

Public Financial  
Management Database  
Users' Guide



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# CONTENTS

Executive summary .....	1
The public financial management database .....	2
How to use this guide .....	2
PART A: Navigating the PFM database – Access MIS version .....	3
Description of 'Select options' .....	3
Description of 'Preview of results' .....	3
Step 1: To select data for retrieval .....	5
Step 2: To preview revenue details (budgets and actuals) .....	5
Step 3: To preview expenditure details (budgets and actuals) .....	6
Step 4: To view a report (table) or chart .....	6
PART B: Navigating the PFM database – Excel pivot table version .....	7
Appearance of the pivot table worksheet .....	8
Step 1: To create a table from the database .....	8
Step 2: To create a report on revenue/total cash available .....	9
Step 3: To create a report on recurrent expenditure and transfers .....	11
Step 4: To create a report on capital expenditure and total expenditure .....	11
Step 5: To view a chart of the tables created .....	12
Step 6: To do any other analysis of interest .....	12

## Executive summary

### Short summary

This document outlines the public financial management database users' guide for the Microsoft Access and Excel versions.

### Full summary

The public financial management database users' guide provides step-by-step instructions for using the Access and Excel versions of the database. The guide provides information about the various analyses, reports and charts which can be generated from the public financial management databases.

## The public financial management database

A database is used for organising data systematically to allow for the quick processing and retrieval of information. The public financial management (PFM) database stores financial data for each SPARC state and enables easy retrieval for PFM analysis. The PFM database helps in the analysis and reporting of different PFM indicators, including sector expenditure and revenue performance, among others, across several years.

The PFM database has two versions which serve two different purposes:

- **The Access database.** The Access database is a management information system which is user-friendly. It can do some pre-programmed analyses and serves as a quick source for management decisions. It is easy to understand and access because it is like a 'form'
- **The Excel spreadsheet.** The Excel spreadsheet is meant for users who want to undertake more in-depth analysis or manipulate the data differently. It requires a basic knowledge of how to work with Microsoft Excel pivot tables.

### How to use this guide

This guide provides information on how to navigate the PFM database for basic analysis and data retrieval from either the Access or the Excel versions. Users should take note of the following:

- This guide will not provide users with the basic definitions of PFM terms or teach Microsoft Access or Microsoft Excel. However, the databases are user-friendly and easy to navigate. The databases are write-protected
- In the Excel version, it is possible to copy data from the Excel database and paste it into a new Excel spreadsheet, but it is not possible to change or overwrite the data
- In the Access database, it is possible to print or export to PDF, but it is not possible to copy, paste, overwrite or change the data. In other words, the Access database provides specific static information
- In the Excel database, the level of detail available is dependent on the field(s) selected. For example, the **Total Cash Available** will not show the breakdown figures unless fields like revenue category, revenue sub-category and revenue type are selected
- In the Access database, some levels of detail only become visible if a report or chart is generated. For example, internally generated revenue (IGR) details, like 'fines and fees' are only visible once a report is generated.

Other significant information is provided in the appropriate sections of the guide.

## PART A: Navigating the PFM database – Access MIS version

The first step in working with this PFM database is to enable the content of the database by clicking on the **Options** tab (which follows the text '**Security Warning** Certain content in the database has been disabled'). In the drop-down menu select '**Enable the content**' and click **OK**.

The PFM Access Management Information System (MIS) database is divided into two different parts:

- a) A part on the left-hand side of the screen which we call '**Select options**'
- b) A part on the right-hand side of the screen which we call '**Preview of results**'.

For every variable selected in the Select options, the output is shown in the Review of results.

### Description of 'Select options'

Select options is on the left of the page. It has three different menus by which to query or sort the database and two different output buttons. The menus are:

- **States.** This gives you the options of selecting a single state (e.g. Lagos), a number of states (e.g. Lagos, Niger and Yobe) or all states
- **Sectors.** This functions in same way as the **States** menu. There is the option of selecting a single sector (e.g. Agriculture), a group of sectors (e.g. Agriculture, Education and Health) or all sectors
- **Years** – e.g. from 2004 to 2014 – which functions in the same way as the **Sectors** and **States** menus. Please note that the years will be updated periodically when new data becomes available.

