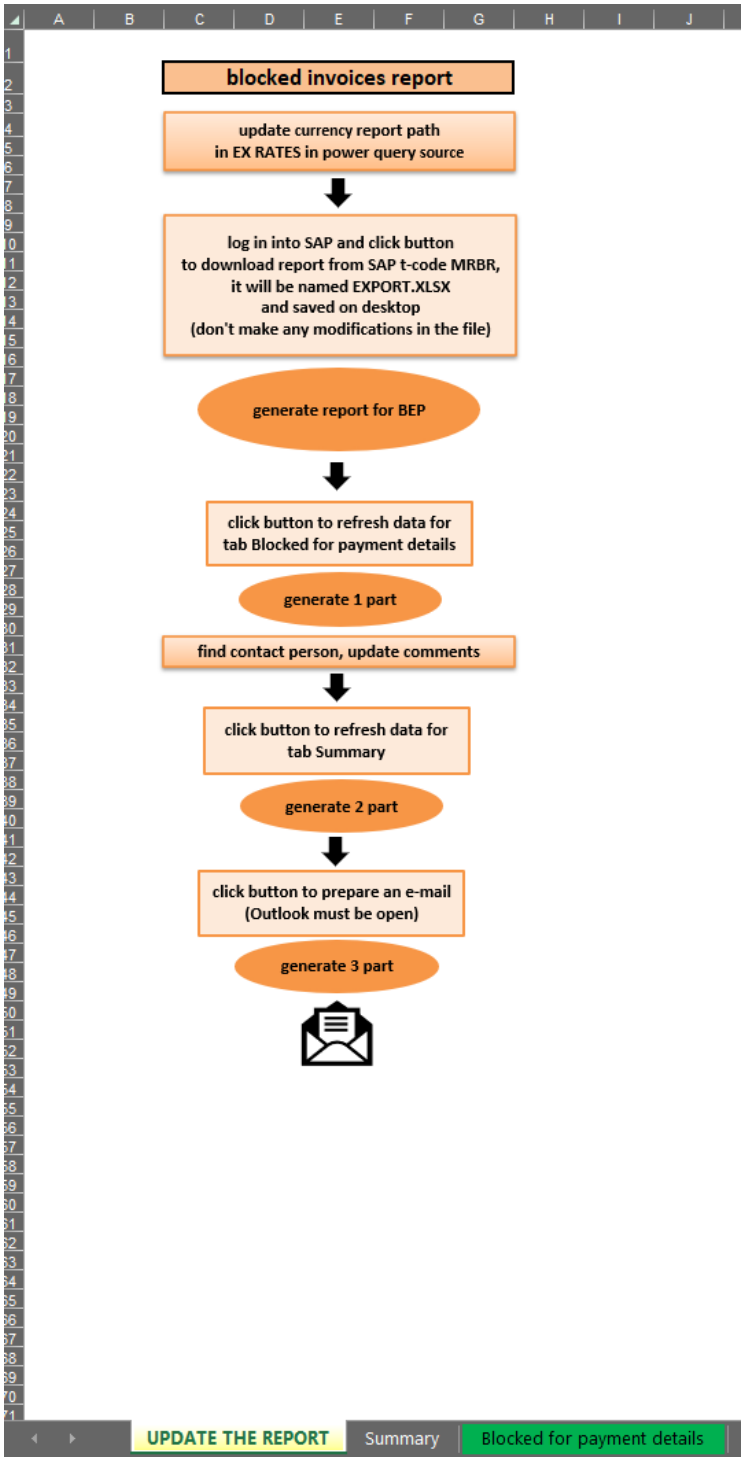
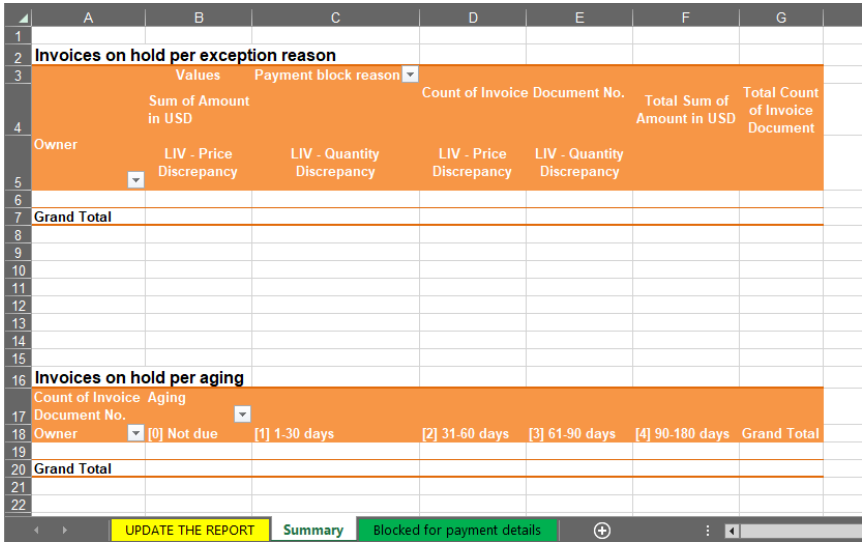
**Power Query + Power Pivot + Macros => Macro for blocked invoices report for BEP**

*** Company data was hidden, among others: by blurring them, replacing them in the code with xxx**

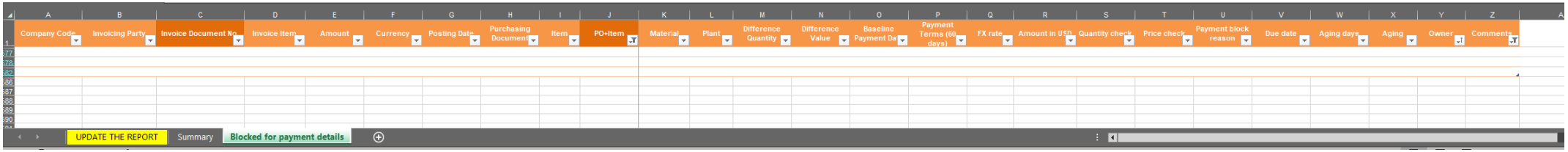
The report consists of 3 tabs in Excel. In the first tab we have detailed instructions on what to do step by step, and in the second and third tab we have parts of the report. After completing all steps, a separate file with today's date will be created on the desktop with the final report and an appropriate e-mail will be generated for sending with the attached report.


blocked invoices report
update currency report path
in EX RATES in power query source
log in into SAP and click button
to download report from SAP t-code MRBR,
it will be named EXPORT.XLSX
and saved on desktop
(don't make any modifications in the file)
generate report for BEP
click button to refresh data for
tab Blocked for payment details
generate 1 part
find contact person, update comments
click button to refresh data for
tab Summary
generate 2 part
click button to prepare an e-mail
(Outlook must be open)
generate 3 part
UPDATE THE REPORT
Summary
Blocked for payment details

