



**SedonaOffice Users Conference**  
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## **Advanced Excel Reporting**

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**PERENNIAL SOFTWARE**

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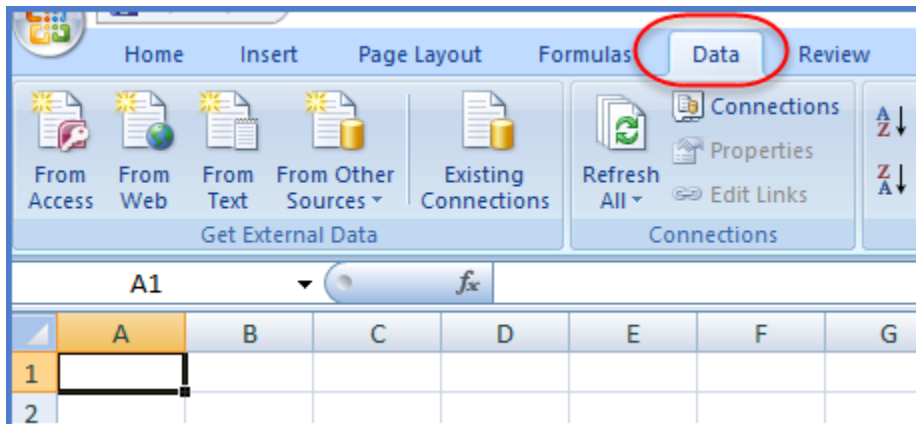
## Overview

In this session, we will learn how to use Microsoft Excel and Microsoft Query to extract data from a SedonaOffice database into Excel, add formulas and analyze the data with pivot charts.

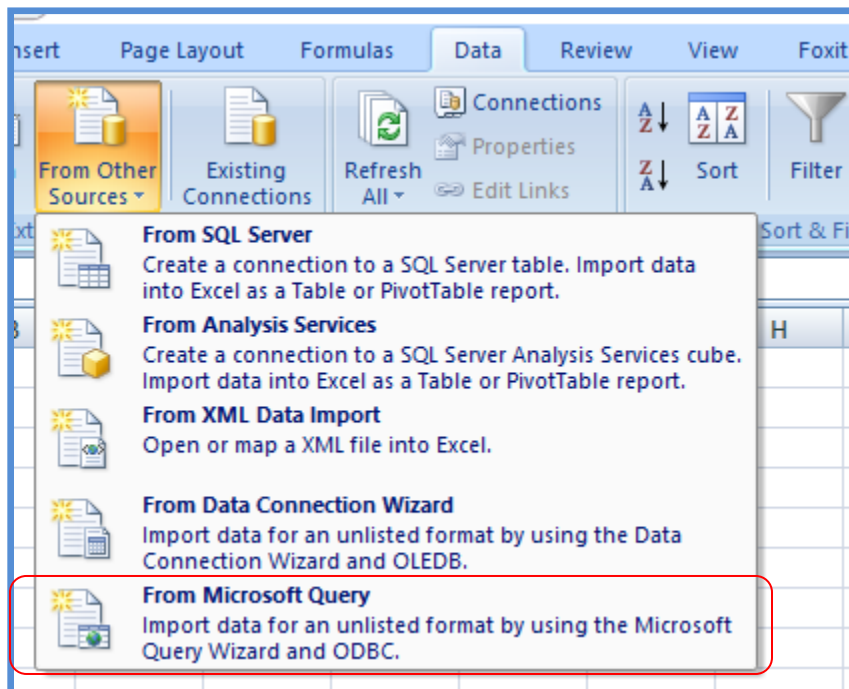
## Making the Connection to the Database

In order for Excel and Query to access the data in your SQL server, we need to make a Data Connection object. This sounds more complicated than it is, and the object you create can be used for other Excel Queries.

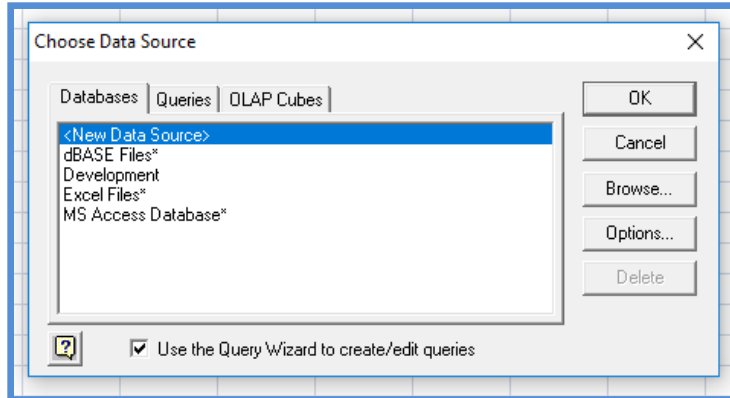
Open Excel and select the “Data” tab.



