Financial Institutions Commission

Executive Summary

Student Consultant, Mehak Sikka
Development Partner, G. Semdiu Decherong

I. About the Organization

The Financial Institutions Commission (FIC) is the organization designated for bank regulation and supervision within the Republic of Palau. The mission statement of FIC is

> *To establish and maintain a financial regulatory and supervisory system for the Republic of Palau, consistent with international standards, which promotes a stable banking and financial sector that facilitates economic growth and development.*

The FIC uses Excel spreadsheets and database and is currently considering expanding its use of technology to have a more flexible database and to be able to gain more efficiency in validating and analyzing the data received from the banks operating in Palau.

II. Goal 1: Suggest a platform for the banks to be able to share the quarterly files

The Banks have been sharing data quarterly with FIC via email or a USB drive. There have been discussions between the bank partner and the student consultant around having a common platform; for instance, a web application for the banks to be able to share data with FIC. After the discussions, it was decided that the banks should continue using email or switch to email if using USB as the web application wouldn't be as sustainable and would require continuous monitoring and maintenance.

III. Goal 2: To develop a more flexible database than Excel

FIC has been using Excel as their database; however, after the discussion with the development partner, requirement for a more flexible database was raised to be able to segregate data according to the different worksheets (balance sheets, loans, etc.) and perform analysis on the same. Because of limitations of excel in terms of size and speed, a MySQL database was developed which has the data for FIC from 2012-2019 segregated according to the different worksheets received from the banks. The MySQL database stores data in form of different tables based on year, quarter, bank and

type of balances (balance sheets, loans, remittances, etc.), for instance, table "2012_q4_apcb form 1 bal sheet" will contain balance sheet data for APCB for last quarter of 2012 whereas table "2012_q4_boh form 2-consolidarted p&l" will have profit and loss balances for Bank of Hawaii for last quarter of 2012.

The new/incoming data can be imported in the database using an executable file and if any changes are made, the modified file can be replaced in the database by running the executable file again. Therefore, the new/backup database not only stores segregated FIC data over the years but also, is extremely user-friendly in terms of exporting the data to excel and perform various analyses.

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Mehak is a graduate student in Information Systems Management at Carnegie Mellon University.

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Final Consulting Report
Student Consultant, Mehak Sikka
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I. About the Organization

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> *To establish and maintain a financial regulatory and supervisory system for the Republic of Palau, consistent with international standards, which promotes a stable banking and financial sector that facilitates economic growth and development.*

The FIC provides measures to protect the interests of consumers of financial services, to prevent systemic risk to the financial system, to provide sufficient scope for market forces to operate in the field of financial services, and to protect the reputation of the Republic in the international financial community, and establishing rules for the licensing, supervision and regulation of financial institutions. At present, the FIC monitors and regulates five banks in Palau.

The FIC was established and operates as an independent agency with three employees. It is overseen by a Governing Board that functions as a policymaking body to enforce and promulgate the rules and regulations by which the Commission operates.

The FIC is currently considering expanding its use of technology to better optimize the file sharing process between the banks and FIC and improve work efficiency by automated reporting and achieve its vision of having most stable financial sector among all independent Pacific Island nations.

Facilities

The FIC's office is located on the second floor of a building above a restaurant in Koror and is shared with the Financial Intelligence Unit (FIU), a government organization that investigates and monitors all financial activity in Palau.

In the office, there is a lobby area with a desk where Tikei the Administrative Officer works. There is also a kitchen behind the lobby where both FIC and FIU people can keep some food.

Two office rooms are dedicated for Semdiu, the Executive Commissioner and Lindsay, the Bank Examiner. Both rooms have enough lighting, adequate power outlets and air conditioners, which create a good environment for daily work. The office room where Lindsay works has a large six-person desk and it serves as the conference room where all meetings happen. The local server is also located in this room.

The front door and the door at the top of the steps will keep locked during non-work time in order to maintain office security. The staffs of the FIU and the FIC are the only people with keys. Each door in the office also has its own key and only the dedicated people have these keys.

Programs

The FIC is responsible for the oversight, supervision and regulation of the Republic of Palau's financial sector. It grants the license of a bank and provides banks with relevant lessons to maintain their business. On a quarterly basis, the FIC requires banks to submit prudential financial forms using the template provided and monitors their performance by analyzing data, identifying risks and producing reports.

Currently, the FIC uses a Microsoft Excel Database to store all financial data and do data analysis. The Data Entry work, which was previously done manually, has been automated by the Student Consultant last year which also helped analysis easier and much more efficient.