**(Macros)**




**(Power Pivot)**

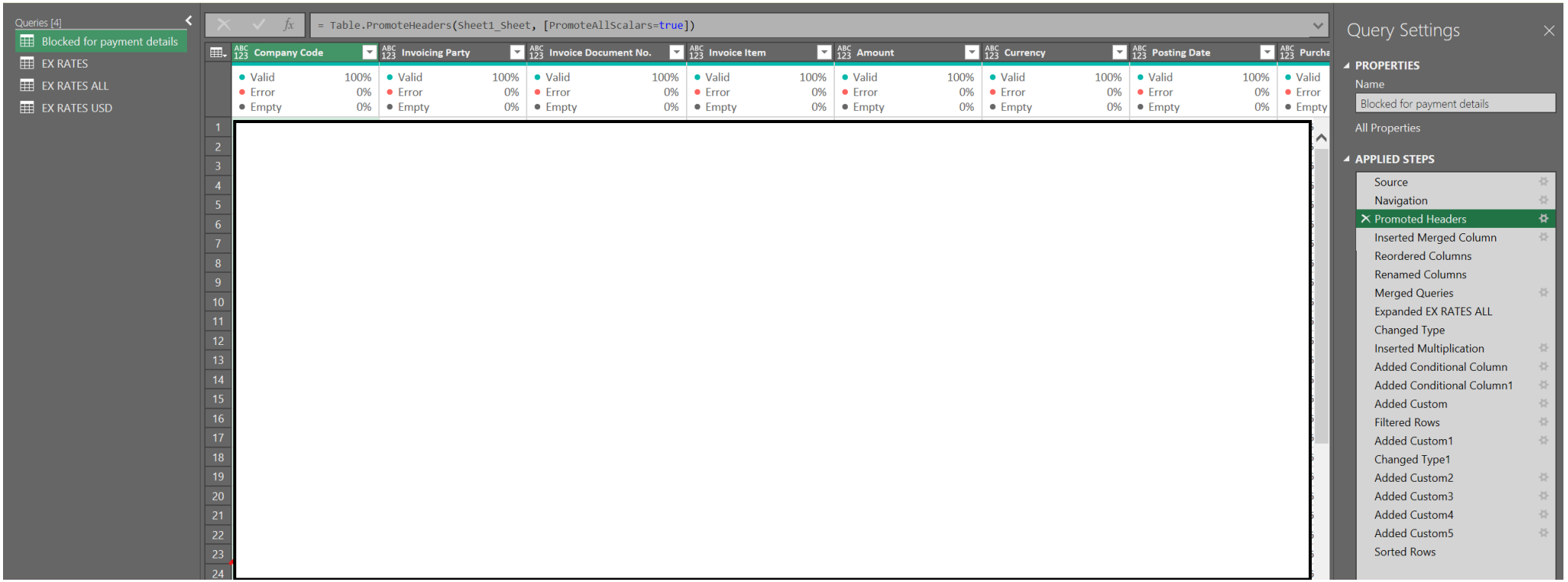


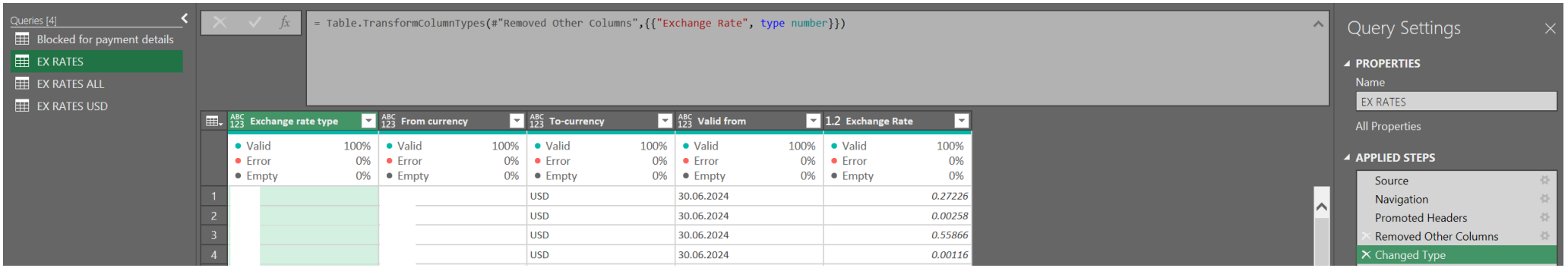

**(Power Query)**

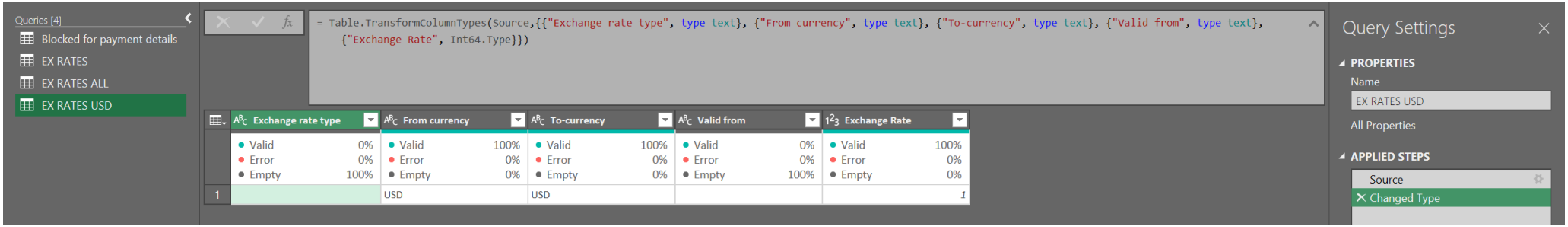
**Power Query editor:**

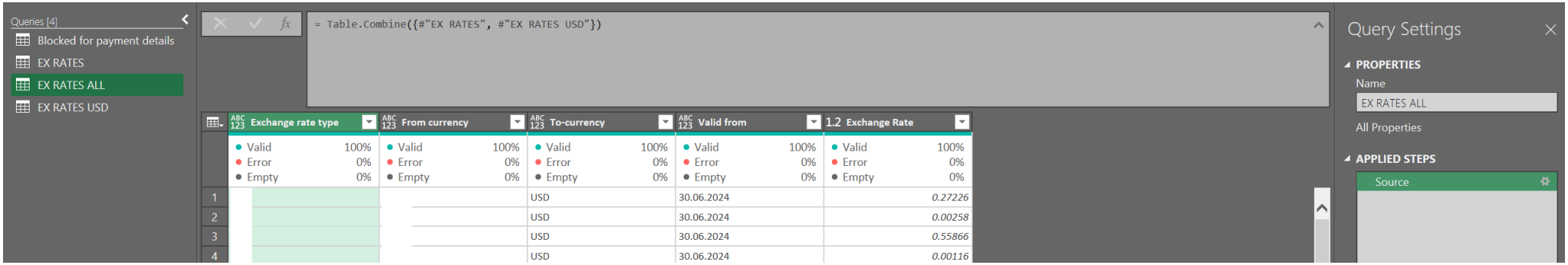
The downloaded data from SAP was loaded into Power Query and named Block for payment details. Then, data on exchange rates called EX RATES were added and a new EX RATES USD table was manually added. Both of these tables have been merged into one main table using append, named EX RATES ALL rates, whose rate column will be used in the Block for payment details table. The data in the Block for payment details table has been appropriately transformed, including: conditional and custom columns have been added, a column from the FX RATES ALL table has been added via join

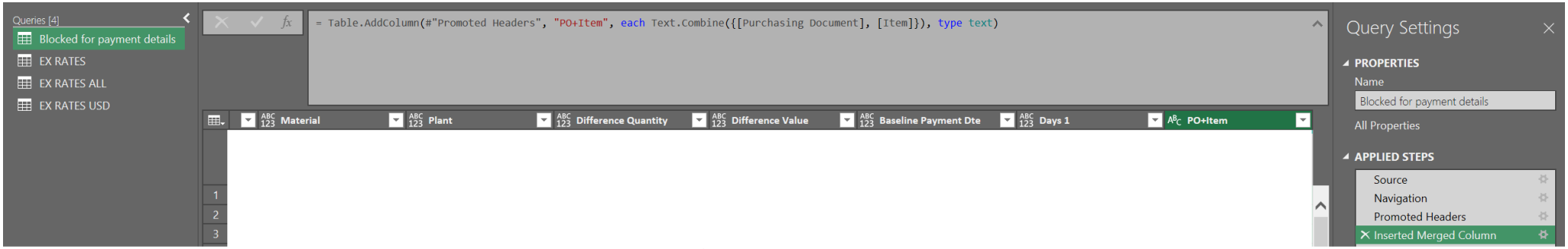
The screenshots below show the data transformations.

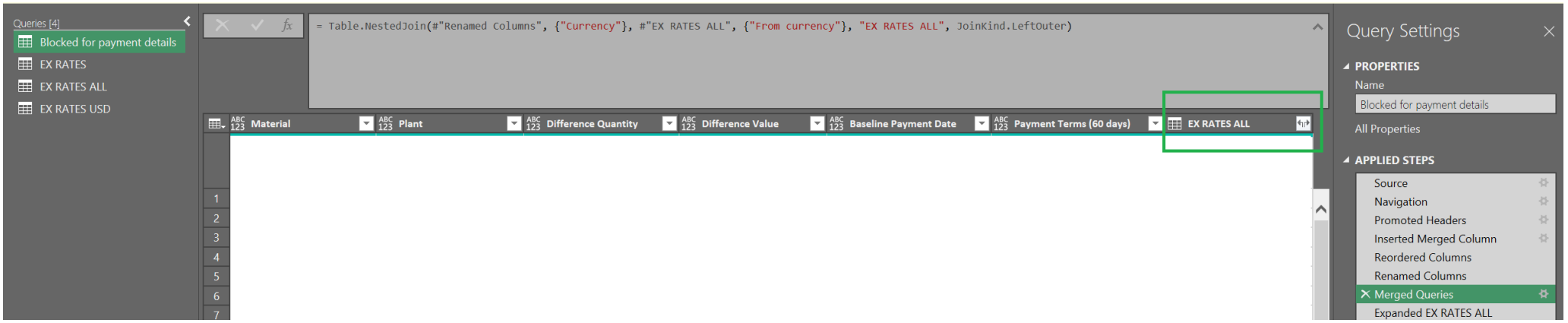

Queries [4]
Blocked for payment details
EX RATES
EX RATES ALL
EX RATES USD
= Table.PromoteHeaders(Sheet1_Sheet, [PromoteAllScalars=true])
Company Code
Invoicing Party
Invoice Document No.
Invoice Item
Amount
Currency
Posting Date
Purcha
Valid 100%
Error 0%
Empty 0%
Query Settings
PROPERTIES
Name
Blocked for payment details
All Properties
APPLIED STEPS
Source
Navigation
Promoted Headers
Inserted Merged Column
Reordered Columns
Renamed Columns
Merged Queries
Expanded EX RATES ALL
Changed Type
Inserted Multiplication
Added Conditional Column
Added Conditional Column1
Added Custom
Filtered Rows
Added Custom1
Changed Type1
Added Custom2
Added Custom3
Added Custom4
Added Custom5
Sorted Rows

