Wharton

Financial Institutions Center

Using Wharton's FDIC Research Database

by
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Supplement 95-24

The Wharton School
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Anthony M. Santomero
Director

Using Wharton's FDIC Database [1]

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Summary: This document is one of two papers on Wharton's FDIC Research Database.
Working paper #95-24 reviews the structure and data elements of the database.
Supplement #95-24 facilitates its installation and use.

[1]Jalal D. Akhavein is a Research Associate at the Wharton Financial Institutions Center.

INTRODUCTION

The purpose of this document is help facilitate the installation and use of Wharton's FDIC database. Included in this package are:

- 4mm or 8mm cartridge tape(s) that contain data
    - 3 1/2 inch floppy containing the Data Dictionary
    - 3 1/2 inch floppy containing SAS programs.

x

x   How the Database Works: Transfer the transport formatted SAS Datasets from the 4mm or 8mm tape onto a 'hard drive'. Use the programs supplied to convert the files from transport format to a regular SAS dataset. Once completed, other supplied programs help extract the data.

x

Important: It is important to understand how the five different datasets on the 4mm or 8mm tape are related. The five datasets are STRU*YYMM*, FTS*YYMM*, CDI*YYMM*, RAT*YYMM*, and MERG*YYMM* [1] , were *YYMM* stands for the year and month. For example, the STRUcture data file for year end 1986 is named STRU8612. The most important dataset is the STRU file that contains all of the structure information about the firms. For example this might be the firms' name, address, insurance status, state of operation, city and county codes, etc. The researcher will use this file to filter or limit the dataset to their need. For example one might only want insured commercial banks operating in California, Oregon, and Washington. They would use the appropriate fields on this dataset to achieve this goal. There are several SAS programs included in this package and also mentioned below that help guide the user. The FTS file contains all of the balance sheet and income data of the firms. The CDI and RAT files use the data in the FTS file to derive or construct various new fields (ROA and ROE are examples.) The MERG file is the merger history file of the firms. It should be clear at this point that the FTS, CDI, RAT, and MERG files all rely on the STRU file in some way. The only common variable between the datasets is the CERT. This is the certificate number associate with each firm and is the unique identifier of that firm. With this in mind, please notice that we always merge the datasests (for example the STRU and FTS) by the variable CERT. Since the researcher would primarily be concerned with the STRU and FTS files, we have concentrated on these two for the examples and the programs included in this package.

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[1] Please refer to the document "Wharton's FDIC Database," by Jalal D. Akhavein, Working Paper 95-24, Wharton Financial Institutions Center for more details on the content of the various datasets.

THE TRANSFER STAGE

SAS transport format datasets allow the user to ship the data across different platforms (e.g. PC, workstation, mainframe, etc) without sacrificing usability. The programs are ASCII format and should run in SAS on any platform (Please note: problems might arise with assigning library names, please consult your SAS manual for the appropriate syntax under your system.)

Step One:

Transfer the files from the 4mm or 8mm tape(s) onto your 'hard disk'.[2] By 'hard disk' we mean any device attached to your computer that allows random access to the data residing on it. For example this would be a hard drive on the PC, a SCSI Disk Drive on the workstation level, etc. Once this has been done, note the path to the device. For example "c:\temp\fdicdata" on the PC level, or "/tmp/fdicdata" on the workstation level.

Step Two:

Refer to the CPORT1.SAS and CIMPORT1.SAS files supplied.

The CPORT1.SAS and CIMPORT1.SAS Programs:

The following four programs should be on one of the 3 1/2 inch floppies provided, CPORT.SAS, CIMPORT.SAS, CPORT1.SAS, CIMPORT1.SAS. The two programs that *do not* contain '1' in their names are more advanced versions that include SAS Macro functions.

The CPORT1.SAS program was used to convert a regular SAS dataset into a SAS transport file. The CIMPORT1.SAS program converts a SAS transport file into a regular SAS dataset. Please refer to the CIMPORT1.SAS file, this is the program you will be using.

```
------------------------------------------------------------
options ps=60 ls=80 mprint;
```

---

[2] We used the **tar** command under HP-UX 9.0 to tranfer the files from our disk drive to the 4mm or 8mm tape.

```
libname fdic       'SAS-data-library';
filename tranfile 'transport-file-name';


proc cimport data=fdic.prefix9412 file=tranfile;
run;
----------------------------------------------------------
```

The libname statement should be modified to include the appropriate path for the *SAS-data-libarary* where you want your final or regular SAS datasets to reside, once they have been imported.