Staff

The FIC is governed by a Governing Board of Commissioners. Governing Board members are appointed by the President of the Republic of Palau.
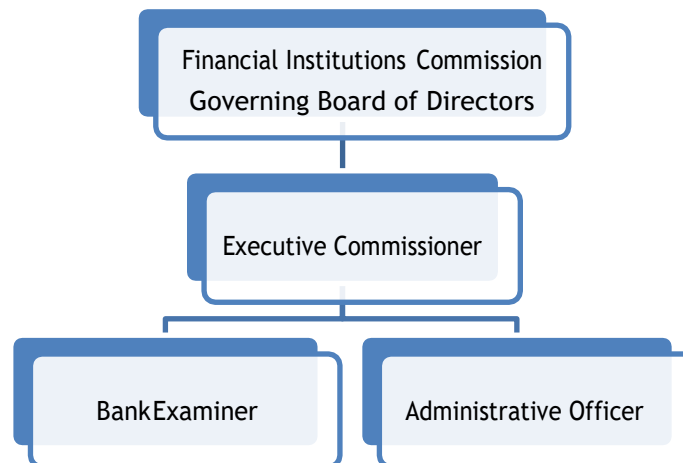
The Executive Commissioner Semdiu manages and oversees administrative tasks and operational matters and is responsible for the implementation of Governing Board policies, those that pertain to the monitoring and regulation of the Republic of Palau financial sector. He uses the desktop to send and receive emails, but he does not use Excel on a regular basis.

The Bank Examiner Lindsay conducts off-site and on-site bank examinations, which include but are not limited to quarterly and annual analyses of individual bank and sector-wide financial returns and financial sector statistics. In addition to emails, she primarily uses Excel daily to validate data in prudential return forms sent by banks, analyze data and produce reports. She is the one who will mostly work with the student consultant in this project to find the best solution to manage the financial data.

The Administrative Officer Tikei is responsible for the maintenance of records, documentation, fulfills all clerical and related functions and other day-to-day operation of the office. She also uses email to interact with external people and uses Microsoft office such as Word and Excel to do documentation.

Technology Infrastructure

Infrastructure	Description
Website	Website is developed and updated by a Guam-based team M&D Web Creation
Internet connection	Have one Wi-Fi access point which is WPA key protected and all office rooms can use it.
IT hardware (laptops and desktops)	IT hardware is grant funded. Employees are assigned their desktops in the office as well laptops that they can work at home.
Servers	In-house with restricted access. Staff needs to login to get access to the organizational files. Staff also has their personal file folders.
Backup	There are two backup hard drives that will be updated manually on a regular basis
IT support	Provided by Conrad, the IT expert in Palau
Email	Available @ropfic.org domain for all staff
Operating system	Machines are running on Windows 10
Software programs	Each desktop has the Microsoft Professional Plus 2013 Package Suite installed, i.e. Word, Excel, Access, PowerPoint, etc. It also has Internet Explorer, which is what is used by the staff to access the Internet and send emails

Technology Management

There is no technical person responsible for technology infrastructure at the FIC. Since the need for technology infrastructure support is not high for the organization, it is currently not necessary to have someone on staff responsible for technology. When the FIC needs any IT hardware or there is any technical issue, they will contact Conrad, who is the IT guy for many government organizations in Palau, but he has a very limited time dedicated to the FIC due to his busy schedule.

Tikei is responsible for backing up all organizational data into two hard drives manually on a regular basis. Other technology issues are ad-hoc basis.The FIC's website is developed by web masters at M&D Web Creation and if any updates or modification are needed, the FIC will contact these web masters to fix the problem.

Technology Planning

There is no regular plan or budget for technology infrastructure at the FIC. The demands for technology will be proposed by staff and be discussed during staff meetings. While Semdiu makes the recommendation for the use of technology, the final decisions should be confirmed by the board members. Though the present technology infrastructure will not change in a short period of time, it may require a new technology plan to accommodate more staff as the organization gets bigger in the future.

In terms of databases, at the end of 2012, the FIC started to use the master spreadsheets to store all financial data. In 2018, the data entry was automated using VBA Macros, however, FIC still uses excel spreadsheets to store the data.

Communication

All staff has emails with @ ropfic.org domain to communicate internally and externally. The organization is connected to the internet and has wireless connectivity in the facility. They also use a shared drive to share files within the organization and those internal documents are stored in the in- house server. Staff needs to login using the browser to get access to the organizational files on the server. Staff also has their personal file folders which only they have the access to.