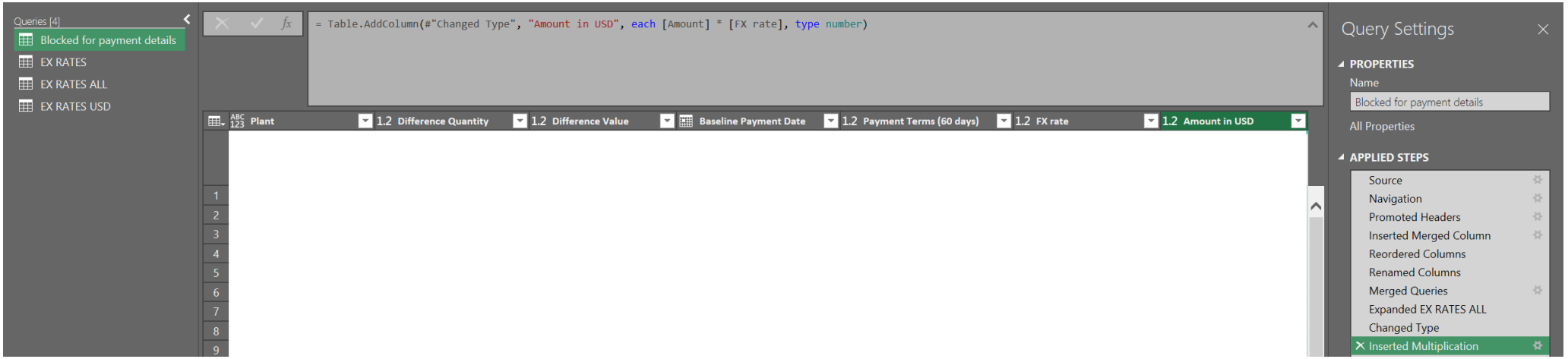

Queries [4]
Blocked for payment details
EX RATES
EX RATES ALL
EX RATES USD
= Table.TransformColumnTypes(#"Removed Other Columns",{{"Exchange Rate", type number}})
Exchange rate type
From currency
To-currency
Valid from
1.2 Exchange Rate
Valid 100%
Error 0%
Empty 0%
1 USD 30.06.2024 0.27226
2 USD 30.06.2024 0.00258
3 USD 30.06.2024 0.55866
4 USD 30.06.2024 0.00116
Query Settings
PROPERTIES
Name
EX RATES
All Properties
APPLIED STEPS
Source
Navigation
Promoted Headers
Removed Other Columns
Changed Type

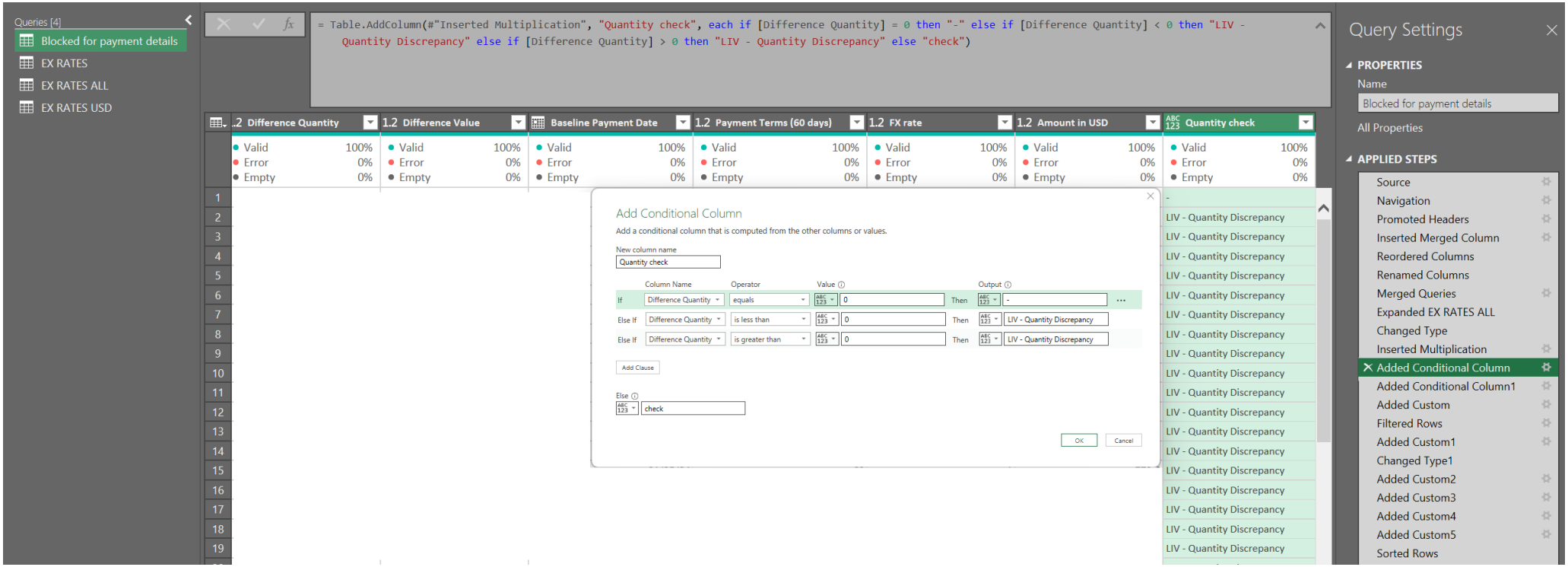

Queries [4]
Blocked for payment details
EX RATES
EX RATES ALL
EX RATES USD
= Table.TransformColumnTypes(Source,{{"Exchange rate type", type text}, {"From currency", type text}, {"To-currency", type text}, {"Valid from", type text}, {"Exchange Rate", Int64.Type}})
Exchange rate type
From currency
To-currency
Valid from
Exchange Rate
Valid 0% Error 0% Empty 100%
Valid 100% Error 0% Empty 0%
Valid 100% Error 0% Empty 0%
Valid 0% Error 0% Empty 100%
Valid 100% Error 0% Empty 0%
1 USD USD 1
Query Settings
PROPERTIES
Name
EX RATES USD
All Properties
APPLIED STEPS
Source
Changed Type

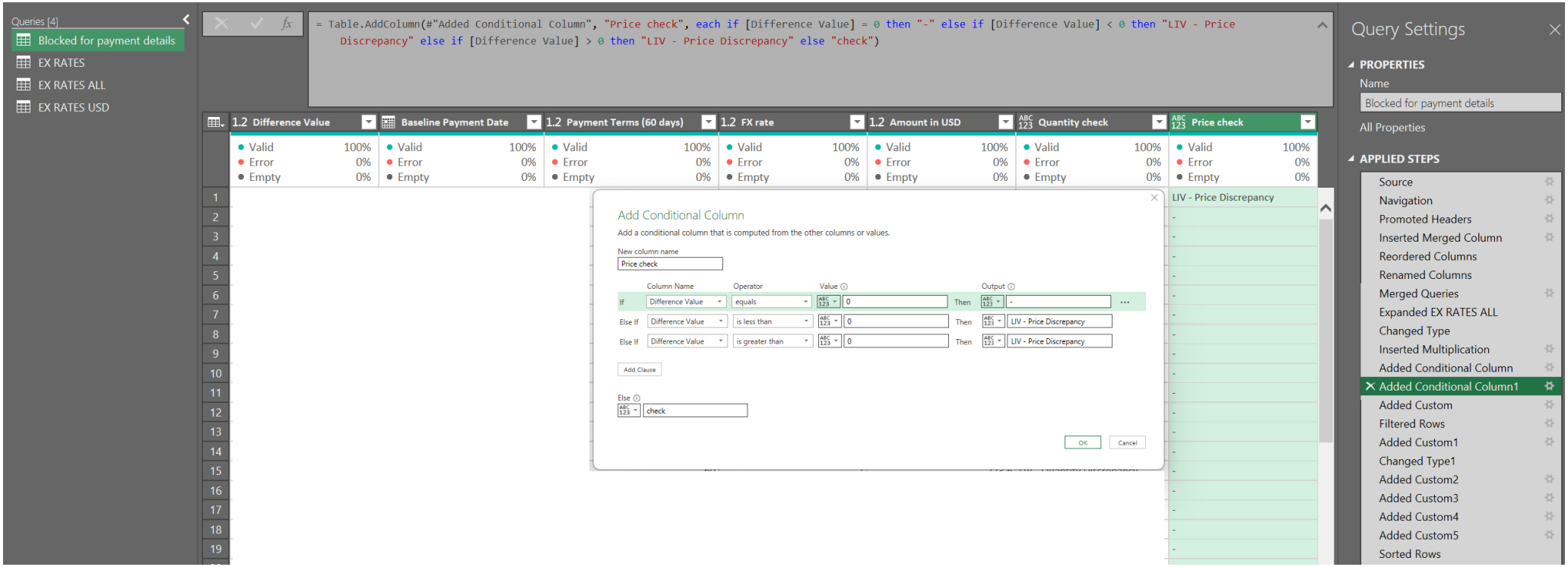

Queries [4]
Blocked for payment details
EX RATES
EX RATES ALL
EX RATES USD
= Table.Combine({#"EX RATES", #"EX RATES USD"})
Exchange rate type
From currency
To-currency
Valid from
Exchange Rate
Valid 100% Error 0% Empty 0%
Valid 100% Error 0% Empty 0%
Valid 100% Error 0% Empty 0%
Valid 100% Error 0% Empty 0%
Valid 100% Error 0% Empty 0%
1 USD 30.06.2024 0.27226
2 USD 30.06.2024 0.00258
3 USD 30.06.2024 0.55866
4 USD 30.06.2024 0.00116
Query Settings
PROPERTIES
Name
EX RATES ALL
All Properties
APPLIED STEPS
Source

