22
Project - VBAProject
(General)
MakeTriggerReport
BloombergHistory (blph.xla)
BloombergRibbonUI (BloombergOfficeToolsRibbonUI.xlam)
BloombergUI (BloombergUI.xla)
Blp.xls (Blp.xla)
MLXPORT (MLXport.xla)
MLXPORTAUTOREOPEN (MLXPORTAUTOREOPEN.xla)
VBAProject (BOACustomHeadFoot.xlam)
VBAProject (Book1)
VBAProject (Create Golden Copy for 2007 Dec 5.xls)
Microsoft Excel Objects
Forms
UserForm1
Modules
VBAProject (Create Trigger and Error Reports Dec 5th...)
Microsoft Excel Objects
Sheet1 (HTMLScrape)

```
For strs = 1 To s + 1
    If Range("B" & strs) = "TRIGGERED" Or Range("B" & strs)
        'Get all triggers which contain Collateral Price
        If Range("O" & strs).Interior.ColorIndex = 3 Or Rang

            Sheets("Sub").Select
            Range("A" & strs).Copy
            Sheets("Triggers").Select
            Range("B" & wtp).Select
            ActiveSheet.Paste

            Sheets("Sub").Select
            Range("E" & strs).Copy
            Sheets("Triggers").Select
            Range("C" & wtp).Select
            ActiveSheet.Paste
```

3. Your code should look like this:

```
Sheets("Sub").Select
Range("B" & strs).Copy
Sheets("Triggers").Select
Range("I" & wtp).Select
ActiveSheet.Paste
```

First you should write the sheet you want to get the data from. Simply copy and paste the circled code and change the letter "B" with the corresponding column letter from the Main tab and continue with the letter "I" for the column which you will add to the Trigger Report. (the next column letters should be "J", "K", "L", etc.)

Trigger Report – Add a Column

- If the added column was inserted before a preexisting column, each:

```
Sheets(“Triggers”).Select
Range(“C” & wtp).Select
```

expressions after the addition needs to be edited so that the C is now the next letter of the alphabet.

```
Ex: previous expression:  Range (“D1”).Select       new expression:  Range(“E1”).Select
                           Range(“Z1”).Select        new expression: Range(“AA1”).Select
                           Range(“AB1”).Select       new expression: Range(“AC1”).Select
```

- This process needs to be similarly repeated three more times.
- Find the line that says 'Get all triggers which contain Collateral Price
- To add a column to the Trigger report, enter the five lines below:

```
Sheets(“Sub”).Select
Range(“D”) & strs).Copy
Sheets(“Triggers”).Select
Range(“C” & wtp).Select
ActiveSheet.Paste
```

with the appropriate letters representing where the data is coming from and where it will be pasted.

- If the added column was inserted before a preexisting column, each:

```
Sheets(“Triggers”).Select
Range(“C” & wtp).Select
```

expressions after the addition needs to be edited so that the C is now the next letter of the alphabet.