The output buttons are:

- **View report.** This has a print preview symbol and helps to view a detailed report (table) of the data being viewed
- **View chart.** This has a chart symbol and helps to view a chart of the data being viewed.

### Description of 'Preview of results'

Preview of results is on the right of the page. Once the required options are selected in the Select options, the associated data appear in Preview of results. These are arranged based on two major categories (**Revenue** and **Expenditure**) of the data that can be retrieved from the database. Preview of results has the following features:

- Navigation arrows to navigate among the **States, Years** and **Sectors** selected in the Select options. States and year navigation arrows are visible for **Revenue Budgets and Actuals**, while the states and sectors navigation arrows are visible for **Expenditure Budgets and Actuals**
- The statement **All figures are in millions of Naira** in brackets
- Two buttons, **Revenue Budgets and Actuals**, and **Expenditure Budgets and Actuals**
- Three buttons, **Recurrent Expenditure**, **Capital Expenditure** and **Total Expenditure** become available if the **Expenditure Budgets and Actuals** button is clicked
- A table which shows a report based on selections from the Select options and the preview navigations
- **Revenue Budgets and Actuals report.** This report shows the Revenue Budgets and Actuals by category/type. The categories are Recurrent Revenue, Capital Receipts, Total Revenue and Total Cash Available. The sub-categories are *Internally Generated Revenues, Federally Allocated Revenues, Grants, Loans* and *Others*. The table below shows the relationship between the revenue categories in Preview of results:

#### Revenue categories/Types Relationship

Total cash available	Total revenue + opening balance
Total revenue	Capital receipts + recurrent revenue
Capital receipts	Grants + loans + others
Recurrent revenue	IGR + federally allocated revenue (FAR)
Closing balance	Total cash available – (total payment + total transfers)

- Further breakdowns of *Grants, Loans, Others, IGR* and *FAR* are available once a detailed report is generated by selecting **View report** in Select options. The *Opening Balance* is under **Total Revenue** for easy retrieval
- These data are disaggregated by budget, revised and actual. Other analyses available in the report include revenue budget growth, revenue category/type as a percentage of total revenue budget, actual revenue growth, actual revenue as a percentage of total revenue budget and variance
- **Expenditure Budget and Actuals report.** This is divided into three sections – **Recurrent Expenditure, Capital Expenditure** and **Total Expenditure**. The data are also disaggregated by budget, revised and actual. Other available analyses include expenditure budget growth; expenditure category as a percentage of total expenditure budget, actual expenditure growth, actual expenditure as a percentage of total expenditure budget and variance. These could be analysed for all sectors or for selected sectors.

## Step 1: To select data for retrieval

### In **Select options**:

- Go to **States** menu
- Click on **Select States** to select single or multiple states
- Click on the downward facing arrow. The list of states will appear
- Select one state (e.g. Anambra) by checking the box beside the state. If you want to select more than one state, then click on the desired states (e.g. Enugu, Lagos and Niger). Once the box(es) is/are checked, a tick ✓ appears in the box(es)
- Click **OK**. The state(s) selected appears highlighted in black in the state box
- To select all states, click on the **All states** button
- Next, go to the **Sectors** menu. Follow the same rule as above to select single, multiple or all sectors
- The sector(s) selected appears highlighted in black, in the sector box
- To get a report not disaggregated by sector, select the **Totals** only button
- Next, click on the **Years**. Follow the same rule for state and sector to select single, multiple or all years.

## Step 2: To preview revenue details (budgets and actuals)

- The selected **state** from Step 1 above appears beside two opposing navigation arrows. If more than one state is selected, use the arrows to navigate between the states selected in the Select options to preview the report
- Select the **Revenue Budgets and Actuals** tab. The selected **year** will appear below the tab, by the two opposing navigation arrows. If more than one year is selected, use the arrows to navigate between the years selected in Select options
- The Revenue Budgets and Actuals report of interest appears below in a tabular format.