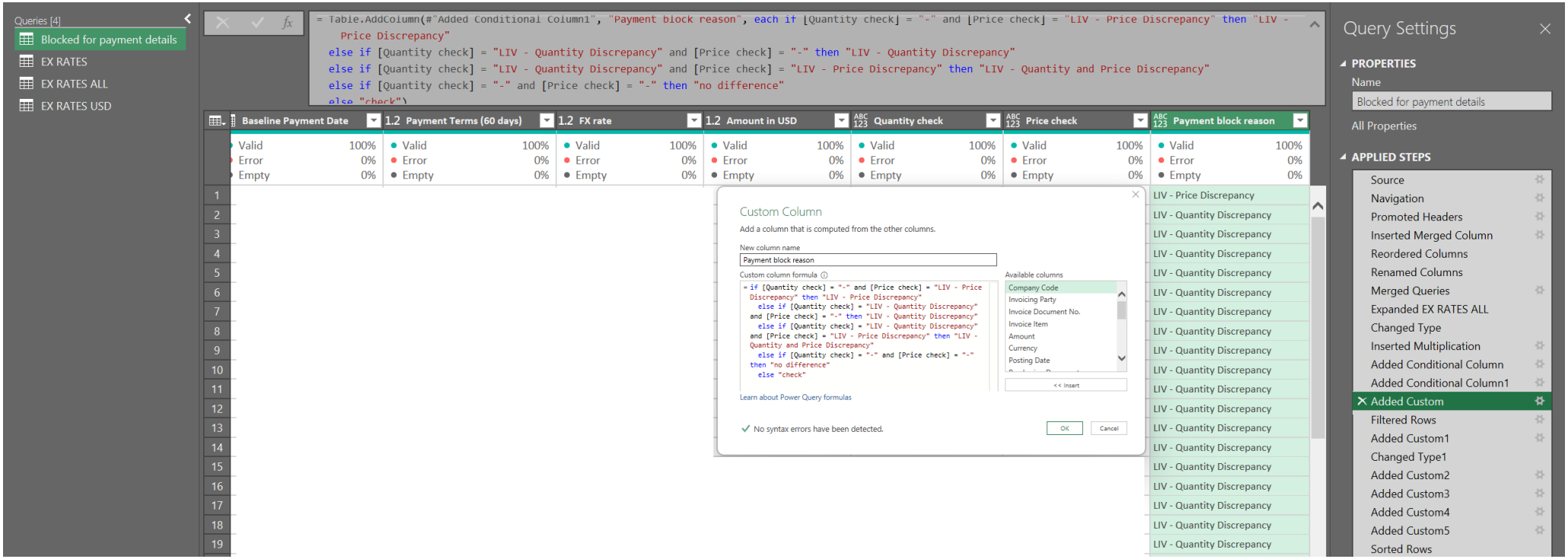

Queries [4]
Blocked for payment details
EX RATES
EX RATES ALL
EX RATES USD
= Table.AddColumn(#"Promoted Headers", "PO+Item", each Text.Combine({[Purchasing Document], [Item]}), type text)
Material
Plant
Difference Quantity
Difference Value
Baseline Payment Dte
Days 1
PO+Item
1
2
3
Query Settings
PROPERTIES
Name
Blocked for payment details
All Properties
APPLIED STEPS
Source
Navigation
Promoted Headers
Inserted Merged Column

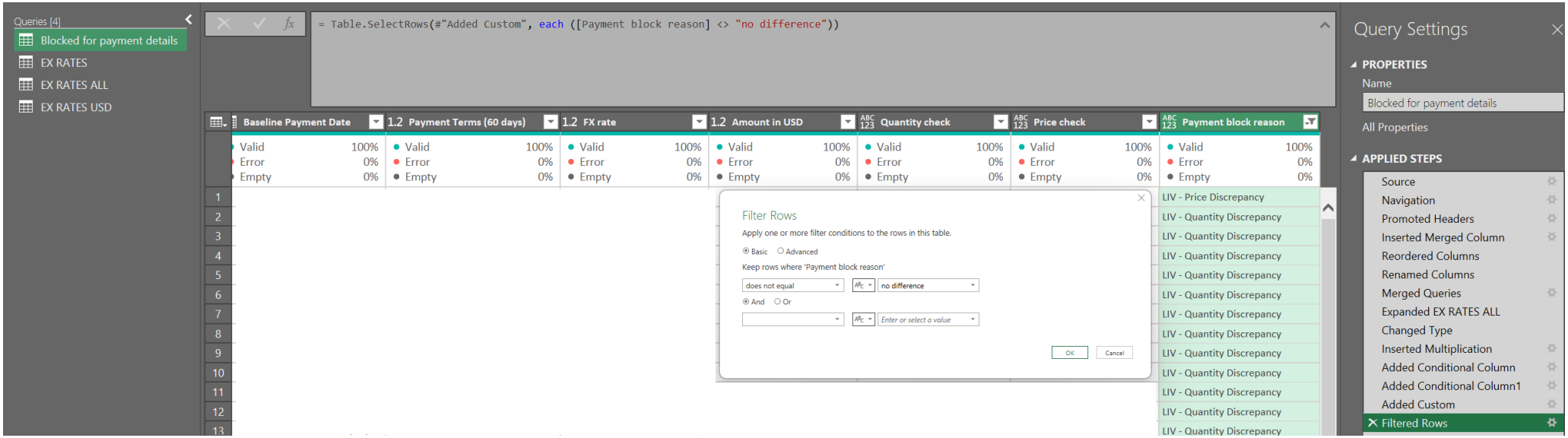

Queries [4]
Blocked for payment details
EX RATES
EX RATES ALL
EX RATES USD
= Table.NestedJoin(#"Renamed Columns", {"Currency"}, #"EX RATES ALL", {"From currency"}, "EX RATES ALL", JoinKind.LeftOuter)
Material
Plant
Difference Quantity
Difference Value
Baseline Payment Date
Payment Terms (60 days)
EX RATES ALL
Query Settings
PROPERTIES
Name
Blocked for payment details
All Properties
APPLIED STEPS
Source
Navigation
Promoted Headers
Inserted Merged Column
Reordered Columns
Renamed Columns
Merged Queries
Expanded EX RATES ALL

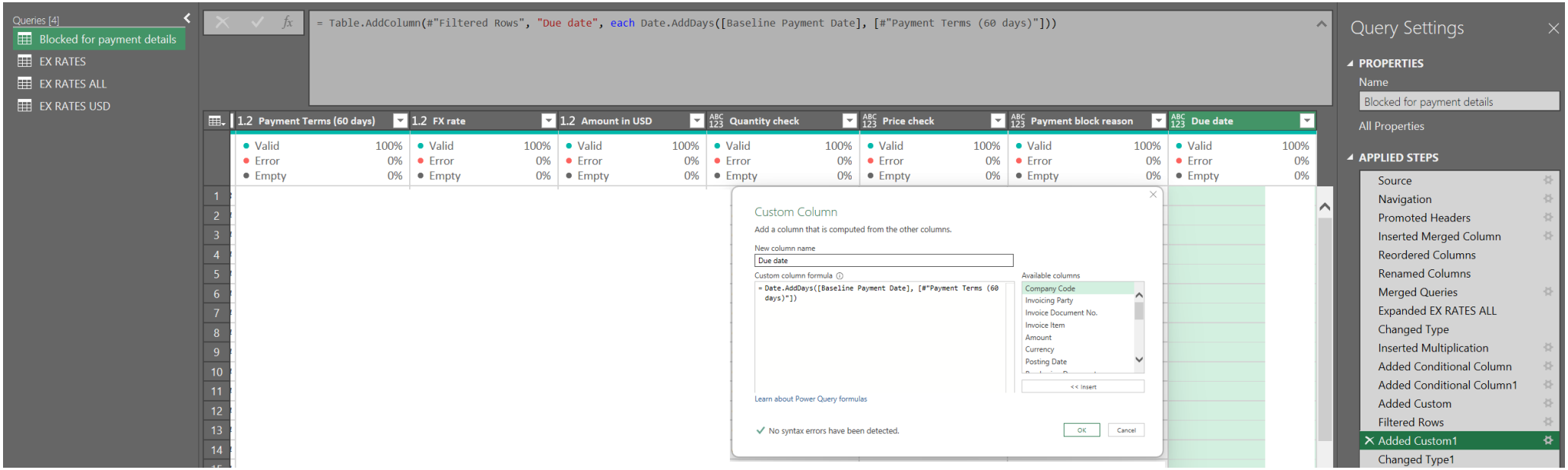

Queries [4]
Blocked for payment details
EX RATES
EX RATES ALL
EX RATES USD
= Table.AddColumn(#"Changed Type", "Amount in USD", each [Amount] * [FX rate], type number)
Plant
Difference Quantity
Difference Value
Baseline Payment Date
Payment Terms (60 days)
FX rate
Amount in USD
Query Settings
PROPERTIES
Name
Blocked for payment details
All Properties
APPLIED STEPS
Source
Navigation
Promoted Headers
Inserted Merged Column
Reordered Columns
Renamed Columns
Merged Queries
Expanded EX RATES ALL
Changed Type
Inserted Multiplication