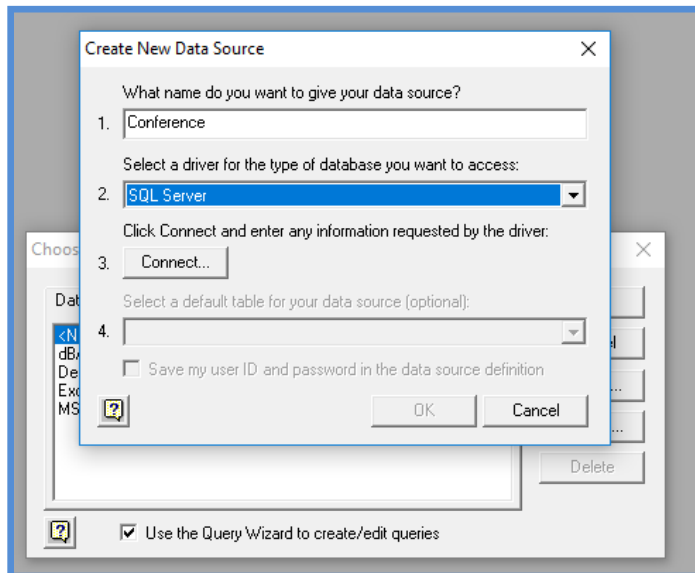
On the “Data” tab choose “From Other Sources”. Then select “From Microsoft Query”.



The “Choose Data Source” form will be displayed. You can see I have one connection already built to access my Development database, and I could reuse that just as you will be able to reuse the one you create. For the purposes of this session, we will build a new one by selecting <New Data Source>.



- In box number 1, type in a name for the connection.
- In box number 2, select SQL Server from the drop down list [from near the bottom of the list] of drivers.
- Click the Connect button when finished.

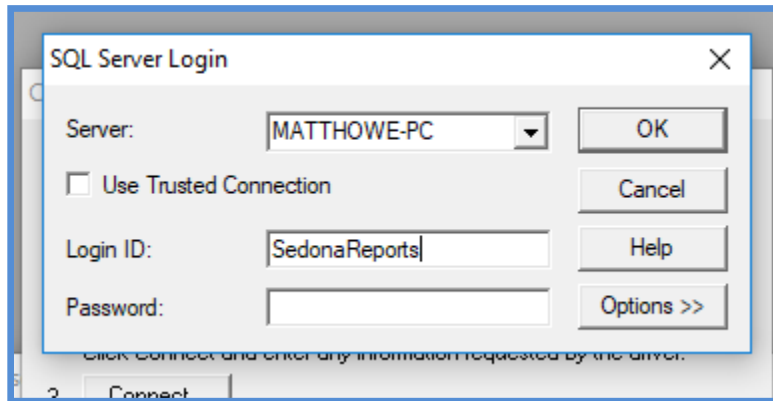


Notes

The SQL Server Login form will be displayed.

- In the Server field, select your SedonaOffice SQL server from the drop-down list
- Uncheck the “Use Trusted Connection” checkbox
- In the Login ID text box, type SedonaReports
- Leave the password field blank

When finished, click the OK button.

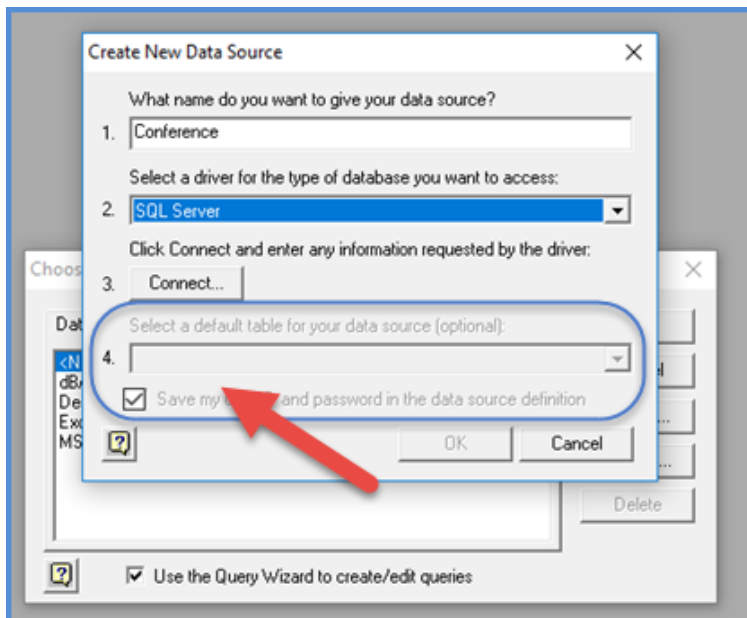
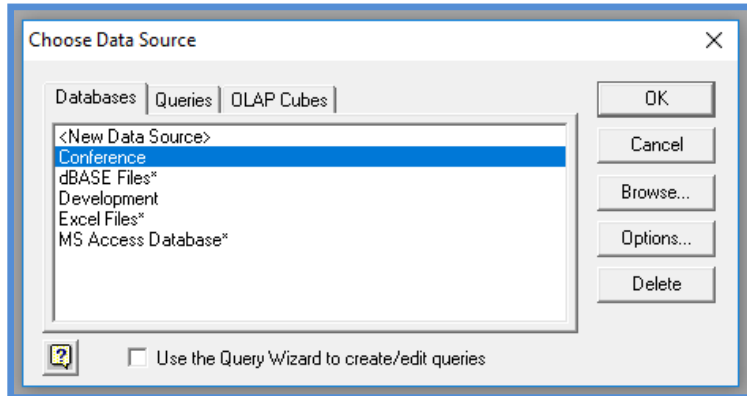