- Follow these same steps after the ‘ Get all other triggers expressions

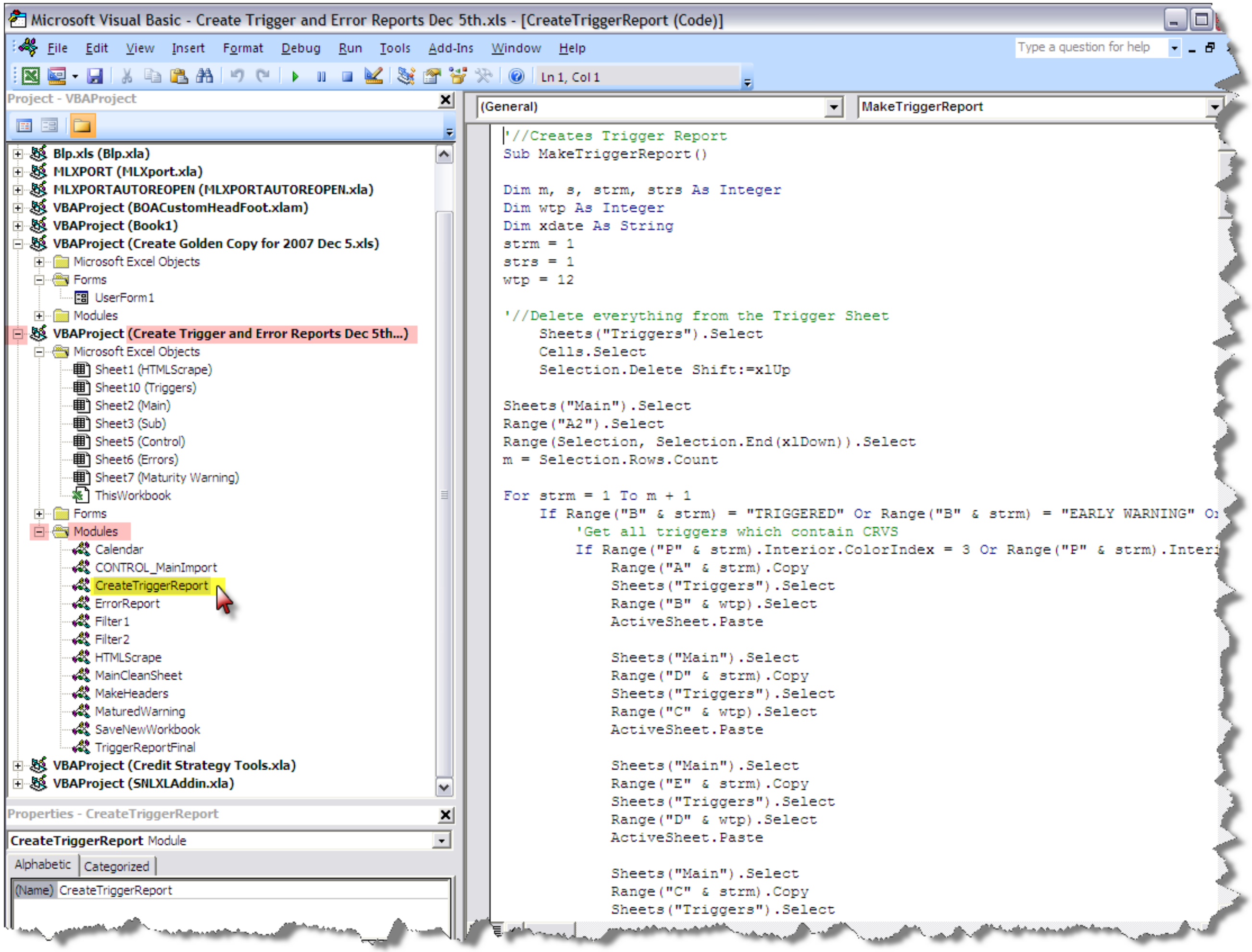
Trigger Report – Delete a Column

Bank of America Merrill Lynch

1. Expand the VBA Project for the file you have open

2. Expand the Modules folder

3. Select the *CreateTriggerReport* module and a window will open in the right pane (This module contains all the code that creates data mappings and formatting to the Trigger tab.)



CreateTriggerReport Module

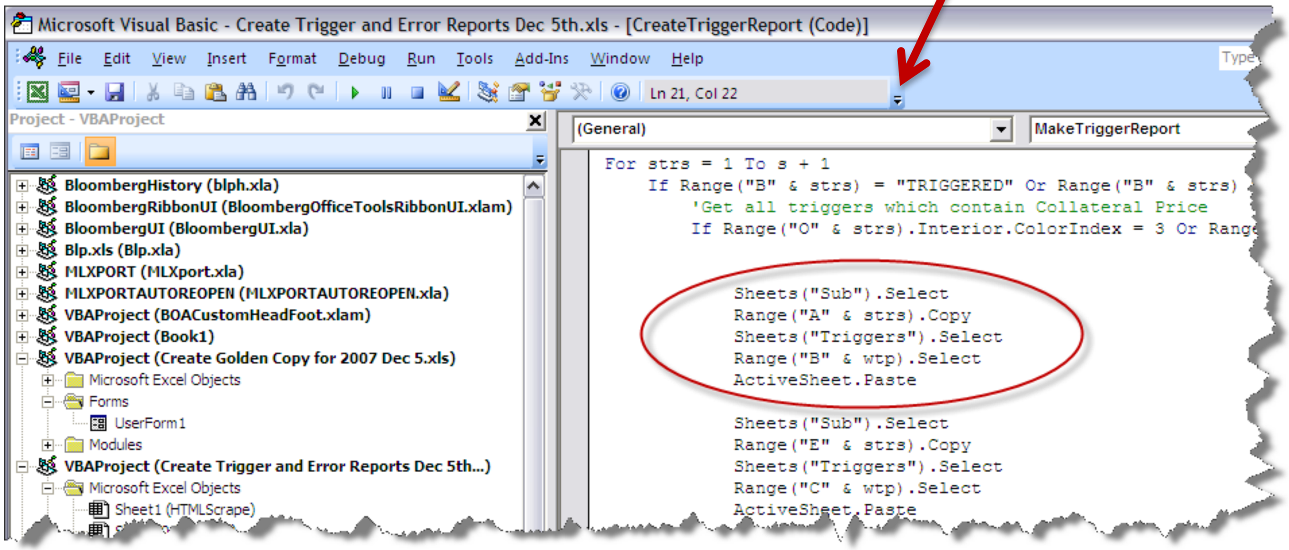
(Name) CreateTriggerReport

```
'//Creates Trigger Report
Sub MakeTriggerReport()

Dim m, s, strm, strs As Integer
Dim wtp As Integer
Dim xdate As String
strm = 1
strs = 1
wtp = 12

'//Delete everything from the Trigger Sheet
    Sheets("Triggers").Select
    Cells.Select
    Selection.Delete Shift:=xlUp

Sheets("Main").Select
Range("A2").Select
Range(Selection, Selection.End(xlDown)).Select
m = Selection.Rows.Count

For strm = 1 To m + 1
    If Range("B" & strm) = "TRIGGERED" Or Range("B" & strm) = "EARLY WARNING" Or
        'Get all triggers which contain CRVS
        If Range("P" & strm).Interior.ColorIndex = 3 Or Range("P" & strm).Interi
            Range("A" & strm).Copy
            Sheets("Triggers").Select
            Range("B" & wtp).Select
            ActiveSheet.Paste

            Sheets("Main").Select
            Range("D" & strm).Copy
            Sheets("Triggers").Select
            Range("C" & wtp).Select
            ActiveSheet.Paste

            Sheets("Main").Select
            Range("E" & strm).Copy
            Sheets("Triggers").Select
            Range("D" & wtp).Select
            ActiveSheet.Paste

            Sheets("Main").Select
            Range("C" & strm).Copy
            Sheets("Triggers").Select
```