← → **Nigeria** [All Figures in Millions of Naira]

Revenue Budgets and Actuals | Expenditure Budgets and Actuals

← → **2008**

Revenue Category/Type	Budget			Actual			Variance
	Budget	Revised	Actual	Growth % of Total	Growth % of Total		
<b>Recurrent Revenue</b>	48,411	48,411	<b>56,735</b>	57.4%	74.8%	81.9%	13.1%
Internally Generated Revenues (IGR)	2,113	2,113	<b>3,394</b>	136.3%	3.7%	299.6%	40.6%
Federally Allocated Revenues	46,000	46,000	<b>51,343</b>	49.6%	71.1%	75.6%	11.6%
<b>Capital Receipts</b>	16,787	16,787	<b>20,259</b>	54.2%	75.2%	605.8%	24.4%
Grants	11,131	11,131	<b>13,793</b>	181.0%	21.8%	6152.6%	-2.8%
Loans	2,003	2,003	<b>377</b>	100.7%	3.1%	28.8%	-61.2%
Other	250	250	<b>6,149</b>	-66.5%	0.2%	159.5%	3999.3%
<b>Total Revenue</b>	64,700	64,700	<b>74,996</b>	51.0%	100.0%	127.5%	15.9%
Opening Balance	7,000	7,000	<b>540</b>	133.3%	10.8%	41.0%	-92.3%
<b>Total Cash Available</b>	71,700	71,700	<b>75,536</b>	59.1%	110.8%	120.5%	5.3%
Total Payments	71,400	71,400	<b>88,240</b>			117.7%	-18.8%
Total Transfers	0	0	<b>0</b>			0.0%	N/A

### Step 3: To preview expenditure details (budgets and actuals)

- The selected **state** appears beside two opposing navigation arrows. If more than one state is selected, use the arrows to navigate between the states selected in Select options
- Select the **Expenditure Budgets and Actuals** tab. The selected **sector(s)** will appear below the tab, by the two opposing navigation arrows. If more than one sector is selected, use the arrows to navigate between the sectors selected in Select options
- Select the **Recurrent Expenditure**, **Capital Expenditure** or the **Total Expenditure** tab to disaggregate the expenditure budgets and actuals by recurrent, capital or total expenditure

All Sectors								
Year	Budget		Actual	Budget		Actual		Variance
	Year	Revised		Growth	% of Total	Growth	% of Total	
2009	25,721	25,721	27,137	19.0%	100.0%	19.1%	100.0%	5.5%
2010	29,035	29,035	31,882	12.9%	100.0%	12.0%	100.0%	9.8%
2011	39,984	39,984	43,586	27.7%	100.0%	35.7%	100.0%	9.0%

Selected Sector				Budget		Actual		Variance
Year	Budget	Revised	Actual	Growth	% of Total	Growth	% of Total	
2009	12,129	12,129	11,794	48.7%	42.2%	26.7%	48.7%	-2.8%
2010	12,550	12,550	13,787	3.5%	42.2%	15.9%	42.2%	9.9%

- The expenditure budgets and actuals report of interest appears below in a tabular format
- If a single, multiple or all sectors option is selected, the report generated shows two tables. The first table shows the summation of the data for all the sectors selected and the second shows the data for the sector in the current view (that is, the data for the sector appearing beside the arrows). If the **Totals Only** option is selected, then the summation table for all the sectors in the state appears and there are tables for individual sectors.

### Step 4: To view a report (table) or chart

- Once the data of interest have been selected following Steps 1, 2 or 3 above, this function enables you to view the data as a chart or table
- To **view a report of the data being viewed** in the preview table, click on the print preview icon on Select options. The table generated has more details than the table currently being previewed
- Click on the chart icon to **view a chart of the data being viewed** in order to see a chart. All necessary charts from the table currently being previewed are created



- Once you click on either of these links, the database automatically directs you to the print preview page. Print the table(s) or chart(s). The tables and charts can also be converted to PDF, but cannot be copied or exported.