## Notes

If you do not receive an error and are returned to the “Create New Data Source” form, leave the #4 dropdown blank and check “Save my ID and password” checkbox. Click the OK button; you will be returned to the “Chose Data Source” form. Choose the Source you just created. Uncheck “Use the Query Wizard” checkbox and click “OK”.

Set the database to the SedonaOffice database you wish to use.

Note: This is the database name in the SQL Server, not the company name from the log in screen. Usually they will be similar.



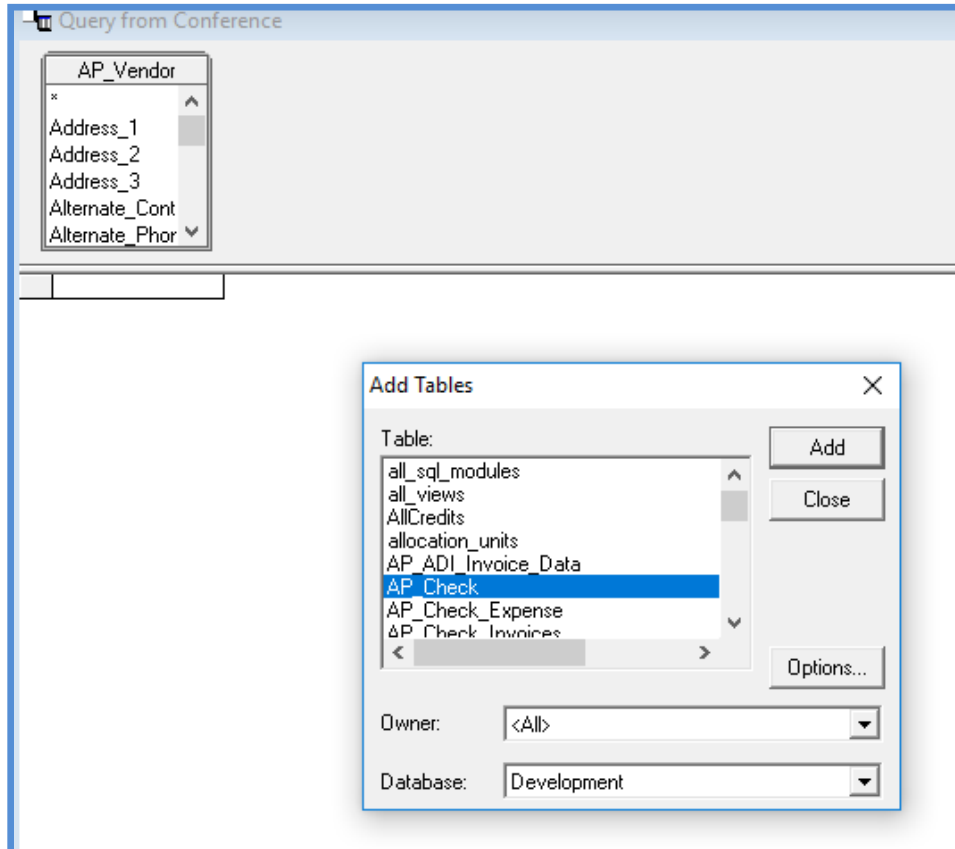
Notes



## Designing the Query

Start selecting the tables you will want to use. Each table you choose will be opened in the top area of the window. Here you can see I have selected AP\_Vendor and am about to choose AP\_Check.

We will be using the AP\_Vendor and AP\_Check table in our example. When you are finished selecting tables, click the “Close” button on the “Add Tables” form.