Trigger Report – Delete a Column

1. If you want to delete a column to the existing ones please follow the code to the first line that says *For strm = 1 To m + 1*

2. To delete a column to the Trigger Report from the Main/Sub output sheet, delete the field which contains the column name you want to remove


Microsoft Visual Basic - Create Trigger and Error Reports Dec 5th.xls - [CreateTriggerReport (Code)]
File Edit View Insert Format Debug Run Tools Add-Ins Window Help
Type
Ln 21, Col 22
Project - VBAProject
BloombergHistory (blph.xla)
BloombergRibbonUI (BloombergOfficeToolsRibbonUI.xlam)
BloombergUI (BloombergUI.xla)
Blp.xls (Blp.xla)
MLXPORT (MLXport.xla)
MLXPORTAUTOREOPEN (MLXPORTAUTOREOPEN.xla)
VBAProject (BOACustomHeadFoot.xlam)
VBAProject (Book1)
VBAProject (Create Golden Copy for 2007 Dec 5.xls)
Microsoft Excel Objects
Forms
UserForm1
Modules
VBAProject (Create Trigger and Error Reports Dec 5th...)
Microsoft Excel Objects
Sheet1 (HTMLScrape)
(General)
MakeTriggerReport

```
For strs = 1 To s + 1
    If Range("B" & strs) = "TRIGGERED" Or Range("B" & strs)
        'Get all triggers which contain Collateral Price
        If Range("O" & strs).Interior.ColorIndex = 3 Or Rang


            Sheets("Sub").Select
            Range("A" & strs).Copy
            Sheets("Triggers").Select
            Range("B" & wtp).Select
            ActiveSheet.Paste

            Sheets("Sub").Select
            Range("E" & strs).Copy
            Sheets("Triggers").Select
            Range("C" & wtp).Select
            ActiveSheet.Paste
```

2. To remove a column from the Trigger report, enter the five lines below that correspond to that field. If you want to remove the third column look for a C in the second Range expression:

Sheets(“Main”).Select
Range(“D”) & strm).Copy
Sheets(“Triggers”).Select
Range(“C” & wtp).Select
ActiveSheet.Paste

And delete all of these lines

Trigger Report – Delete a Column

```
Sheets(“Triggers”).Select
Range(“D” & wtp).Select
```

expressions after the removal needs to be edited so that the D is now the previous letter of the alphabet.

Ex: previous expression: Range (“D1”).Select   new expression: Range(“C1”).Select
Range(“Z1”).Select   new expression: Range(“Y1”).Select
Range(“AB1”).Select   new expression: Range(“AA1”).Select

- This process needs to be similarly repeated three more times.
- Find the line that says 'Get all triggers which contain Collateral Price
- To remove a column from the Error report, find the five lines below:

```
Sheets(“Sub”).Select
Range(“D”) & strs).Copy
Sheets(“Triggers”).Select
Range(“C” & wtp).Select
ActiveSheet.Paste
```

with the appropriate letters representing where the data is coming from and where it will be pasted. And delete them

- If the removed column preceded other columns, for each:

```
Sheets(“Triggers”).Select
Range(“D” & wtp).Select
```

expressions after the addition needs to be edited so that the D is now the previous letter of the alphabet.