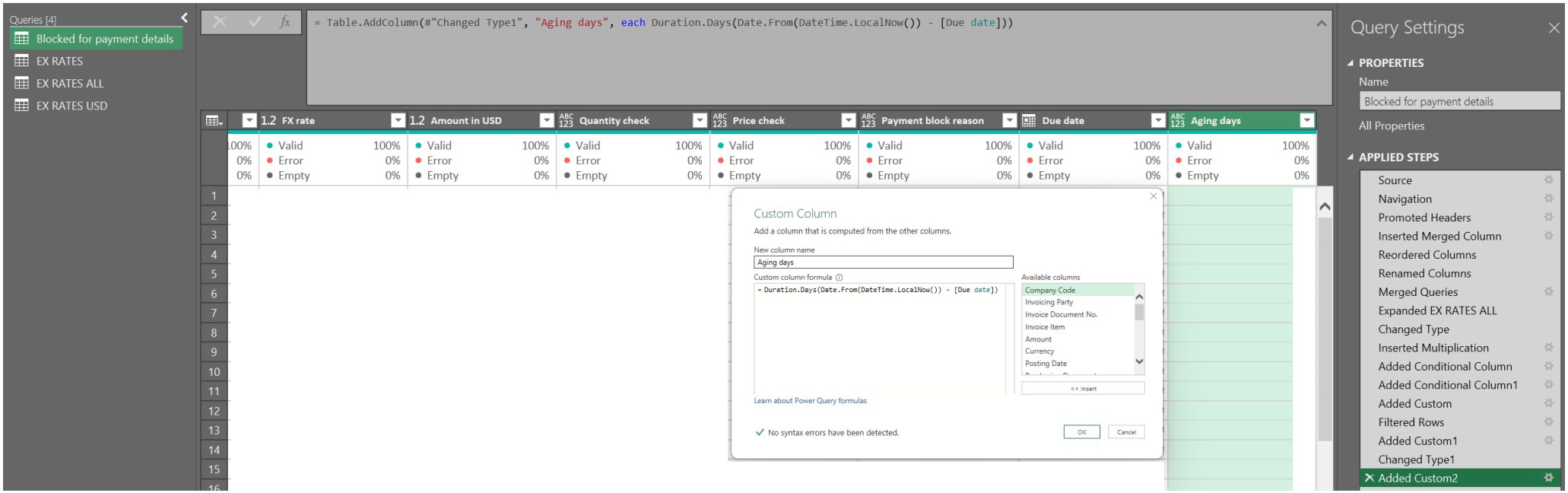

Queries [4]
Blocked for payment details
EX RATES
EX RATES ALL
EX RATES USD
= Table.AddColumn(#"Inserted Multiplication", "Quantity check", each if [Difference Quantity] = 0 then "-" else if [Difference Quantity] < 0 then "LIV - Quantity Discrepancy" else if [Difference Quantity] > 0 then "LIV - Quantity Discrepancy" else "check")
1.2 Difference Quantity
1.2 Difference Value
Baseline Payment Date
1.2 Payment Terms (60 days)
1.2 FX rate
1.2 Amount in USD
ABC 123 Quantity check
Valid 100%
Error 0%
Empty 0%
Add Conditional Column
Add a conditional column that is computed from the other columns or values.
New column name
Quantity check
Column Name
Operator
Value
Output
If Difference Quantity equals 0 Then -
Else If Difference Quantity is less than 0 Then LIV - Quantity Discrepancy
Else If Difference Quantity is greater than 0 Then LIV - Quantity Discrepancy
Add Clause
Else
check
OK
Cancel
Query Settings
PROPERTIES
Name
Blocked for payment details
All Properties
APPLIED STEPS
Source
Navigation
Promoted Headers
Inserted Merged Column
Reordered Columns
Renamed Columns
Merged Queries
Expanded EX RATES ALL
Changed Type
Inserted Multiplication
Added Conditional Column
Added Conditional Column1
Added Custom
Filtered Rows
Added Custom1
Changed Type1
Added Custom2
Added Custom3
Added Custom4
Added Custom5
Sorted Rows

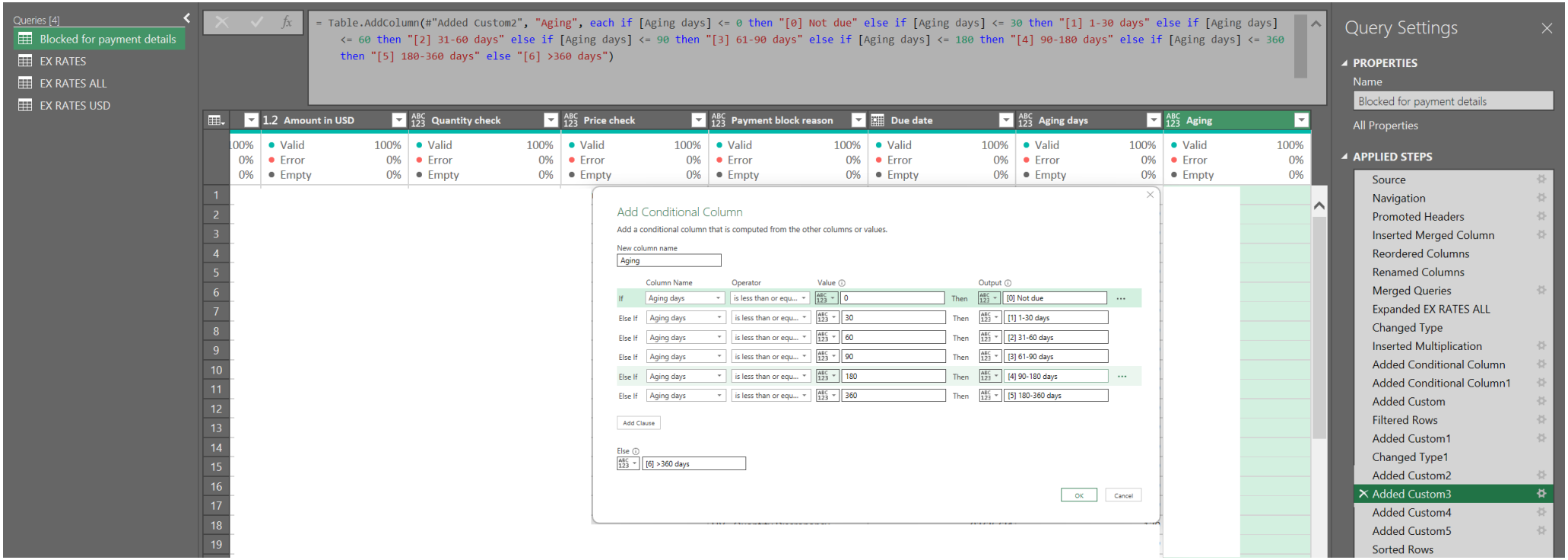

Queries [4]
Blocked for payment details
EX RATES
EX RATES ALL
EX RATES USD
= Table.AddColumn(#"Added Conditional Column", "Price check", each if [Difference Value] = 0 then "-" else if [Difference Value] < 0 then "LIV - Price Discrepancy" else if [Difference Value] > 0 then "LIV - Price Discrepancy" else "check")
1.2 Difference Value
Baseline Payment Date
1.2 Payment Terms (60 days)
1.2 FX rate
1.2 Amount in USD
ABC 123 Quantity check
ABC 123 Price check
Valid 100%
Error 0%
Empty 0%
LIV - Price Discrepancy
Add Conditional Column
Add a conditional column that is computed from the other columns or values.
New column name
Price check
Column Name
Operator
Value
Output
If
Difference Value
equals
0
Then
-
Else If
Difference Value
is less than
0
Then
LIV - Price Discrepancy
Else If
Difference Value
is greater than
0
Then
LIV - Price Discrepancy
Add Clause
Else
check
OK
Cancel
Query Settings
PROPERTIES
Name
Blocked for payment details
All Properties
APPLIED STEPS
Source
Navigation
Promoted Headers
Inserted Merged Column
Reordered Columns
Renamed Columns
Merged Queries
Expanded EX RATES ALL
Changed Type
Inserted Multiplication
Added Conditional Column
Added Conditional Column1
Added Custom
Filtered Rows
Added Custom1
Changed Type1
Added Custom2
Added Custom3
Added Custom4
Added Custom5
Sorted Rows