Notes

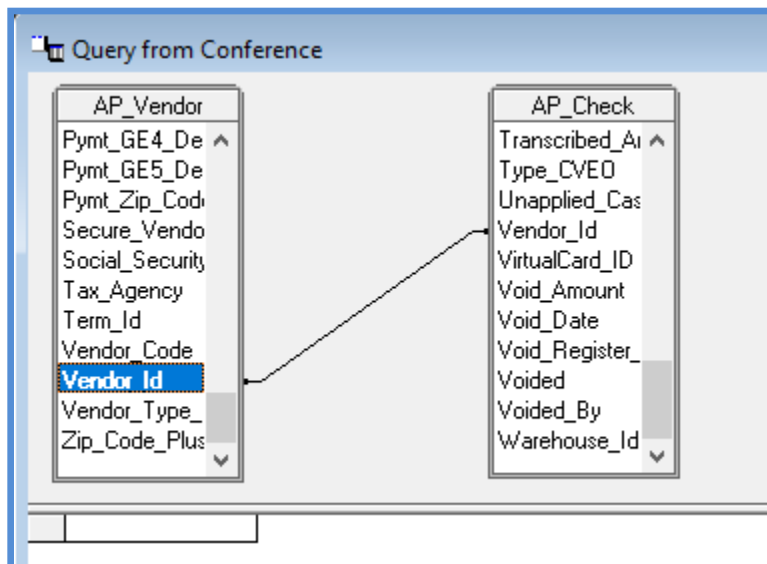
## Joining Tables

Before we take the next step, we need to understand tables, fields and joins.

Tables are made up of fields. Each row or record in a table will have exactly the same fields as all of the others in that table. The data is stored in these fields. Some fields are pointers. They end in \_ID (All of the pointer or linking fields end in \_ID, but not every field ending in \_ID is a pointer or linking field). A join uses these pointers to tell the SQL Server how the various tables relate to each other. Let's build a join to make this clearer.

Scroll both tables until you can see the "Vendor\_ID" in both tables. Notice the one on the left "AP\_Vendor" table is bold. This is because it is the main pointer for that table. Click on the Vendor\_Id field in that table and drag your mouse to the "AP\_Check" table's Vendor\_ID. This will create a join between the tables signified by a line.

Microsoft Query attempts to automatically link the tables for you, so there may already be a line there. You can use that one, but if there is a line connection to the wrong fields, you need to click on it and it will turn bold. Then you need to press the delete key to remove the link.



Notes

## Adding Fields

Now we can select our fields. Double click on the field you want or you can drag it down to the bottom. Add these fields, in the order listed below.

From AP\_Vendor

- Vendor\_Code
- Company\_Name

From AP\_Checks

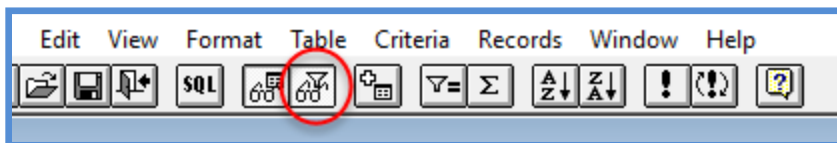
- Check\_Number
- Check\_Date
- Amount
- Void\_Amount
- Void\_Date

If you place a field in the wrong order, just click the name at the top of the column and then click and drag it to the proper position. When finished it should look like the example below.

## Adding Criteria

| Vendor Code            | Company Name             | Check Number | Cleared Date           | Amount   | Void Amount | Void Date              |
|------------------------|--------------------------|--------------|------------------------|----------|-------------|------------------------|
| N/A                    | N/A                      | 100          | 1899-12-30 00:00:00.00 | 79.6000  | .0000       | 1899-12-30 00:00:00.00 |
| Comcast                | Comcast Cellular One     | 6218         | 2001-01-02 00:00:00.00 | 60.2600  | .0000       | 1899-12-30 00:00:00.00 |
| Deeken's Cleaning Serv | Deeken's Cleaning Serv   | 6257         | 2001-01-11 00:00:00.00 | 240.0000 | .0000       | 1899-12-30 00:00:00.00 |
| First Union            | First Union National Ban | 6222         | 2001-01-02 00:00:00.00 | 262.2000 | .0000       | 1899-12-30 00:00:00.00 |
| Verizon                | Verizon                  | 6239         | 2001-01-05 00:00:00.00 | 949.5900 | .0000       | 1899-12-30 00:00:00.00 |
| Hoboken Lock & Supply  | Hoboken Lock & Supply    | 6242         | 2001-01-05 00:00:00.00 | 642.9000 | .0000       | 1899-12-30 00:00:00.00 |

As you can see, Microsoft Query is already showing you a preview of the data retrieved. But there is way too much data. Query is bringing back data for every check ever written, so we need to add some filters to refine the list of data. Click on the filter button from the upper toolbar.



Notes

A new section will appear between the tables/fields area and the data results; this is the Criteria area. From the AP\_Vendor table, drag the Vendor\_Code field down and place it in the top of the first criteria column. Beneath the Vendor Code column, in the "Value" row type <>'N/A'. <> means does not equal and because it is a text field we need to add single quotes. This removes the "N/A" record.