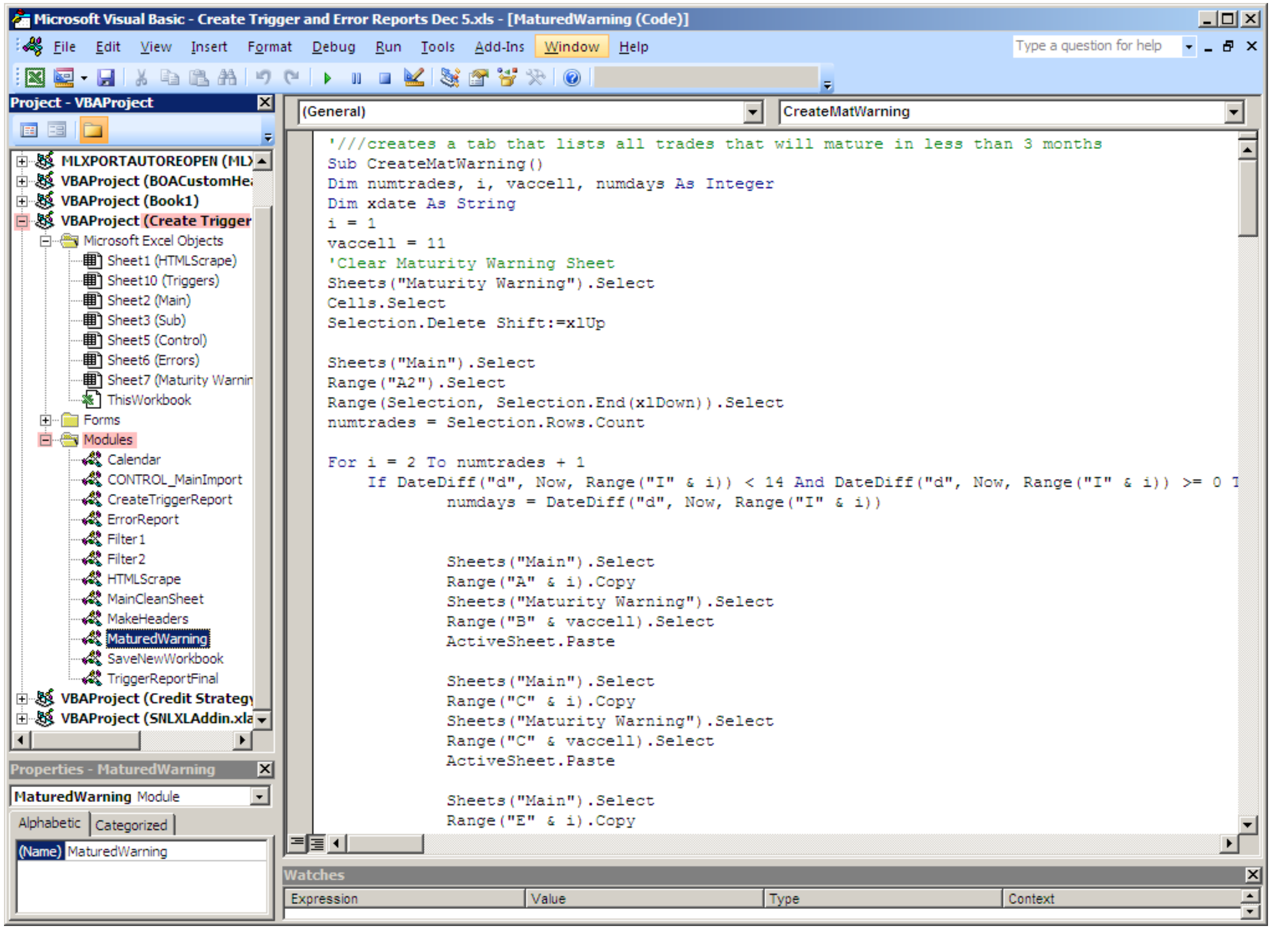
- Follow these same steps after the 'Get all other triggers rating expressions

Maturity Warning – Add a Column

- If another field is desired in the Error Report summary, first open VBA. In the left hand panel :

  - Expand the VBA Project for the file you have open
  - Expand the Modules folder
  - Select the MatruredWarning module and a window will open in the right pane

The Matured Warning module contains all the code that creates data mappings and formatting to the Maturity Warning tab.

