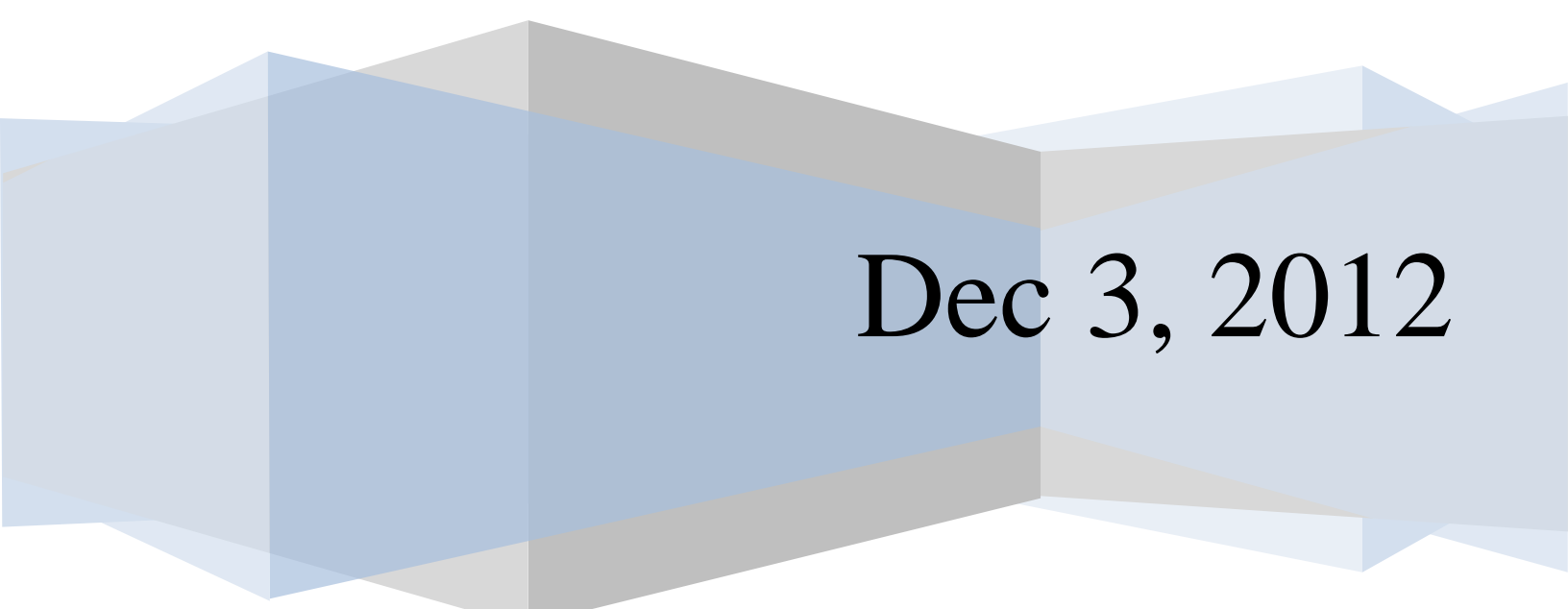# Zions Bancorporation

Pilot Reports

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Executive summary

I work at Zions Bancorporation. My team created a system that will help our tellers cross-sell better. Since this is a new system and still only a pilot program, we do not have the full functionality of full reports. The people in management above the users of the pilot program want to see results to know if the implementation of the system is worth it. My supervisor was running a query daily and uploading the results to excel then manipulating the data and making charts out of data and emailing it to different affiliate banks. I needed to create a macro that would get the data and display it in chart and also save an archive copy of each report in a folder and email the report out the a list of people.

Implementation documentation

So I wanted to create a workbook that looked the same as the one that my supervisor was sending out so I got her workbooks for the past week and saw how each day changed from the next. The first problem I knew I had to deal with was her SQL query had a date in it and it only pulled data from the past 7 days. I needed a way to update the date daily which I will talk about later in my difficulties section. I ended up using a SQL function that update the date and that is why I used a connection file and not an ODBC connection in my VBA. Here is what I did to create the solution:

- Created a excel workbook that would connect to the database with the same query that my supervisor used.
- Then use pivot tables to manipulate the data into the format I wanted it.
- Created charts attached to those pivot tables so that it would automatically update when the macro called to refresh all
- Then the macro will save a copy of the file with the date attached to the end (ex. Filename-20121203.xlm) in the same folder of the workbook.
- Then it will create an outlook object and email the file out to the people of the affiliate branch.
- Then it will close the workbook.
- I set it up so that when the workbook opened it would run the macro

- Then I put the excel file in windows task scheduler so it opened the file when I wanted it to.

You just need to open up the file and it will run the report, format it the correct way, save a copy of the file, email the results to a list of people and then it will close on its own. This will not work for you because I have deleted the connection but on my machine it works wonders.

I did this for three different affiliate banks. Since some of the banks might want different reports we decided to create three different workbooks one for each report. They all do basically the same thing but the SQL and the charts might be a little different. Since we just added the other workbooks to the task scheduler it wasn't that big of deal handling three different workbooks.

Learning and Difficulties

At first I created the ODBC connection in my VBA and I couldn't get my SQL to give me the right data it wouldn't let me use the functions in SQL to have the code keep updating the date of my data since I only wanted the past 7 days of data. It worked if I hard coded it but that wouldn't help me when it was fully automated. I tried a couple different syntax things and got frustrated with it after a while I ended up putting the SQL in the connection itself. After that the SQL functions worked fine.

The email object I was new to and I had trouble attaching the right file since I needed to send the new copy I had just saved and not the one open. Also I had trouble saving a copy of the file because I have some sheets that I did not want to sent to the end recipients so I was able to look up how to just copy certain sheets over. My hardest thing was that I wanted the macro to run automatically. I tried many different built in functions but most of them I had to have the excel open to use. So I put a call to my method in the workbook module which makes it so it calls the macro upon opening the file. So I just opened the file and it ran

everything. Later I put the excel file in my windows tasks so that my machine opened the file at 4 A.M. automatically.

Assistance

I did create the macro and everything by myself and it worked just fine. Then I turned it over to my mentor and he cleaned it up a lot. He divided it into many different subs instead of one long one. Here are some of the calls to the other subs:

```
' Archive workbook to file

   copyWorkbook (strReportFilename)


   ' E-mail file to recipients

   sendEmail (strReportFilename)
```

He capitalized all the CONSTANTS and some other things that made the code much easier to read. That is the extent of the help I received.