Then we set a date range for the Check\_Date using >= and <= (greater than or equal to and less than or equal to).

| Criteria Field: | Vendor_Code | Check_Date     | Check_Date     |
|-----------------|-------------|----------------|----------------|
| Value:          | <>'N/A'     | >='06/01/2017' | <='06/30/2017' |
| or:             |             |                |                |

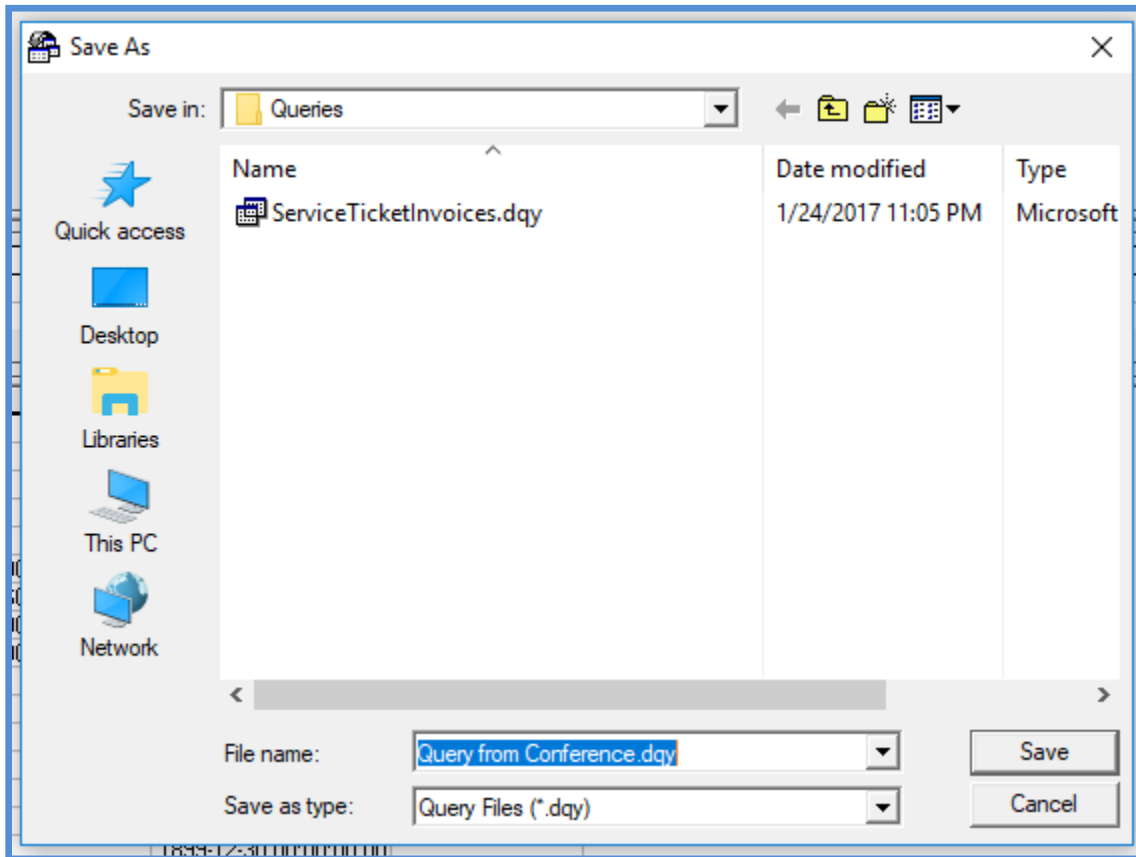
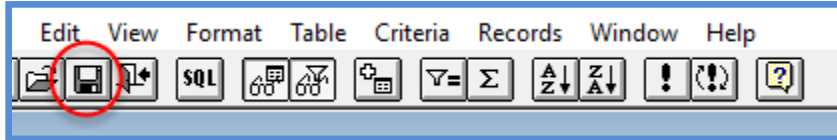
  

|   | Vendor_Code            | Company_Name           | Check_Number | Cleared_Date                  |
|---|------------------------|------------------------|--------------|-------------------------------|
| ▶ | Bosch Security Systems | Bosch Security Systems | 24295        | 1899-12-30 00:00:00.00 921.14 |
|   | Bosch Security Systems | Bosch Security Systems | 24256        | 1899-12-30 00:00:00.00 141.53 |
|   | Bosch Security Systems | Bosch Security Systems | 24313        | 1899-12-30 00:00:00.00 381.44 |

Notes

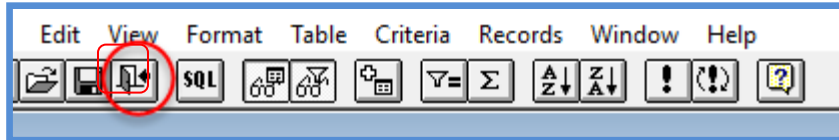
We are now ready to save our query and exit. Click the Save button on the toolbar.

This saves the query but not the spreadsheet. Queries are saved separate because they are also reusable.