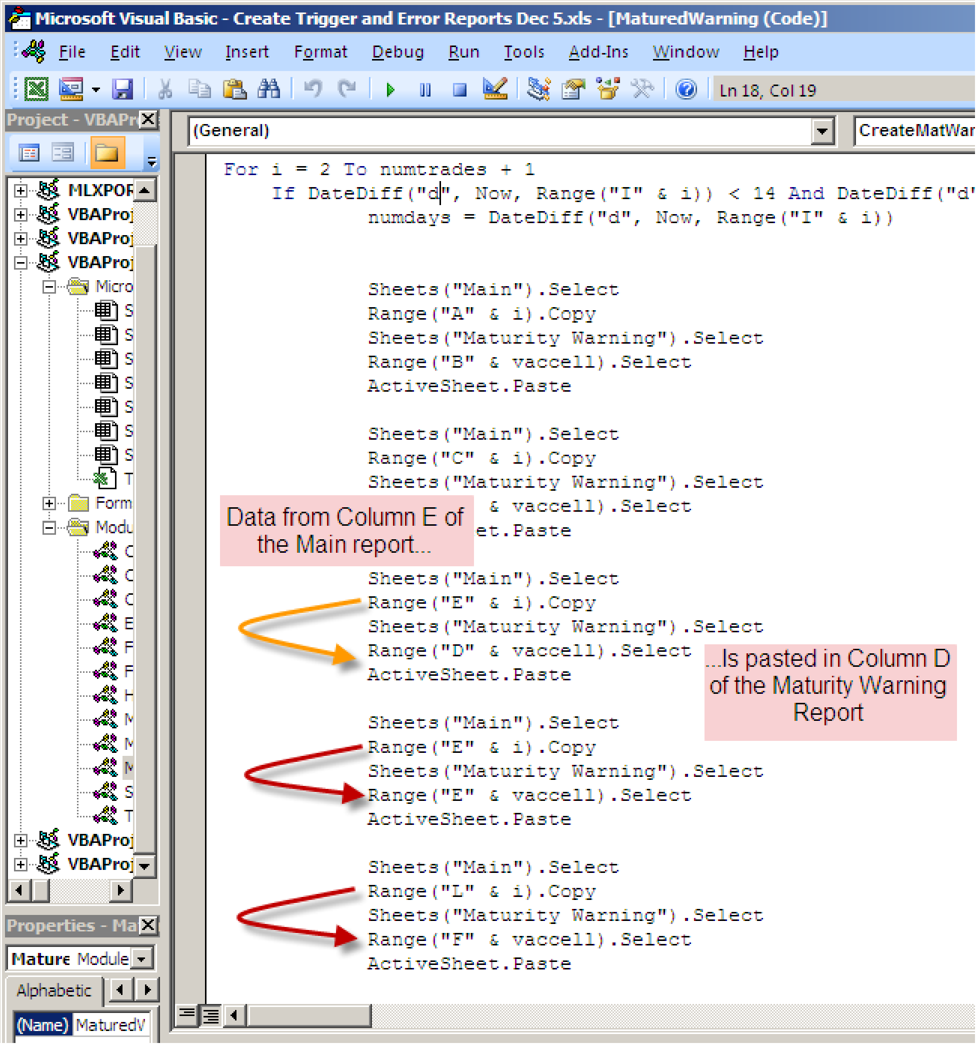


(Name) MaturedWarning

```
'///creates a tab that lists all trades that will mature in less than 3 months
Sub CreateMatWarning()
Dim numtrades, i, vaccell, numdays As Integer
Dim xdate As String
i = 1
vaccell = 11
'Clear Maturity Warning Sheet
Sheets("Maturity Warning").Select
Cells.Select
Selection.Delete Shift:=xlUp

Sheets("Main").Select
Range("A2").Select
Range(Selection, Selection.End(xlDown)).Select
numtrades = Selection.Rows.Count

For i = 2 To numtrades + 1
    If DateDiff("d", Now, Range("I" & i)) < 14 And DateDiff("d", Now, Range("I" & i)) >= 0 T
            numdays = DateDiff("d", Now, Range("I" & i))


            Sheets("Main").Select
            Range("A" & i).Copy
            Sheets("Maturity Warning").Select
            Range("B" & vaccell).Select
            ActiveSheet.Paste

            Sheets("Main").Select
            Range("C" & i).Copy
            Sheets("Maturity Warning").Select
            Range("C" & vaccell).Select
            ActiveSheet.Paste

            Sheets("Main").Select
            Range("E" & i).Copy
```

Maturity Warning – Add a Column

Bank of America Merrill Lynch


Microsoft Visual Basic - Create Trigger and Error Reports Dec 5.xls - [MaturedWarning (Code)]
File Edit View Insert Format Debug Run Tools Add-Ins Window Help
Ln 18, Col 19
Project - VBAPr
MLXPOF
VBAProj
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Mature Module
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(Name) MaturedV
(General)
CreateMatWar

```
For i = 2 To numtrades + 1
    If DateDiff("d", Now, Range("I" & i)) < 14 And DateDiff("d'
            numdays = DateDiff("d", Now, Range("I" & i))


            Sheets("Main").Select
            Range("A" & i).Copy
            Sheets("Maturity Warning").Select
            Range("B" & vaccell).Select
            ActiveSheet.Paste

            Sheets("Main").Select
            Range("C" & i).Copy
            Sheets("Maturity Warning").Select
                      & vaccell).Select
                    et.Paste

            Sheets("Main").Select
            Range("E" & i).Copy
            Sheets("Maturity Warning").Select
            Range("D" & vaccell).Select
            ActiveSheet.Paste

            Sheets("Main").Select
            Range("E" & i).Copy
            Sheets("Maturity Warning").Select
            Range("E" & vaccell).Select
            ActiveSheet.Paste

            Sheets("Main").Select
            Range("L" & i).Copy
            Sheets("Maturity Warning").Select
            Range("F" & vaccell).Select
            ActiveSheet.Paste
```

Data from Column E of the Main report...

...Is pasted in Column D of the Maturity Warning Report

- Follow the code to the first line that says For i= 2 To numtrades + 1
- This piece of code says:
    - If the Swap PV is a Price Error, continue to the data mappings below
    - The data mappings pick one column of the Main report and places that data into one column of the Error Report. The chosen column is the letter that appears in the statement Range(“**D**”….).Select

- To add a column to the Maturity Warning report, enter the five lines below:

```
Sheets(“Main”).Select
Range(“D”) & i).Copy
Sheets(“Maturity Warning”).Select
Range(“C” & vaccell).Select
ActiveSheet.Paste
```

with the appropriate letters representing where the data is coming from and where it will be pasted.

Maturity Warning – Add a Column

Bank of America Merrill Lynch

- If the added column was inserted before a preexisting column, each:

```
Sheets(“Maturity Warning”).Select
Range(“C” & vaccell).Select
```

expressions after the addition needs to be edited so that the C is now the next letter of the alphabet.