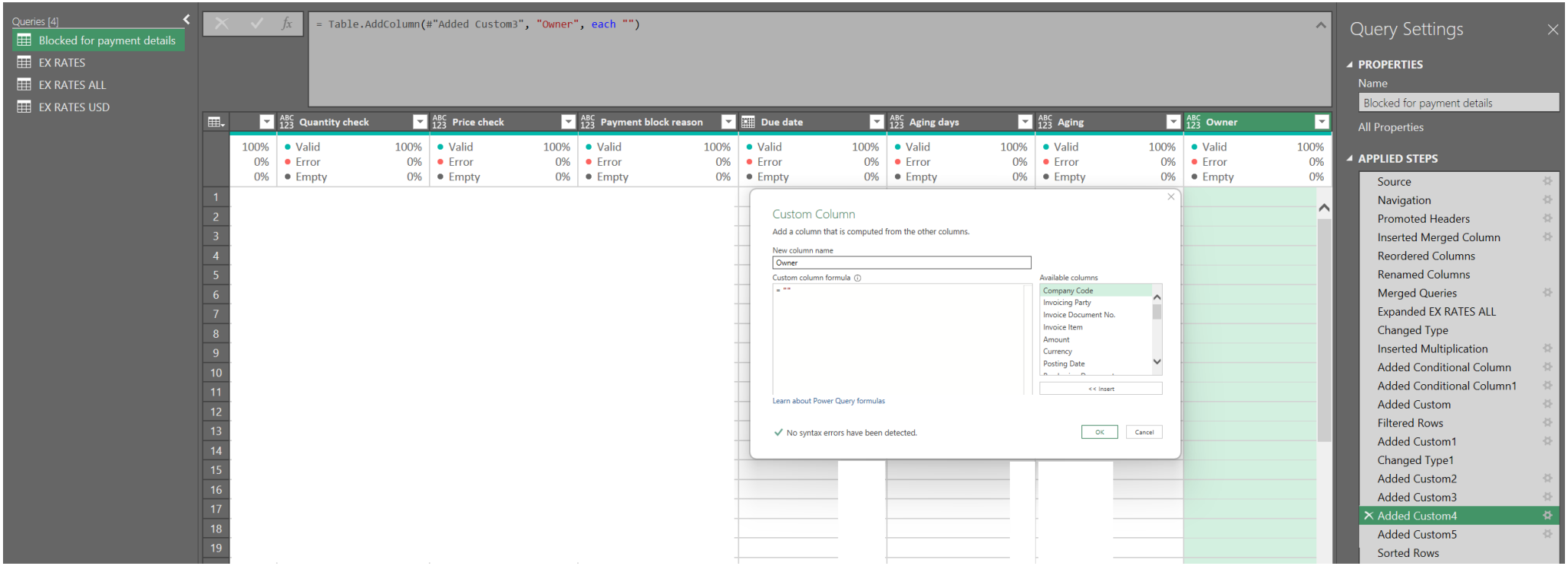

Queries [4]
Blocked for payment details
EX RATES
EX RATES ALL
EX RATES USD
= Table.AddColumn(#"Added Conditional Column1", "Payment block reason", each if [Quantity check] = "-" and [Price check] = "LIV - Price Discrepancy" then "LIV - Price Discrepancy"
else if [Quantity check] = "LIV - Quantity Discrepancy" and [Price check] = "-" then "LIV - Quantity Discrepancy"
else if [Quantity check] = "LIV - Quantity Discrepancy" and [Price check] = "LIV - Price Discrepancy" then "LIV - Quantity and Price Discrepancy"
else if [Quantity check] = "-" and [Price check] = "-" then "no difference"
else "check")
Baseline Payment Date
1.2 Payment Terms (60 days)
1.2 FX rate
1.2 Amount in USD
Quantity check
Price check
Payment block reason
Valid 100%
Error 0%
Empty 0%
Custom Column
Add a column that is computed from the other columns.
New column name
Payment block reason
Custom column formula
Available columns
Company Code
Invoicing Party
Invoice Document No.
Invoice Item
Amount
Currency
Posting Date
<< Insert
Learn about Power Query formulas
No syntax errors have been detected.
OK
Cancel
LIV - Price Discrepancy
LIV - Quantity Discrepancy
Query Settings
PROPERTIES
Name
Blocked for payment details
All Properties
APPLIED STEPS
Source
Navigation
Promoted Headers
Inserted Merged Column
Reordered Columns
Renamed Columns
Merged Queries
Expanded EX RATES ALL
Changed Type
Inserted Multiplication
Added Conditional Column
Added Conditional Column1
Added Custom
Filtered Rows
Added Custom1
Changed Type1
Added Custom2
Added Custom3
Added Custom4
Added Custom5
Sorted Rows

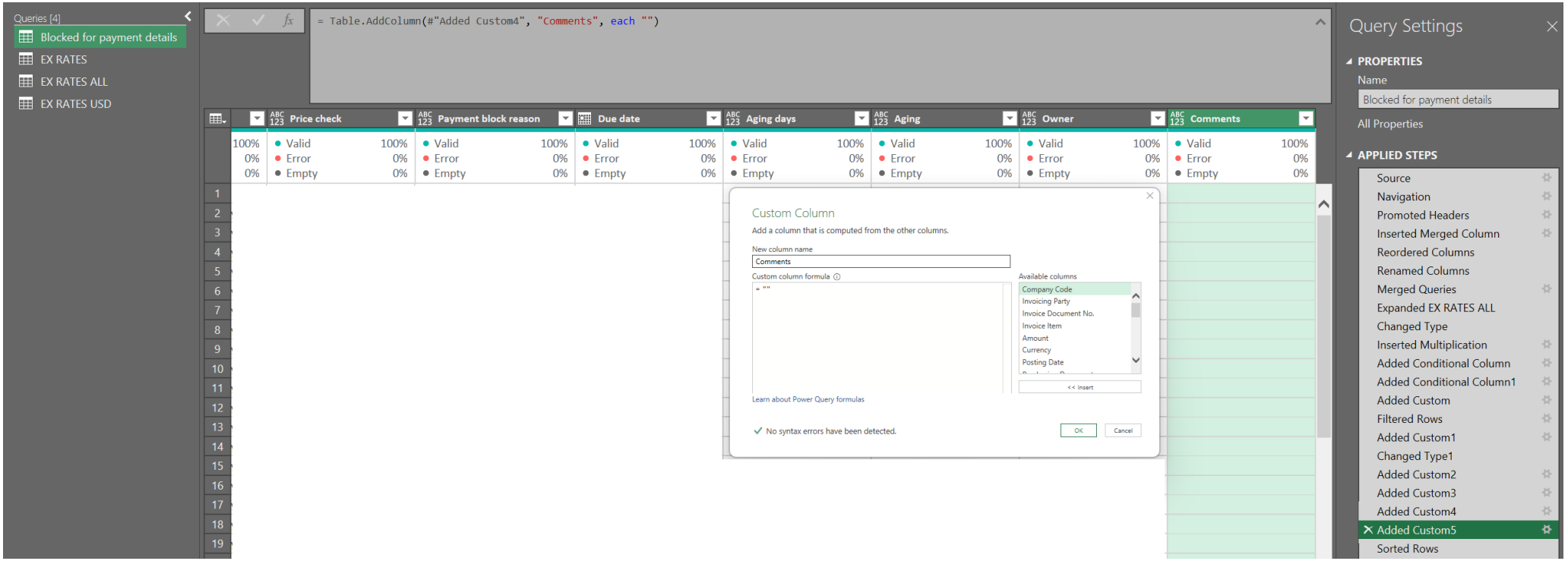

Queries [4]
Blocked for payment details
EX RATES
EX RATES ALL
EX RATES USD
= Table.SelectRows(#"Added Custom", each ([Payment block reason] <> "no difference"))
Baseline Payment Date
1.2 Payment Terms (60 days)
1.2 FX rate
1.2 Amount in USD
Quantity check
Price check
Payment block reason
Valid 100%
Error 0%
Empty 0%
Filter Rows
Apply one or more filter conditions to the rows in this table.
Basic
Advanced
Keep rows where 'Payment block reason'
does not equal
no difference
And
Or
Enter or select a value
OK
Cancel
LIV - Price Discrepancy
LIV - Quantity Discrepancy
Query Settings
PROPERTIES
Name
Blocked for payment details
All Properties
APPLIED STEPS
Source
Navigation
Promoted Headers
Inserted Merged Column
Reordered Columns
Renamed Columns
Merged Queries
Expanded EX RATES ALL
Changed Type
Inserted Multiplication
Added Conditional Column
Added Conditional Column1
Added Custom
Filtered Rows


Queries [4]
Blocked for payment details
EX RATES
EX RATES ALL
EX RATES USD
= Table.AddColumn(#"Filtered Rows", "Due date", each Date.AddDays([Baseline Payment Date], [#"Payment Terms (60 days)"]))
1.2 Payment Terms (60 days)
1.2 FX rate
1.2 Amount in USD
Quantity check
Price check
Payment block reason
Due date
Valid 100%
Error 0%
Empty 0%
Custom Column
Add a column that is computed from the other columns.
New column name
Due date
Custom column formula
= Date.AddDays([Baseline Payment Date], [#"Payment Terms (60 days)"])
Available columns
Company Code
Invoicing Party
Invoice Document No.
Invoice Item
Amount
Currency
Posting Date
<< Insert
Learn about Power Query formulas
No syntax errors have been detected.
OK
Cancel
Query Settings
PROPERTIES
Name
Blocked for payment details
All Properties
APPLIED STEPS
Source
Navigation
Promoted Headers
Inserted Merged Column
Reordered Columns
Renamed Columns
Merged Queries
Expanded EX RATES ALL
Changed Type
Inserted Multiplication
Added Conditional Column
Added Conditional Column1
Added Custom
Filtered Rows
Added Custom1
Changed Type1