The FIC currently has no social media presence. It has its official website which contains helpful information for banks and financial institutions. Banks can find the requirement for obtaining a license and other information about the required reports.

Banks will either send the quarterly prudential return forms to the bank examiner via email or share them using a USB drive, sometimes with a paper copy of the forms. Though the data analysis is done using Excel spreadsheets, the reports Lindsay produces will be shared with other stakeholders in pdf format or only as the paper copies. Currently, the plan is to optimize the file sharing process so that sharing, storage and analysis can be done on a single platform.

Information Management

The critical information for the FIC is the financial reports received from five banks, which will be updated in the FIC's Excel database by Lindsay using the macro, and the aggregated data and reports are produced from the Excel spreadsheets, which are used to evaluate banks' performance and are reported to stakeholders.

The present Excel database spreadsheets were provided by Pacific Financial Technical Assistance Centre and improved by Lindsay based on the FIC's needs. The FIC has been using this Excel database for more than six years and all data from then on is stored there. Quarterly, banks send the prudential return forms to the FIC, and Lindsay will update that data to the "DATABASE_Prudential Returns_with macros" file by selecting the new files. The spreadsheets will automatically compute the data in "Database_FIC Output Ratios and Indicators" and "BE Analysis_Remittances". Lindsay will then analyze those aggregated data and produce diagram reports. Sem will take outcomes from the diagrams and report

them to the board members. Those aggregated data and reports will also be submitted to the International Monetary Fund (IMF) and the Ansian Development Bank (ADB).

Business Systems

Since the FIC's all financial activities are governed by the Ministry of Finance, it has no its own business system. All accounting process including budgeting will be the government's responsibility. If the FIC has any expenditure, Tikei will call the Ministry of Finance to request for the amount. In addition, the government will provide the FIC with the monthly accounting report and the FIC can also ask for it at any time.

II. Goal 1: Suggest a platform for the banks to be able to share the quarterly files.

Motivation

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Outcomes

After the discussions, it was decided that the banks should continue using email or switch to email if using USB as the web application wouldn't be as sustainable and would require continuous monitoring and maintenance.

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Motivation

FIC has been using Excel as their database; however, after the discussion with the development partner, requirement for a more flexible database was raised to be able to segregate data according to the different worksheets (balance sheets, loans, etc.) and perform analysis on the same.

Outcomes

A MySQL database was developed which has the data for FIC from 2012-2019 segregated according to the different worksheets received from the banks. The MySQL database stores data in form of different tables based on year, quarter, bank and type of balances (balance sheets, loans, remittances, etc.), for instance, table "2012_q4_apcb form 1 bal sheet" will contain balance sheet data for APCB for last quarter of 2012 whereas table "2012_q4_boh form 2-consolidarted p&l" will have profit and loss balances for Bank of Hawaii for last quarter of 2012.

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Appendix A.

MySQL Database FIC

1. Accessing the Database:

FIC wouldn't need to access the database; the files can be imported/exported by running a script/excel.

Username: root

Password: fic2019

Schema/Database: fic

To modify the database:

"MySQL Workbench" has been installed on the FIC computer. Open MySQL Workbench to access the database using the username and password above.

2. Importing the files to the Database:

Currently, files from last quarter (Q4) of 2012 till first quarter of 2019 have been loaded to the database except the **protected files** which are:
2012 Qtr 4 New FIC Prudential Returns_BOG.xlsx
2013 Qtr 1 New FIC Prudential Returns_BOG.xlsx
2013 Qtr 2 New FIC Prudential Returns_BOG.xlsx
2013 Qtr 3 New FIC Prudential Returns_BOG.xlsx
2013 Qtr 4 New FIC Prudential Returns_BOG.xlsx