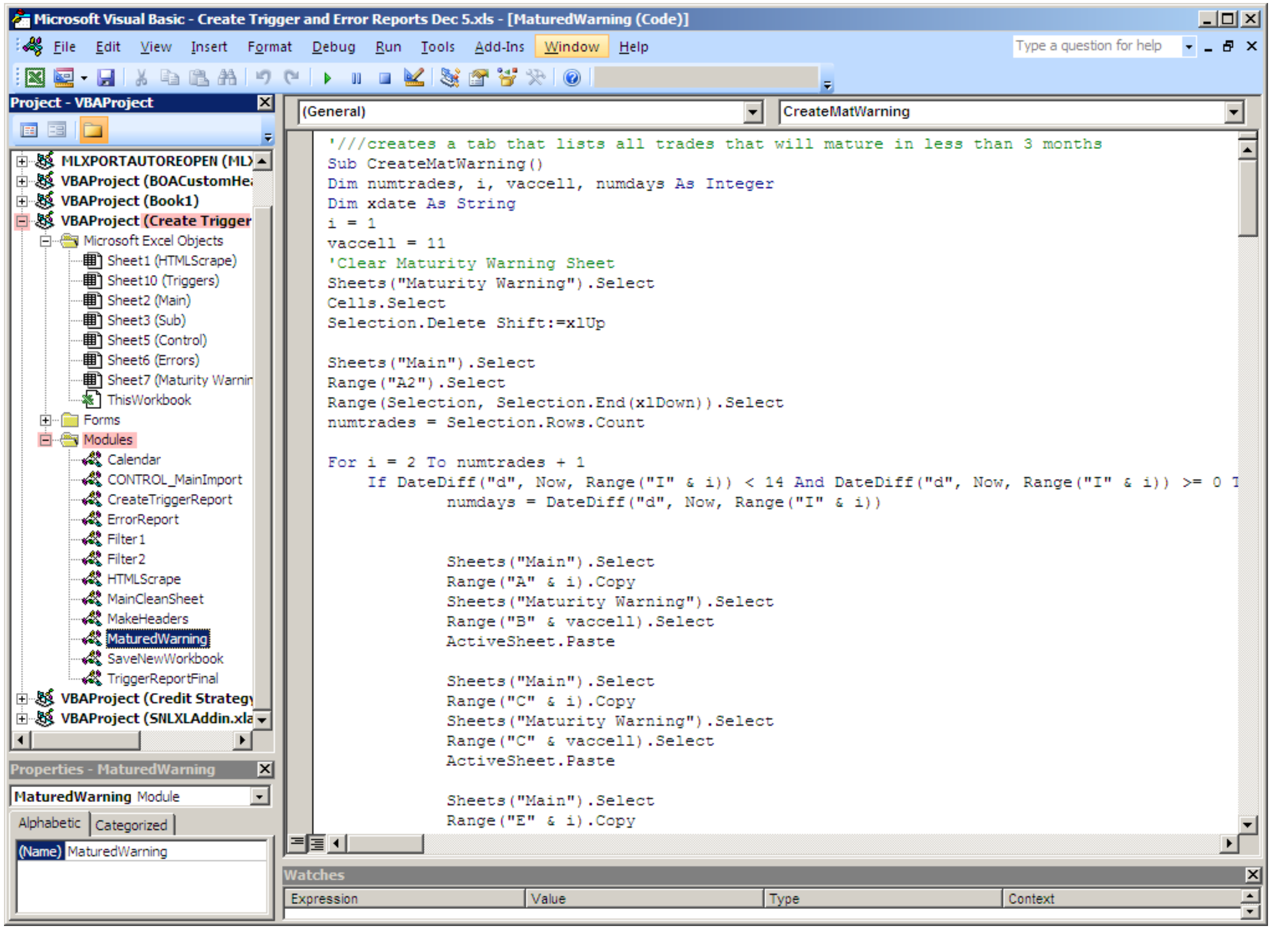
```
Ex: previous expression:  Range (“D1”).Select        new expression:  Range(“E1”).Select
                          Range(“Z1”).Select         new expression: Range(“AA1”).Select
                          Range(“AB1”).Select        new expression: Range(“AC1”).Select
```

Maturity Warning – Delete a Column

- If a field needs to be removed in the Error Report summary, first open VBA. In the left hand panel :

- Expand the VBA Project for the file you have open
- Expand the Modules folder
- Select the MatruredWarning module and a window will open in the right pane