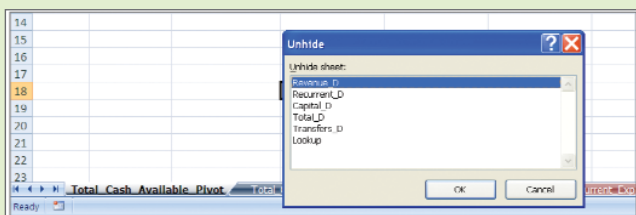
## PART B: Navigating the PFM database – Excel pivot table version

The description of the Excel version of the PFM database will focus on worksheet tabs and the description of a typical Excel pivot spreadsheet. This description will not focus on any of the Excel menus.

- Worksheets.** The PFM Excel database is a spreadsheet with different worksheets, rather than forms. Each worksheet deals with the different aspects of Revenue and Expenditure Budgets and Actuals. For each Revenue or Expenditure data, there is a pivot table and chart. Each table can be manipulated for different analysis. Each pivot table and its accompanying chart are colour coded. The worksheets with pivot tables are labelled '**XXX pivot**' while the worksheets with a chart read '**XXX pivot chart**'. There are 16 worksheets in the database, which necessitates the need to hide some of the tabs. The 16<sup>th</sup> worksheet tab is titled 'Lookup' and it provides a reference for all of the variables in the spreadsheet.

To unhide the worksheet tabs:

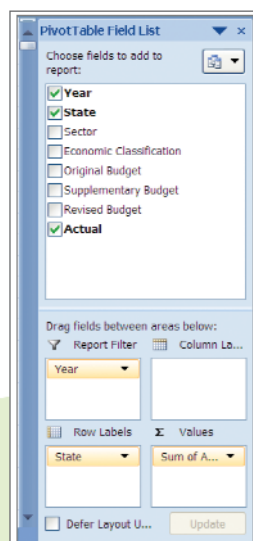
- Right-click** on the name tag of any of the current worksheets and select **Unhide**. It will bring out a list of hidden worksheets, which will be Revenue, Recurrent, Capital, Total, Transfers and Lookup
- Click on the desired **option**; click **OK** to unhide
- Repeat the steps to unhide all worksheets.



## Appearance of the pivot table worksheet

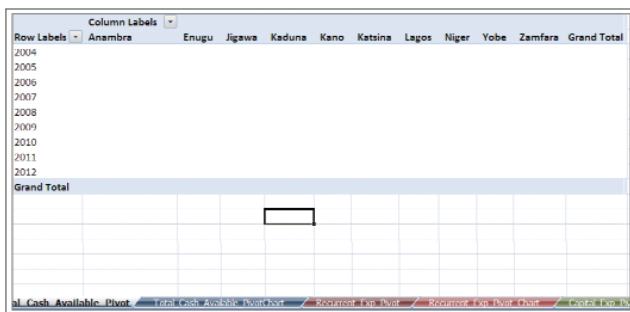
A typical pivot table worksheet has two areas, the spreadsheet itself and the Pivot Table Field List (which opens in the right side of the screen when you click anywhere within the table of values):

- **Pivot Table Field List:** The Pivot Table Field List contains the fields which are the variables (both dependent and independent) needed for any analysis of interest. The Pivot Table Field List is a table showing several fields, like Year, State, Total cash available category, Sector, Economic classification, Revenue type, Original Budget, Supplementary Budget, Revised Budget and Actual. The number of pivot table fields available on a pivot table depends on the number of necessary variables needed for a particular analysis or associated with a particular analysis
- Below the Pivot Table Field List, there is an area which determines the function of the variables. The options are Report Filter, Column Labels, Row Labels and Values
- The column labels show the titles of the columns, the row labels show the titles of the rows, while the values show what the associated data for the rows and columns should be. To have a meaningful analysis, ensure that selected variables from the field list are placed in the appropriate boxes. Ensure that the fields with values are programmed to **Sum** the figures, and not to **count** the number of figures
- **Spreadsheet:** The spreadsheet area displays the table. Once the necessary variables in the field list are selected, a table is created. Unless the data for populating the table are specified in the Pivot Table Field List which is at the right-hand side of the spreadsheet, no table is created and no analysis is possible. So, the first step for any analysis is to select the relevant fields. The Pivot Table Field List appears on the spreadsheet once the cursor is placed on the table area.