Queries [4]
Blocked for payment details
EX RATES
EX RATES ALL
EX RATES USD
= Table.AddColumn(#"Changed Type1", "Aging days", each Duration.Days(Date.From(DateTime.LocalNow()) - [Due date]))
1.2 FX rate
1.2 Amount in USD
Quantity check
Price check
Payment block reason
Due date
Aging days
Valid 100%
Error 0%
Empty 0%
Custom Column
Add a column that is computed from the other columns.
New column name
Aging days
Custom column formula
= Duration.Days(Date.From(DateTime.LocalNow()) - [Due date])
Available columns
Company Code
Invoicing Party
Invoice Document No.
Invoice Item
Amount
Currency
Posting Date
<< Insert
Learn about Power Query formulas
No syntax errors have been detected.
OK
Cancel
Query Settings
PROPERTIES
Name
Blocked for payment details
All Properties
APPLIED STEPS
Source
Navigation
Promoted Headers
Inserted Merged Column
Reordered Columns
Renamed Columns
Merged Queries
Expanded EX RATES ALL
Changed Type
Inserted Multiplication
Added Conditional Column
Added Conditional Column1
Added Custom
Filtered Rows
Added Custom1
Changed Type1
Added Custom2

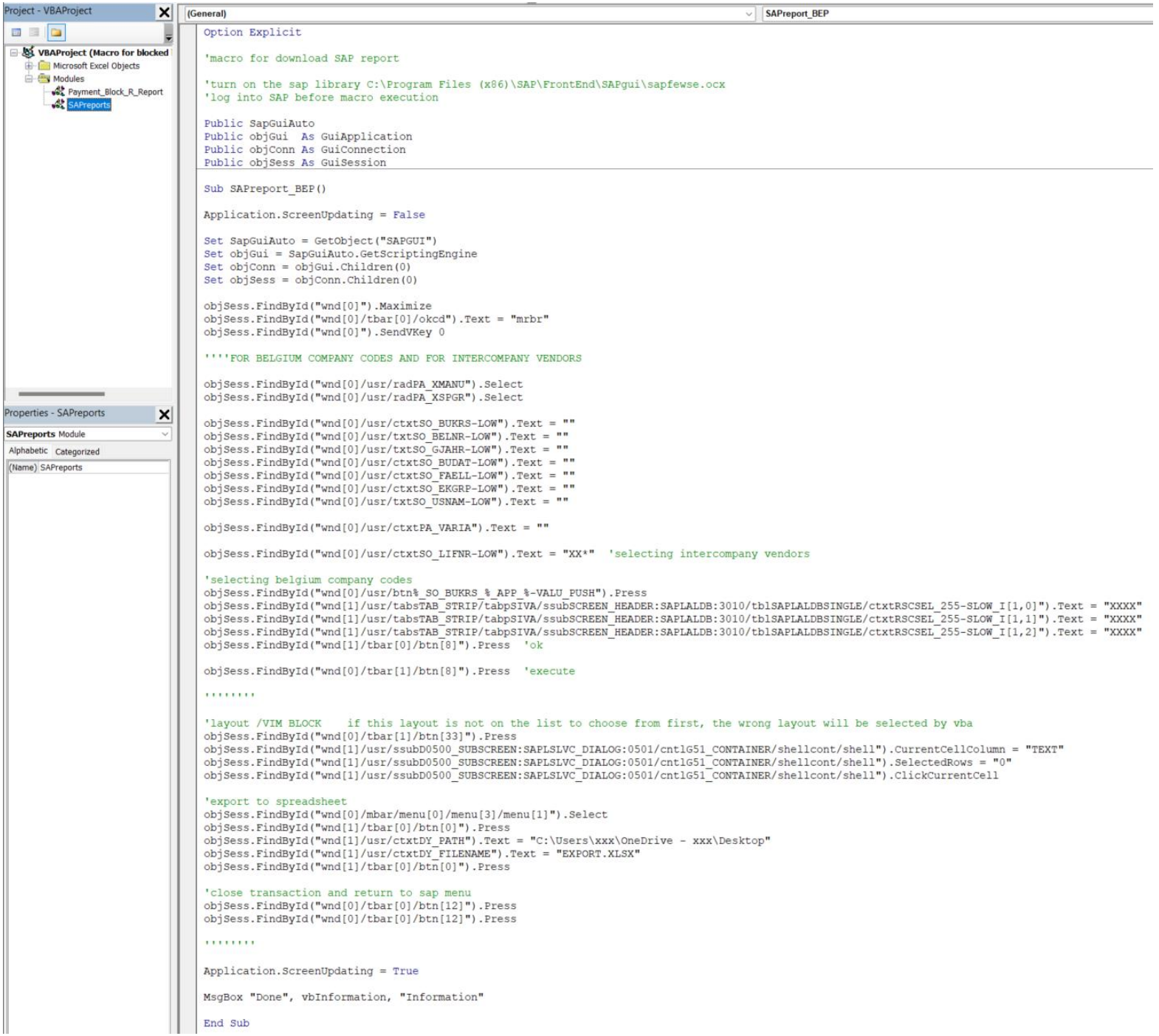

Queries [4]
Blocked for payment details
EX RATES
EX RATES ALL
EX RATES USD
= Table.AddColumn(#"Added Custom2", "Aging", each if [Aging days] <= 0 then "[0] Not due" else if [Aging days] <= 30 then "[1] 1-30 days" else if [Aging days] <= 60 then "[2] 31-60 days" else if [Aging days] <= 90 then "[3] 61-90 days" else if [Aging days] <= 180 then "[4] 90-180 days" else if [Aging days] <= 360 then "[5] 180-360 days" else "[6] >360 days")
1.2 Amount in USD
Quantity check
Price check
Payment block reason
Due date
Aging days
Aging
Valid
Error
Empty
Add Conditional Column
Add a conditional column that is computed from the other columns or values.
New column name
Aging
Column Name
Operator
Value
Output
Add Clause
Else
[6] >360 days
OK
Cancel
Query Settings
PROPERTIES
Name
Blocked for payment details
All Properties
APPLIED STEPS
Source
Navigation
Promoted Headers
Inserted Merged Column
Reordered Columns
Renamed Columns
Merged Queries
Expanded EX RATES ALL
Changed Type
Inserted Multiplication
Added Conditional Column
Added Conditional Column1
Added Custom
Filtered Rows
Added Custom1
Changed Type1
Added Custom2
Added Custom3
Added Custom4
Added Custom5
Sorted Rows


Queries [4]
Blocked for payment details
EX RATES
EX RATES ALL
EX RATES USD
= Table.AddColumn(#"Added Custom3", "Owner", each "")
Quantity check
Price check
Payment block reason
Due date
Aging days
Aging
Owner
Valid
Error
Empty
Custom Column
Add a column that is computed from the other columns.
New column name
Owner
Custom column formula
= ""
Available columns
Company Code
Invoicing Party
Invoice Document No.
Invoice Item
Amount
Currency
Posting Date
<< Insert
Learn about Power Query formulas
No syntax errors have been detected.
OK
Cancel
Query Settings
PROPERTIES
Name
Blocked for payment details
All Properties
APPLIED STEPS
Source
Navigation
Promoted Headers
Inserted Merged Column
Reordered Columns
Renamed Columns
Merged Queries
Expanded EX RATES ALL
Changed Type
Inserted Multiplication
Added Conditional Column
Added Conditional Column1
Added Custom
Filtered Rows
Added Custom1
Changed Type1
Added Custom2
Added Custom3
Added Custom4
Added Custom5
Sorted Rows