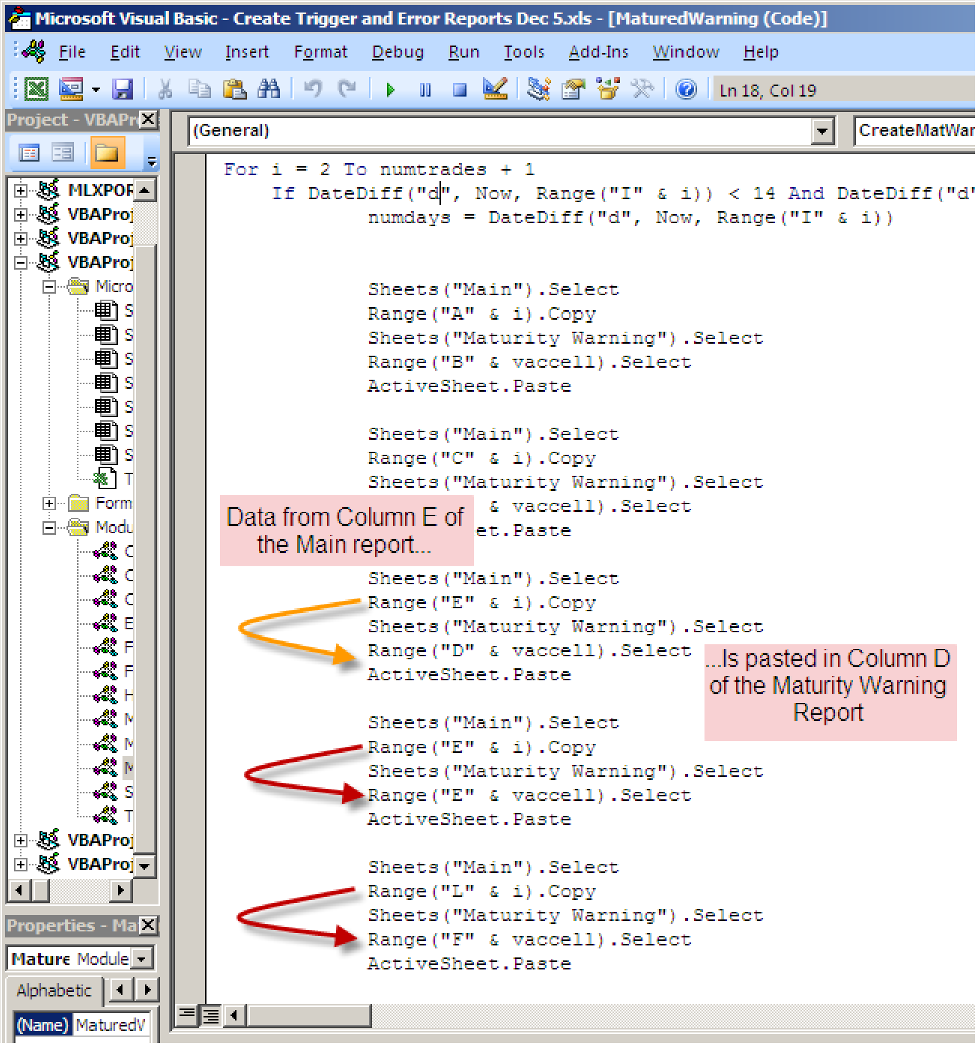
The Matured Warning module contains all the code that creates data mappings and formatting to the Maturity Warning tab.



```
'///creates a tab that lists all trades that will mature in less than 3 months
Sub CreateMatWarning()
Dim numtrades, i, vaccell, numdays As Integer
Dim xdate As String
i = 1
vaccell = 11
'Clear Maturity Warning Sheet
Sheets("Maturity Warning").Select
Cells.Select
Selection.Delete Shift:=xlUp

Sheets("Main").Select
Range("A2").Select
Range(Selection, Selection.End(xlDown)).Select
numtrades = Selection.Rows.Count

For i = 2 To numtrades + 1
    If DateDiff("d", Now, Range("I" & i)) < 14 And DateDiff("d", Now, Range("I" & i)) >= 0 T
            numdays = DateDiff("d", Now, Range("I" & i))


            Sheets("Main").Select
            Range("A" & i).Copy
            Sheets("Maturity Warning").Select
            Range("B" & vaccell).Select
            ActiveSheet.Paste

            Sheets("Main").Select
            Range("C" & i).Copy
            Sheets("Maturity Warning").Select
            Range("C" & vaccell).Select
            ActiveSheet.Paste

            Sheets("Main").Select
            Range("E" & i).Copy
```

Maturity Warning – Delete a Column

Bank of America Merrill Lynch


Microsoft Visual Basic - Create Trigger and Error Reports Dec 5.xls - [MaturedWarning (Code)]
File Edit View Insert Format Debug Run Tools Add-Ins Window Help
Ln 18, Col 19
Project - VBAPr
MLXPOF
VBAProj
VBAProj
VBAProj
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Mature Module
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(Name) MaturedV
(General)
CreateMatWar

```
For i = 2 To numtrades + 1
    If DateDiff("d", Now, Range("I" & i)) < 14 And DateDiff("d'
            numdays = DateDiff("d", Now, Range("I" & i))


            Sheets("Main").Select
            Range("A" & i).Copy
            Sheets("Maturity Warning").Select
            Range("B" & vaccell).Select
            ActiveSheet.Paste

            Sheets("Main").Select
            Range("C" & i).Copy
            Sheets("Maturity Warning").Select
                     & vaccell).Select
            et.Paste

            Sheets("Main").Select
            Range("E" & i).Copy
            Sheets("Maturity Warning").Select
            Range("D" & vaccell).Select
            ActiveSheet.Paste

            Sheets("Main").Select
            Range("E" & i).Copy
            Sheets("Maturity Warning").Select
            Range("E" & vaccell).Select
            ActiveSheet.Paste

            Sheets("Main").Select
            Range("L" & i).Copy
            Sheets("Maturity Warning").Select
            Range("F" & vaccell).Select
            ActiveSheet.Paste
```

Data from Column E of the Main report...

...Is pasted in Column D of the Maturity Warning Report

- Follow the code to the first line that says For i= 2 To numtrades + 1
- This piece of code says:
  - If the Swap PV is a Price Error, continue to the data mappings below
  - The data mappings pick one column of the Main report and places that data into one column of the Error Report. The chosen column is the letter that appears in the statement Range(“**D**”….).Select

- To remove a column from the Maturity Warning report, enter the five lines below that correspond to that field. If you want to remove the third column look for a C in the second Range expression:

  Sheets(“Main”).Select
  Range(“**D**”) & i).Copy
  Sheets(“Maturity Warning”).Select
  Range(“**C**” & vaccell).Select
  ActiveSheet.Paste

And delete all of these lines

Maturity Warning – Delete a Column

- If the removed column preceded other columns, for each:

  Sheets(“Maturity Warning”).Select
  Range(“D” & vaccell).Select

expressions after the removal needs to be edited so that the D is now the previous letter of the alphabet.