## Returning Data to the Spreadsheet

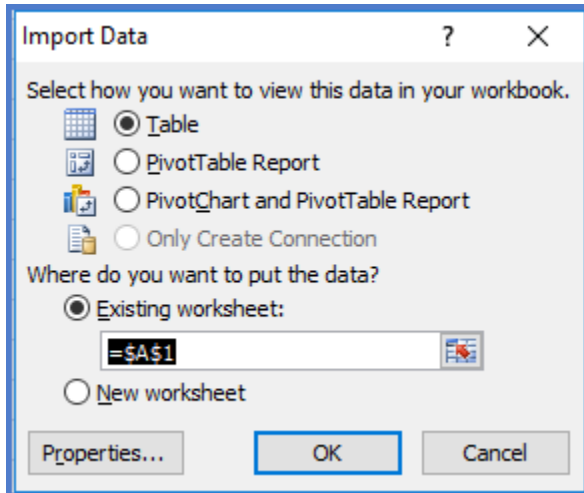
To exit, we do not just close the window. We want to close the window *and* return our data to the spreadsheet. Click the “Return Data” button on the toolbar.



Notes

Once back in Excel we see a new form with several options. First, we can return a table, a pivot table or a table *and* a pivot table. We are going to use the default option, which is Table. We will build our pivot table manually later.

Then we have the choice of importing the data into the existing worksheet or a new worksheet. If you select existing worksheet, which we are going to use, it wants to know where to place the data within the worksheet. Again, we will use the default, which is cell A1. Click the OK button.



Depending on how much data is being retrieved, it may take a few seconds or up to a minute to return the data. Below are the results.

|    | A                      | B                      | C            | D             | E       | F           | G              |
|----|------------------------|------------------------|--------------|---------------|---------|-------------|----------------|
| 1  | Vendor_Code            | Company Name           | Check Number | Cleared Date  | Amount  | Void Amount | Void Date      |
| 2  | Bosch Security Systems | Bosch Security Systems | 24295        | 1/0/1900 0:00 | 921.14  | 0           | 1/0/1900 0:00  |
| 3  | Bosch Security Systems | Bosch Security Systems | 24256        | 1/0/1900 0:00 | 141.53  | 0           | 1/0/1900 0:00  |
| 4  | Bosch Security Systems | Bosch Security Systems | 24313        | 1/0/1900 0:00 | 381.44  | 0           | 1/0/1900 0:00  |
| 5  | Bosch Security Systems | Bosch Security Systems | 24282        | 1/0/1900 0:00 | 486.05  | 0           | 1/0/1900 0:00  |
| 6  | Bosch Security Systems | Bosch Security Systems | 24239        | 1/0/1900 0:00 | 156.91  | 0           | 1/0/1900 0:00  |
| 7  | ADI                    | ADI                    | 62017        | 1/0/1900 0:00 | 0       | -9153.28    | 6/20/2017 0:00 |
| 8  | ADI                    | ADI                    | 62917        | 1/0/1900 0:00 | 0       | -11473.66   | 6/29/2017 0:00 |
| 9  | ADI                    | ADI                    | 60817        | 1/0/1900 0:00 | 0       | -9862.32    | 6/8/2017 0:00  |
| 10 | ADI                    | ADI                    | 60817        | 1/0/1900 0:00 | 0       | -5202.04    | 6/8/2017 0:00  |
| 11 | ALLY (GMAC)            | ALLY                   | 24268        | 1/0/1900 0:00 | 1727.19 | 0           | 1/0/1900 0:00  |
| 12 | ALLY (GMAC)            | ALLY                   | 24254        | 1/0/1900 0:00 | 535.75  | 0           | 1/0/1900 0:00  |
| 13 | ALLY (GMAC)            | ALLY                   | 24311        | 1/0/1900 0:00 | 535.75  | 0           | 1/0/1900 0:00  |
| 14 | ALLY (GMAC)            | ALLY                   | 24294        | 1/0/1900 0:00 | 1327.18 | 0           | 1/0/1900 0:00  |
| 15 | Cooper Electric Supply | Cooper Electric Supply | 24314        | 1/0/1900 0:00 | 245.76  | 0           | 1/0/1900 0:00  |
| 16 | Cooper Electric Supply | Cooper Electric Supply | 24240        | 1/0/1900 0:00 | 327.44  | 0           | 1/0/1900 0:00  |
| 17 | Cooper Electric Supply | Cooper Electric Supply | 24290        | 1/0/1900 0:00 | 111.73  | 0           | 1/0/1900 0:00  |

Notes

## Adding Formulas to the Dataset

As this worksheet is not really about checks but about how much we spent, we will create a formula to account for voided checks.