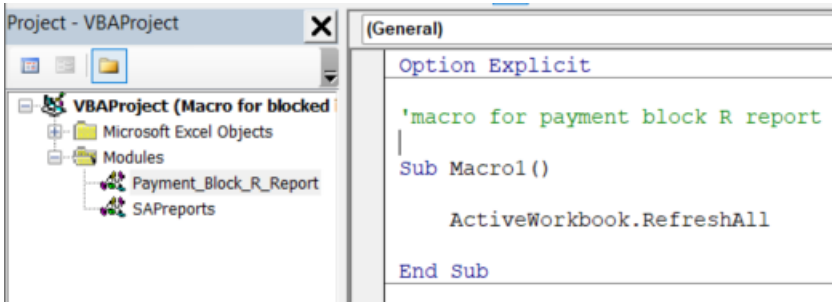



**VBA editor:**

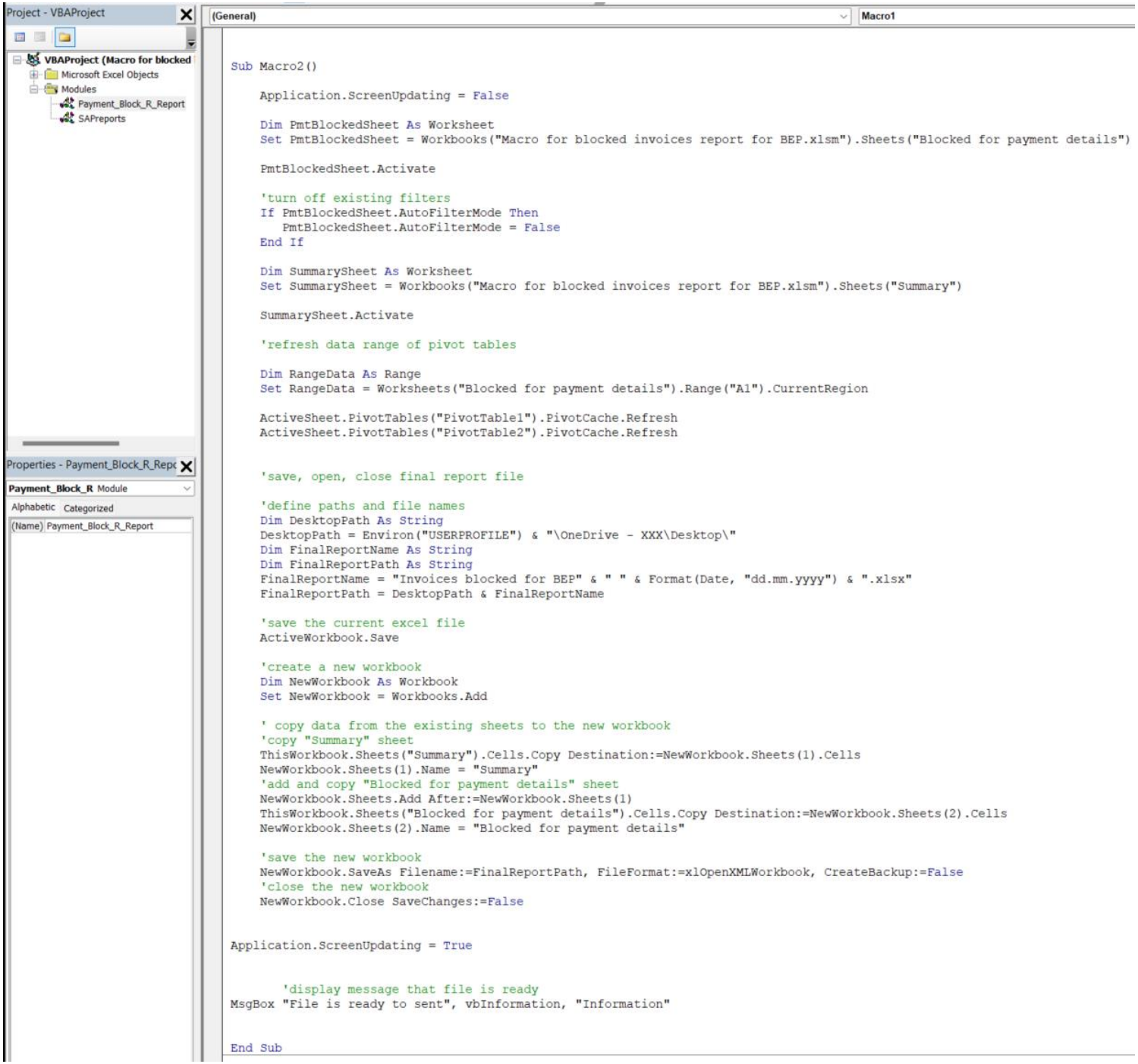
Code for button: generate report



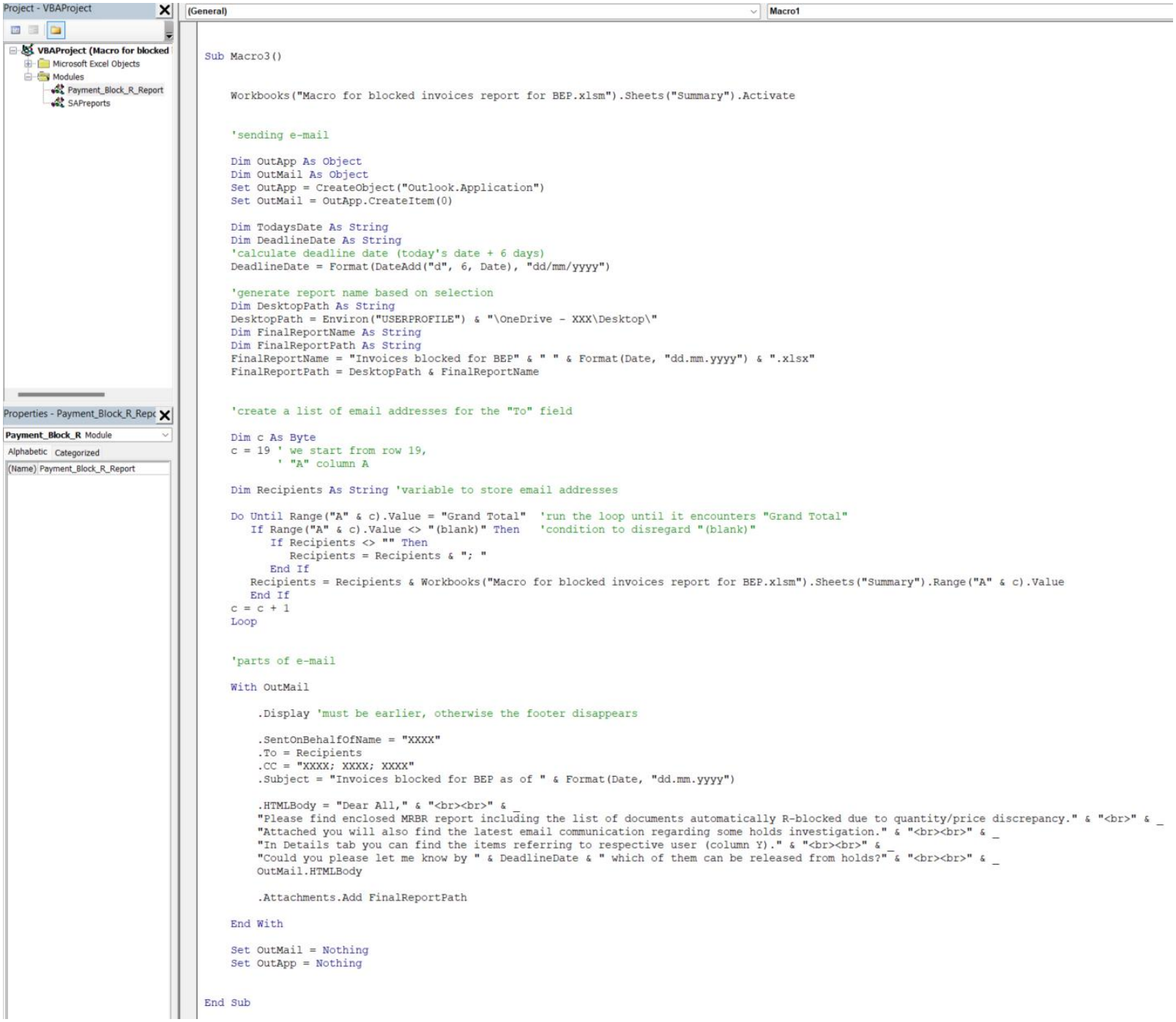

Code for button: generate 1 part




Code for button: generate 2 part




Code for button: generate 3 part


Project - VBAProject
VBAProject (Macro for blocked
Microsoft Excel Objects
Modules
Payment_Block_R_Report
SAPreports
Properties - Payment_Block_R_Repo
Payment_Block_R Module
Alphabetic
Categorized
(Name) Payment_Block_R_Report
(General)
Macro1
Sub Macro3()
Workbooks("Macro for blocked invoices report for BEP.xlsm").Sheets("Summary").Activate
'sending e-mail
Dim OutApp As Object
Dim OutMail As Object
Set OutApp = CreateObject("Outlook.Application")
Set OutMail = OutApp.CreateItem(0)
Dim TodaysDate As String
Dim DeadlineDate As String
'calculate deadline date (today's date + 6 days)
DeadlineDate = Format(DateAdd("d", 6, Date), "dd/mm/yyyy")
'generate report name based on selection
Dim DesktopPath As String
DesktopPath = Environ("USERPROFILE") & "\OneDrive - XXX\Desktop\"
Dim FinalReportName As String
Dim FinalReportPath As String
FinalReportName = "Invoices blocked for BEP" & " " & Format(Date, "dd.mm.yyyy") & ".xlsx"
FinalReportPath = DesktopPath & FinalReportName
'create a list of email addresses for the "To" field
Dim c As Byte
c = 19 ' we start from row 19,
' "A" column A
Dim Recipients As String 'variable to store email addresses
Do Until Range("A" & c).Value = "Grand Total" 'run the loop until it encounters "Grand Total"
If Range("A" & c).Value <> "(blank)" Then 'condition to disregard "(blank)"
If Recipients <> "" Then
Recipients = Recipients & "; "
End If
Recipients = Recipients & Workbooks("Macro for blocked invoices report for BEP.xlsm").Sheets("Summary").Range("A" & c).Value
End If
c = c + 1
Loop
'parts of e-mail
With OutMail
.Display 'must be earlier, otherwise the footer disappears
.SentOnBehalfOfName = "XXXX"
.To = Recipients
.CC = "XXXX; XXXX; XXXX"
.Subject = "Invoices blocked for BEP as of " & Format(Date, "dd.mm.yyyy")
.HTMLBody = "Dear All," & "<br><br>" & _
"Please find enclosed MRBR report including the list of documents automatically R-blocked due to quantity/price discrepancy." & "<br>" & _
"Attached you will also find the latest email communication regarding some holds investigation." & "<br><br>" & _
"In Details tab you can find the items referring to respective user (column Y)." & "<br><br>" & _
"Could you please let me know by " & DeadlineDate & " which of them can be released from holds?" & "<br><br>" & _
OutMail.HTMLBody
.Attachments.Add FinalReportPath
End With
Set OutMail = Nothing
Set OutApp = Nothing
End Sub