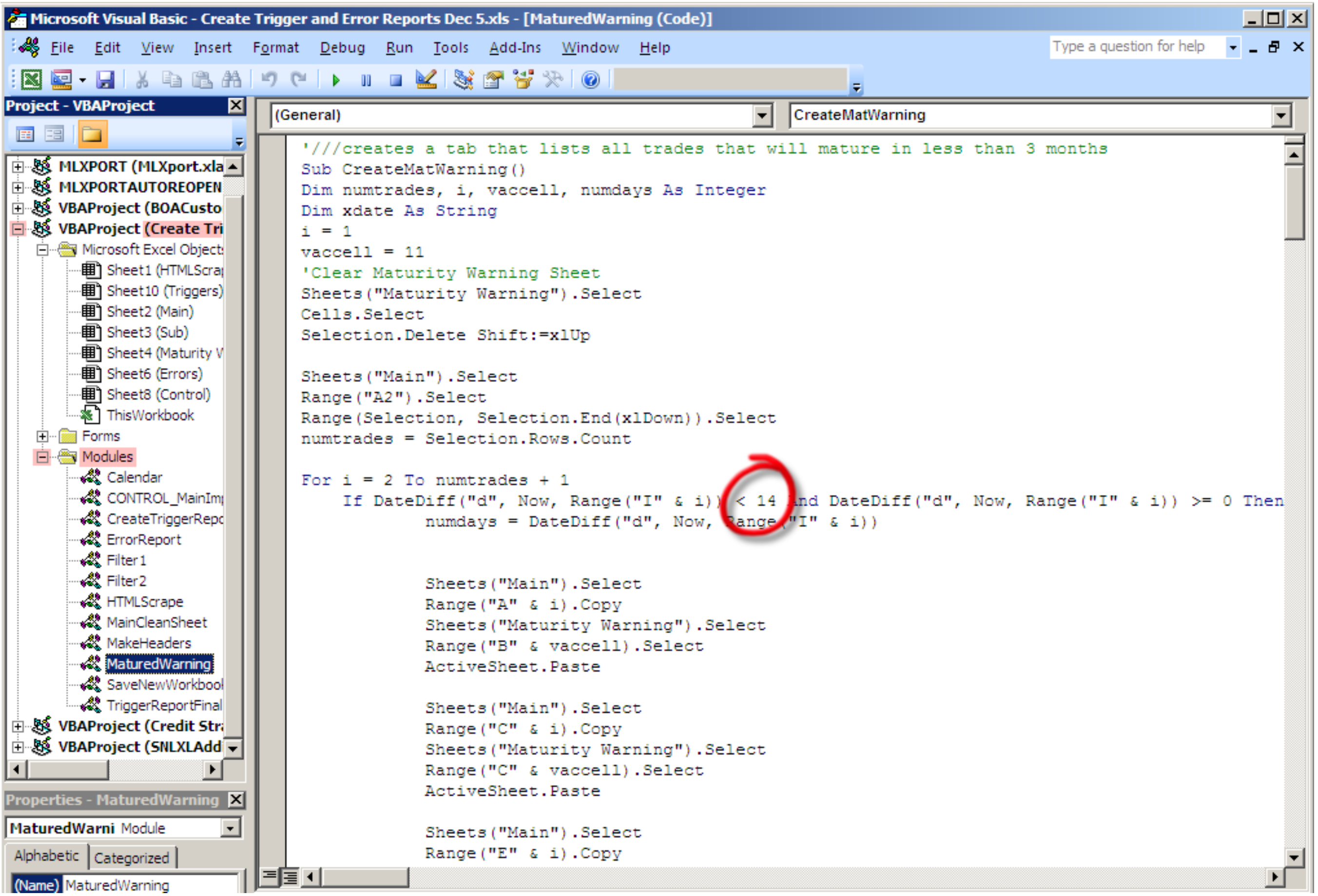
Ex: previous expression:	Range (“D1”).Select	new expression: Range(“C1”).Select
	Range(“Z1”).Select	new expression: Range(“Y1”).Select
	Range(“AB1”).Select	new expression: Range(“AA1”).Select

Maturity Warning – Change Warning Period

Bank of America Merrill Lynch

Currently, the Maturity Warning tab outputs trades that are due to mature in 14 days. To change this standard, follow the steps listed below.

- •Open VBA
- • Expand the VBA Project for the file you have open
- • Expand the Modules folder
- • Select the Matrured Warning module and a window will open in the right pane
- •The circled number is the upper limit of days until maturity from the current date that the code will report. Edit this number.
- •EX: To display all trades that will mature in the next 30 days, replace 14 with 30


Microsoft Visual Basic - Create Trigger and Error Reports Dec 5.xls - [MaturedWarning (Code)]

```
'///creates a tab that lists all trades that will mature in less than 3 months
Sub CreateMatWarning()
Dim numtrades, i, vaccell, numdays As Integer
Dim xdate As String
i = 1
vaccell = 11
'Clear Maturity Warning Sheet
Sheets("Maturity Warning").Select
Cells.Select
Selection.Delete Shift:=xlUp

Sheets("Main").Select
Range("A2").Select
Range(Selection, Selection.End(xlDown)).Select
numtrades = Selection.Rows.Count

For i = 2 To numtrades + 1
    If DateDiff("d", Now, Range("I" & i)) < 14 And DateDiff("d", Now, Range("I" & i)) >= 0 Then
            numdays = DateDiff("d", Now, Range("I" & i))


            Sheets("Main").Select
            Range("A" & i).Copy
            Sheets("Maturity Warning").Select
            Range("B" & vaccell).Select
            ActiveSheet.Paste

            Sheets("Main").Select
            Range("C" & i).Copy
            Sheets("Maturity Warning").Select
            Range("C" & vaccell).Select
            ActiveSheet.Paste

            Sheets("Main").Select
            Range("E" & i).Copy
```