The files have been stored quarterly by sheet names, so that there is segregation of data. The same can be exported to excel for trend analyses and such over years/quarters:
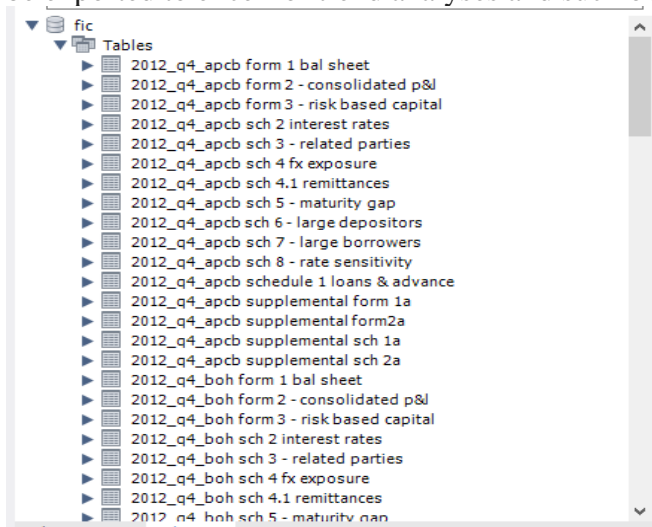
To import new files to the database and keep the database up to date, paste the document **"mysql.exe"** currently located at **"C:\Users\Motil\Desktop\Mehak Sikka"** to the same directory as the excel files and run it.

Things to be taken care of:

1. In case the files need to be overwritten (there's a correction in the files), please **don't** change the name of the files (i.e. keep it the same as norm without keyword "revised",etc.) and run "mysql.exe" again and the file will be overwritten in the database.
2. Before importing the file, please ensure that there are no extra blank sheets in the file. Also, please make sure that the files are named as per the norm i.e. "2019 Qtr 1 Prudential Returns_PIB.xlsx".

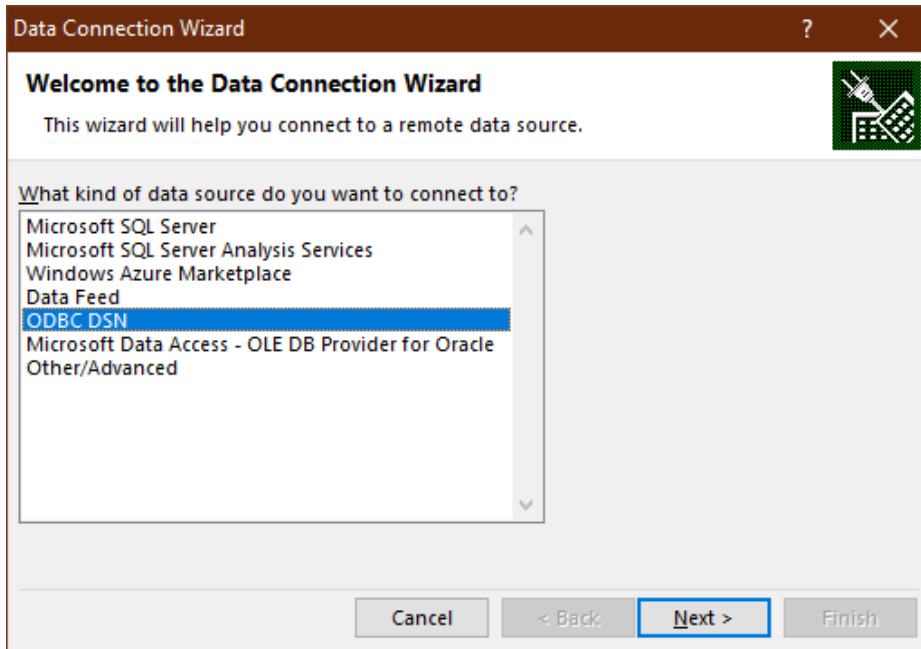## 3. Exporting the files from Database to Excel:

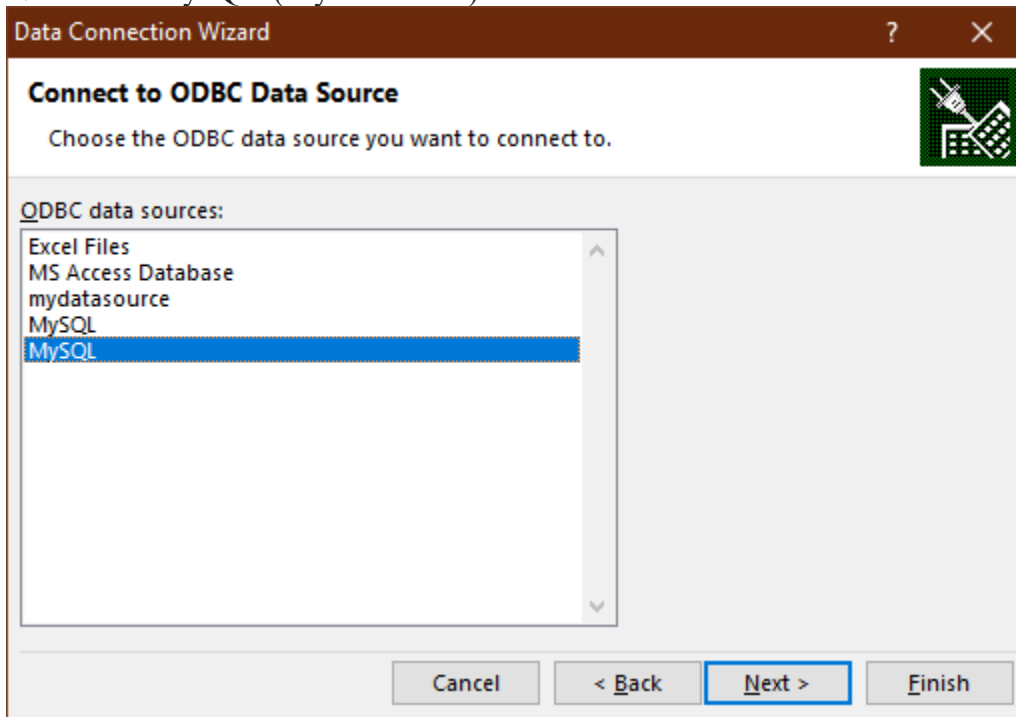1. Open Excel and navigate to the "Data" Tab and select "From Other Sources":
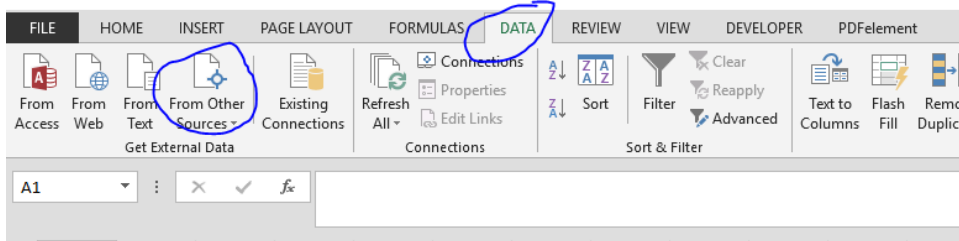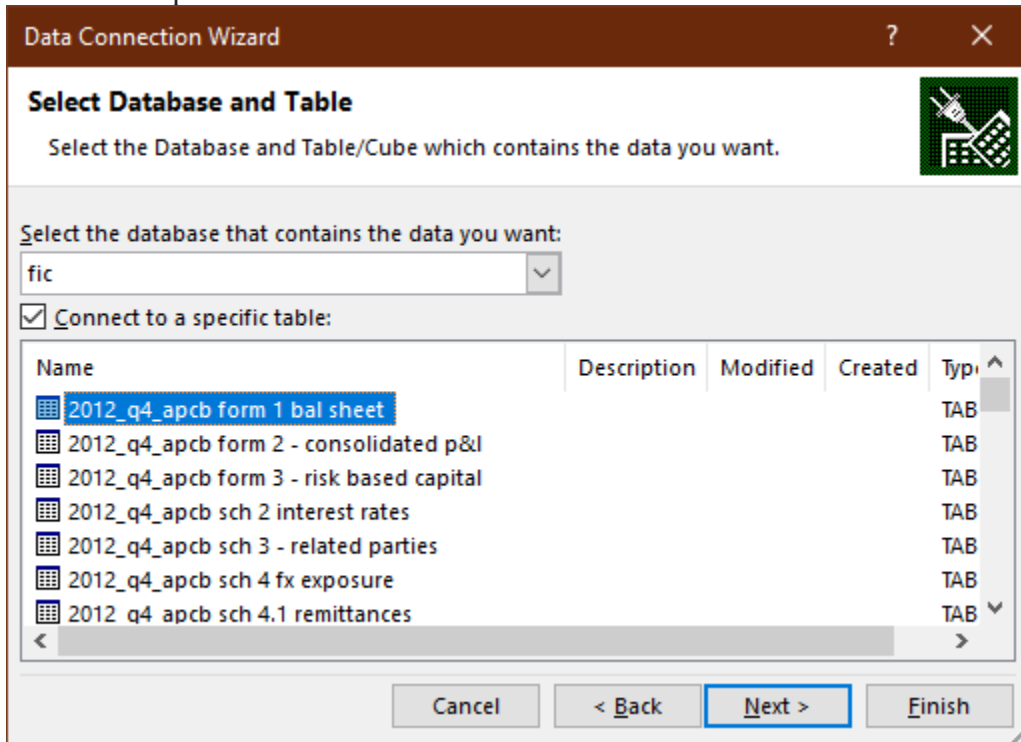