## Step 1: To create a table from the database

- Select the worksheet of interest from the worksheet tabs. e.g. '**Total Cash Available Pivot**'
- In the Pivot Table Field List, select **State** and **Year**, if these fields are not pre-selected. Note that the Pivot Table Field List will not appear unless the cursor is placed on the table area of the spreadsheet
- Place **State** in the column label and **Year** in the row label



- Go to the table area of the spreadsheet. Select **Column Labels** by clicking on the funnel beside it. This brings out a dialog box with '**Select All**', followed by the list of states available on the database – from Anambra to Zamfara – with a check box beside each option
- To select all states, click **Select All**. Once you click select all, a black tick ✓ appears in all the check boxes. To select a single state or multiple states, uncheck select all and click on the desired state or states, e.g. Anambra or a group of states – Enugu, Kaduna and Yobe
- Click **OK**. This brings the state(s) to the top of the table with the grand total as the last column of the table
- On the same table area of the spreadsheet, move the cursor to the **Row Labels** and click on the downward facing arrow to bring out the dialog box. This enables you to select all the years, a single year or multiple years
- To select all years, click **Select All**. Once you click **Select All**, a black tick ✓ appears in all the check boxes. To select a single year or multiple years, uncheck **Select All** and click on the desired year – 2008 – or years – 2008, 2009 and 2012
- Click **OK**. This brings all the year(s) to the side of the table with the grand total as the last row.

The process described in this step will give a blank table, unless the data for populating the table are specified in the Pivot Table Field List. The options available in the Pivot Table Field List show the kind of data that are available for analysis and which are possible to include in the table.

## Step 2: To create a report on revenue/total cash available

- Select the worksheet '**Total Cash Available Pivot**' from the worksheet tabs. This tab is deep blue in colour
- Follow the steps highlighted in Step 1 above to select state(s) and year(s). Once a field is selected, a tick ✓ appears in the available tick box
- Click on the **Cash Available Category** to further disaggregate data by revenue category

- Click on the **Cash Available Sub-Category** to further disaggregate data by revenue sub-category
- Click on **Revenue Type** to further disaggregate data by revenue type.

The fields ticked above should be placed in either the row or column labels. This does not show any numerical figure.

- Click on the **Original Budget** to get the original budget figure for each state, year, cash available category, cash available sub-category and revenue type selected above
- Click on the **Supplementary Budget** to get the supplementary budget figure for each state, year, cash available category, cash available sub-category and revenue type selected above
- Click on the **Revised Budget** to get the revised budget figure for each state, year, cash available category, cash available sub-category and revenue type selected above
- Click on **Actual** to get the actual figure for each state, year, cash available category, cash available sub-category and revenue type selected above.

**Total Cash Available Pivot Table** Note: Includes 3 Cash Available Categories: (i) Recurrent Revenue, (

Sum of Actual	Column Labels <input checked="" type="checkbox"/>			
Row Labels <input checked="" type="checkbox"/>	Anambra	Enugu	Yobe	Grand Total
2006	44,680,398,935	27,068,883,653	35,454,417,923	107,203,700,512
2007	53,826,051,239	34,609,386,742	40,685,278,853	129,120,716,834
2008	66,196,339,113	48,410,884,489	51,742,176,038	166,349,399,640
2009	55,451,666,941	47,358,616,672	45,300,985,606	148,111,269,219
2010	76,848,665,043	56,533,049,923	47,171,363,557	180,553,078,523
2011	117,293,155,637	75,930,465,512	61,157,981,207	254,381,602,356
<b>Grand Total</b>	<b>414,296,276,908</b>	<b>289,911,286,992</b>	<b>281,512,203,185</b>	<b>985,719,767,084</b>

[Empty Value Box]

Navigation: Total Cash Available Pivot | Total Cash Available PivotChart | Recurrent Exp Pivot | Recurrent Exp

The fields ticked above should be placed in the value box and the value field setting programmed to calculate the values as sums instead of counts.