In a new column give it a Header of "Amount\_Paid" and then in the first cell below the header enter the following:

```
=Table_Vendor_Query_from_Conference[[#This Row],[Amount]]-
Table_Vendor_Query_from_Conference[[#This Row],[Void_Amount]]
```

Create another column called "Row\_Header" and add this formula below it.

```
=CONCATENATE(Table_Vendor_Query_from_Conference[[#This
Row],[Vendor_Code]], " - ",Table_Vendor_Query_from_Conference[[#This
Row],[Company_Name]])
```

Either by typing or using the formula wizard. And we have this:

| F         | G              | H           | I   | J |
|-----------|----------------|-------------|---|---|
| Amount    | Void Date      | Amount Paid | Row Header                                      |   |
| 0         | 1/0/1900 0:00  | 921.14      | Bosch Security Systems - Bosch Security Systems |   |
| 0         | 1/0/1900 0:00  | 141.53      | erence[[#This Row],[Company_Name]])             |   |
| 0         | 1/0/1900 0:00  | 381.44      | Bosch Security Systems - Bosch Security Systems |   |
| 0         | 1/0/1900 0:00  | 486.05      | Bosch Security Systems - Bosch Security Systems |   |
| 0         | 1/0/1900 0:00  | 156.91      | Bosch Security Systems - Bosch Security Systems |   |
| -9153.28  | 6/20/2017 0:00 | 9153.28     | ADI - ADI                                       |   |
| -11473.66 | 6/29/2017 0:00 | 11473.66    | ADI - ADI                                       |   |
| -9862.32  | 6/8/2017 0:00  | 9862.32     | ADI - ADI                                       |   |
| -5202.04  | 6/8/2017 0:00  | 5202.04     | ADI - ADI                                       |   |
| 0         | 1/0/1900 0:00  | 1727.19     | ALLY (GMAC) - ALLY                              |   |
| 0         | 1/0/1900 0:00  | 525.75      | ALLY (GMAC) - ALLY                              |   |

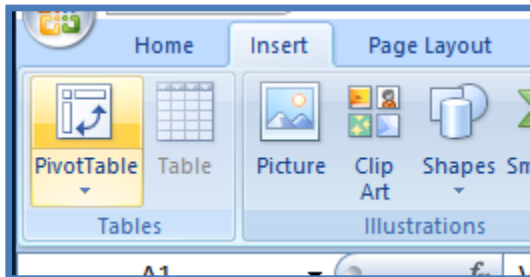
When finished, save the worksheet.

Notes

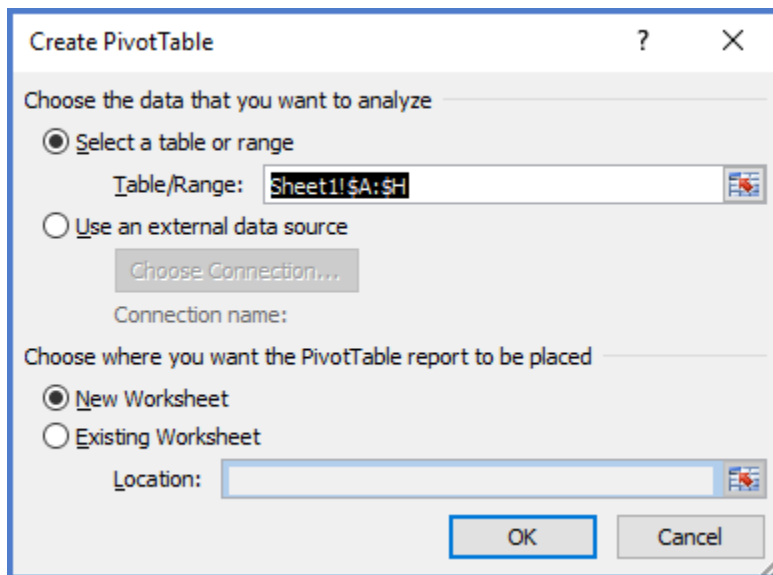


## Creating a Pivot Table

We are now ready to create our pivot table. Select all of the columns, then click on the “Insert” tab and select “PivotTable”.



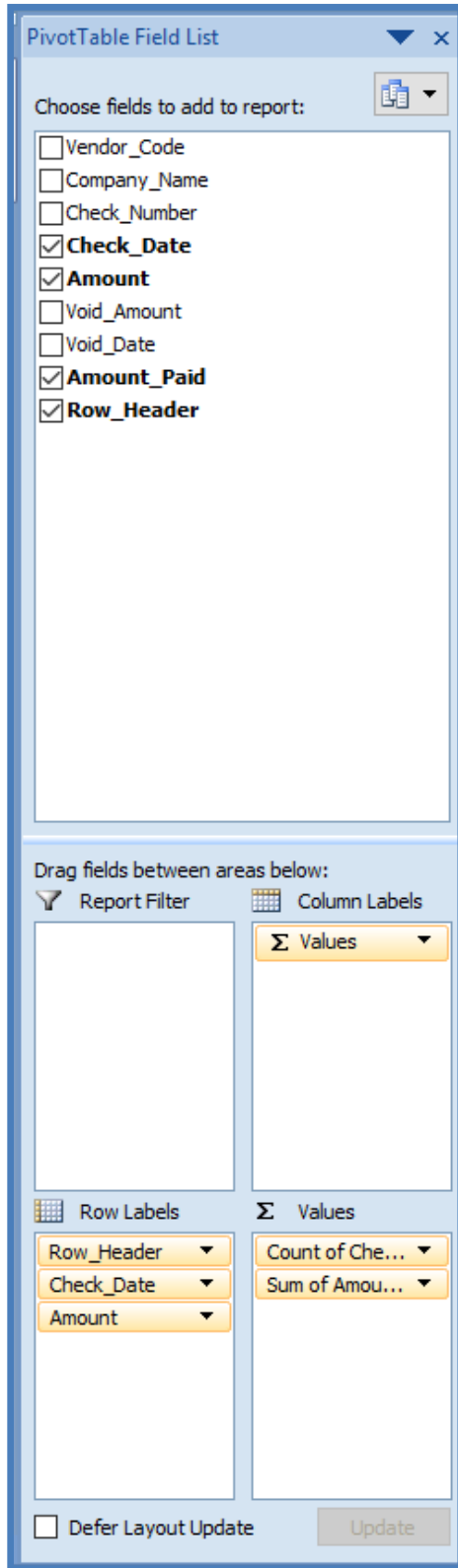
The pivot table form will be displayed. Leave everything at the defaults, and then click the “OK” button.