2. Select "From Data Connection Wizard"
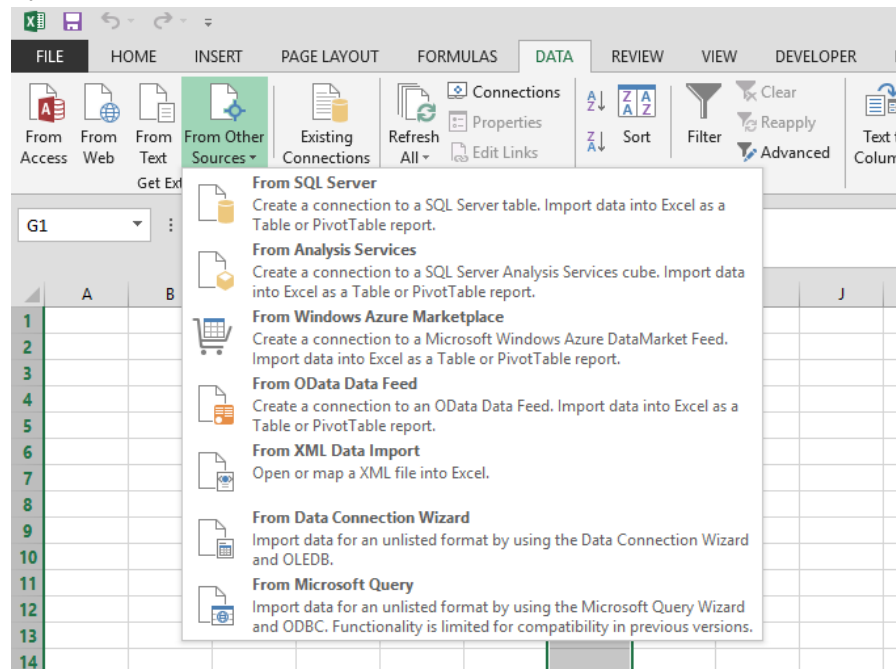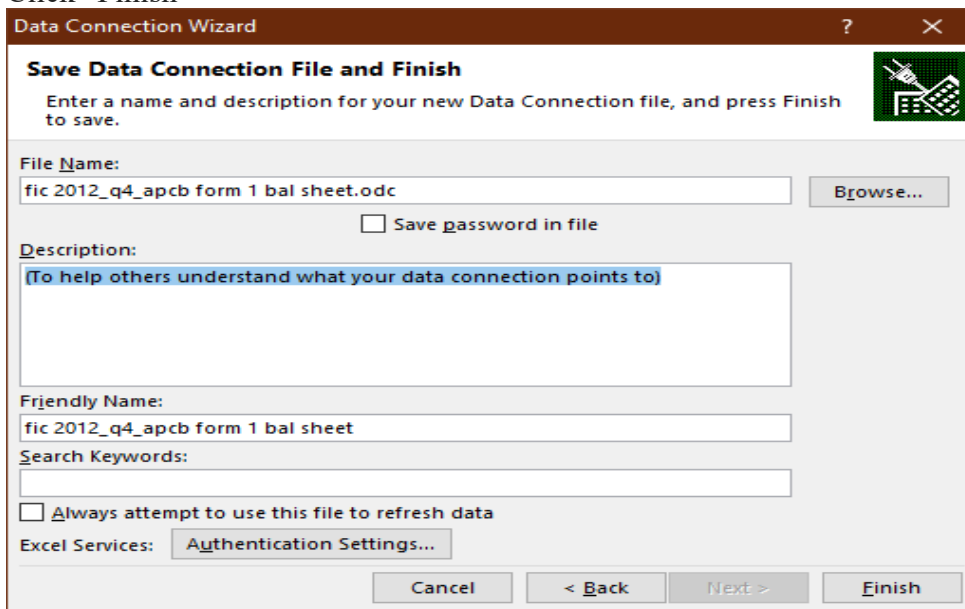
3. Choose "ODBC DSN" and click "Next".

4. Select "MySQL"(any of the two) and click "Next"

5. Select the required table and click "Next".

6. Click "Finish"

7. If there is a prompt, click "yes" and then click on "Table" or "pivotchart" according to requirement and click "OK".The data will be populated in the required worksheet and hence can be used. The worksheet can be named accordingly.