To change the value field setting:

- In the **Values** box of the Pivot Table Field List, click on the down arrow of an entry in the box. Click on the field with count. This brings out a menu of options

- Click on **Value Field Settings**. This brings out another box with **Value Field Settings** as the title
- You will see a drop-down menu below the bold caption '**Summarize value field by**'
- Select **Sum, Count** or any of the other option that you require
- Click **OK**.

### Step 3: To create a report on recurrent expenditure and transfers

- Select the worksheet '**Recurrent Expenditure Pivot**' or '**Transfer Pivot**' from the worksheet tabs. The Recurrent Expenditure tab is deep red in colour, while the Transfers tab is deep orange
- Follow the steps highlighted in Step 1 above to select **State(s)** and **Year(s)**. Once a field is selected, a tick ✓ appears in the available tick box
- Click on **Sector** in the Pivot Table Field List to disaggregate data by sector. Compared with expenditure pivots which have normal ministries, departments and agencies as sectors, the transfer pivot table has transfer as its sector and this is the only option available
- Click on **Economic Classification** to further disaggregate data by economic classification.

The fields selected above should be placed in either the row or column labels. This does not show any numerical figure.

- Click on the **Original Budget** to get the original budget figure for each state, year, sector and economic classification selected above
- Click on the **Supplementary Budget** to get the supplementary budget figure for each state, year, sector and economic classification selected above
- Click on the **Revised Budget** to get the revised budget figure for each state, year, sector and economic classification selected above
- Click on the **Actuals** to get the actual figure for each state, year, sector and economic classification selected above.

The fields ticked above should be placed in the value box and the value field setting selected to calculate the values as sums rather than counts.

### Step 4: To create a report on capital expenditure and total expenditure

- Select the worksheet '**Capital Expenditure Pivot**' or '**Total Expenditure Pivot**' from the worksheet tabs. The Capital Expenditure tab is deep green in colour, while the Total Expenditure tab is deep purple

- Follow the steps highlighted in Step 1 above to select **State(s)** and **Year(s)**. Once a field is selected, a tick ✓ appears in the available tick box
- Click on **Sector** in the Pivot Table Field List to disaggregate data by sector.

The fields selected above should be placed in either the row or column labels. This does not show any numerical figure.

- Click on the **Original Budget** to get the original budget figure for each state, year and sector selected above
- Click on the **Supplementary Budget** to get the supplementary budget figure for each state, year and sector selected above
- Click on the **Revised Budget** to get the revised budget figure for each state, year and sector selected above
- Click on the **Actuals** to get the actual figure for each state, year and sector selected above.

The fields ticked above should be placed in the value box, and the value field setting programmed to calculate the values as sum instead of count.

### Step 5: To view a chart of the tables created

- Once a set of variables and data is selected as described in Steps 1 to 4 above to create a pivot table, the chart is automatically plotted in the default chart (line graph, bar chart, etc.)
- The pivot chart is available for viewing in the next worksheet
- The chart type can be changed as desired
- The pivot field list appears beside the chart and can be changed to plot for different variables.

Caveat: The chart generated from the table may not necessarily be useful, bearing in mind that there is a limit to the amount of detail that it is possible to display on a chart. This means a complex, meaningful table does not result in a meaningful chart. With tweaking, several charts can be produced from the tables generated.

### Step 6: To do any other analysis of interest

- Go to worksheets 11, 12, 13, 14 and 15. They are labelled Revenue D, Recurrent D, Capital D, Total D and Transfers D. These are the master databases
- Copy any database of interest into a **new** Excel spreadsheet
- Convert to a new pivot table and analyse as desired.

SPARC Public Financial Management Database

sparc

[www.sparc-nigeria.com](http://www.sparc-nigeria.com)

State Partnership for Accountability, Responsiveness and Capability (SPARC)

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