This will display the blank pivot table and the pivot table designer.

Notes

## Adding fields to the Pivot Table



Drag the "Row\_Header" to the "Row Labels" box

Drag the "Check\_Date" to the "Row Labels" box.

Drag the "Amount" to the "Row Labels" box.

Drag the "Check\_Date" to the "Row Labels" box.

Drag the "Amount\_Paid" to the "Values" Box"

Make sure "Check\_Date" is set to "count" and "Amount" is set to "sum".

Notes

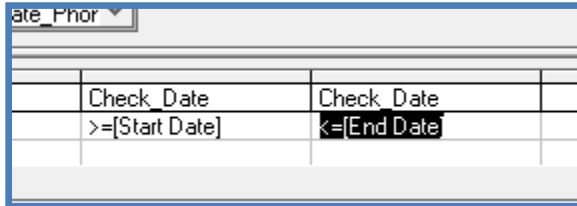
Close the "Pivot Table Fields" box. Our final pivot table should look like this:

| Row Labels   | Count of Check_Date | Sum of Amount_Paid |
|--|---------------------|--------------------|
| <b>ABF Security Systems - American Burglar &amp; Fire Security Systems</b>                                   | <b>2</b>            | <b>1305</b>        |
| 6/16/2017 0:00   | 1                   | 225                |
| 225  | 1                   | 225                |
| 6/23/2017 0:00   | 1                   | 1080               |
| 1080   | 1                   | 1080               |
| <b>ADI - ADI</b>   | <b>4</b>            | <b>35691.3</b>     |
| 6/8/2017 0:00  | 2                   | 15064.36           |
| 0  | 2                   | 15064.36           |
| 6/20/2017 0:00   | 1                   | 9153.28            |
| 0  | 1                   | 9153.28            |
| 6/29/2017 0:00   | 1                   | 11473.66           |
| 0  | 1                   | 11473.66           |
| <b>ADI CREDIT CARD - ADI Americas</b>  | <b>1</b>            | <b>2500</b>        |
| 6/16/2017 0:00   | 1                   | 2500               |
| 2500   | 1                   | 2500               |
| <b>Adrian M Frazier - Adrian M Frazier</b>   | <b>3</b>            | <b>5078.98</b>     |
| 6/2/2017 0:00  | 1                   | 1549.8             |
| 1549.8   | 1                   | 1549.8             |
| 6/16/2017 0:00   | 1                   | 1751.2             |
| 1751.2   | 1                   | 1751.2             |
| 6/30/2017 0:00   | 1                   | 1777.98            |
| 1777.98  | 1                   | 1777.98            |
| <b>Advanced Tire &amp; Auto - Advanced Tire &amp; Auto Center Inc</b>  | <b>1</b>            | <b>59.37</b>       |
| 6/2/2017 0:00  | 1                   | 59.37              |
| 59.37  | 1                   | 59.37              |
| <b>Affiliated Central - Affiliated Central</b>   | <b>3</b>            | <b>16078.04</b>    |
| 6/5/2017 0:00  | 1                   | 14815.06           |
| 14815.06   | 1                   | 14815.06           |
| 6/9/2017 0:00  | 1                   | 435.23             |
| 435.23   | 1                   | 435.23             |
| 6/30/2017 0:00   | 1                   | 827.75             |
| 827.75   | 1                   | 827.75             |
| <b>Affiliated Dhuicrione &amp; Employers Health Plan - Affiliated Dhuicrione &amp; Employers Health Plan</b> | <b>1</b>            | <b>7004.80</b>     |

Notes

## Refinements

Of course the first improvement would be to format the table and pivot table columns. You can also have Excel ask you for the dates every time you refresh the data. Back in the query where we created criteria, replace the dates with labels in square brackets ([]).



| ate_Phor |                |              |
|----------|----------------|--------------|
|          | Check Date     | Check Date   |
|          | >=[Start Date] | <=[End Date] |

You can also add the full check amount and void information to the values box for additional detail.

### Notes