The filename statement should be modified to include the appropriate path for the *transport-file-name*. The *transport-file name* consists of the path where the file resides and the name of the file. For example if the transport file name is *STRU9412* and is in the */tmp/fdicdata/* directory, then the filename statement would look like this

```
filename tranfile '/tmp/fdicdata/stru9412';
```

One Caution: Under some environments the filenames are case sensitive. Next, you have to modify the

```
proc cimport data=fdic.prefix9412 file=tranfile;
```

statement. By *prefix* we refer to one of the following five possibilities: STRU, FTS, MERG, CDI, and RAT. In the tranfile example above we used the STRU prefix which refers to the structure dataset.

Once these changes have been made you are ready to run the program.
Example: Use the above examples to create the following program.

```
----------------------------------------------------------
options ps=60 ls=80 mprint;

libname fdic       '/final/fdicdata/sasdata';
filename tranfile '/tmp/fdicdata/stru9412';

proc cimport data=fdic.stru9412 file=tranfile;
run;
----------------------------------------------------------
```

This program should take the file STRU9412 from the /tmp/fdicdata directory and create the regular dataset STRU9412.SSD01 in the /final/fdicdata/sasdata directory. Notice that the transport file does not have a suffix (namely .ssd01) and the final data set does.

This process should be repeated until you have restored all of your transport files. If you have a good understanding of the SAS language the program CIMPORT.SAS could be used to simplify your task if there are many files involved.

THE EXTRACTION STAGE

You are ready to extract your fields and create your own dataset. First will generate a list containing the names of the variables. This involves installing the Data Dictionary on an IBM compatible PC system. Please print the README.1ST file contained on the 3 1/2 inch floppy and follow the instructions for installation.

Once installed, please refer to Appendix D of the Document "Wharton's FDIC Database," by Jalal D. Akhavein, Working Paper 95-24, Wharton Financial Institutions Center, The Wharton School, University of Pennsylvania. This is the "Call Report" form. Referring to page 11 of this form, the Schedule RC- Balance Sheet, assume you are interested in obtaining a series for Total Assets, Assets held in Trading Accounts, Federal Funds Sold and Premises and fixed Assets. Associated with the above are the following Call or MDRM numbers[3] RCFD2170, RCFD3545, RCFD0276, and RCFD2145.

Using the Data Dictionary you are going to find a mapping between these MDRM or Call numbers and their associated names in Wharton's FDIC database. Bootup the Data Dictionary. Select the "*RIS Names ......*" options, which should be the first one. This should take you one screen down. Now press the F2 button, this corresponds to "*Source/Call Numbers.*" Start typing the first Call Number, RCFD2170. As you type, the dictionary is searching for the match. Once the match is found, record the RIS data associated name. In this case it is ASSET. Repeating this for the above example should yield the following list: ASSET, TRADE, FFSOLD, BKPREM. This process generates the list we need. Now we are ready to run some of the SAS programs provided. Please refer to the program RIS1.SAS. This program should work on any environment.

```
/************************************************************************
*      Program      :  ris1.sas
*
```

---

[3] MDRM numbers are assigned by the FDIC.

```
*
*      Usage          :  To read FDIC Research Database (SAS dataset)
*
*      Input          :  stru9412.ssd01 -- Structure File
*                        fts9412.ssd01  -- Financial Time Series File
*
*      Output         :  ris.log   -- Log file
*                        ris.lst   -- Output(list) file.
*                        ris9412.ssd01 -- Final File
*      Method         :
*
*      Hardware       :  HP 9000-700 series
*
*      OS             :  HP-UX 9.0
*
*      Software       :  SAS 6.09
*
*      Author         :  Jalal D. Akhavein       3/96
*
*
*      Modified       :
*
*
*****************************************************************************/


/****************************************************************************
*          The name of the files indicated above are DATE dependent
*          If the date variable was 9306 then the input files would
*          be  stru9306.ssd01, fts9306.ssd01.
*****************************************************************************/


/****************************************************************************
*          Define the Date variable
*****************************************************************************/

%let date=9412;

/****************************************************************************
*          Other examples include 9403, 9406, 9409, etc.
*****************************************************************************/


/****************************************************************************
*          Define Options
*****************************************************************************/

   Options nocenter nodate nonumber mprint;


/****************************************************************************
*          Define Library path Where you want your data stored
*****************************************************************************/


       libname out 'your-path';
```

```
/*************************************************************************
*            Read the Structure File
*************************************************************************/

   libname fdic 'SAS-data-library';

   data stru;
         set fdic.stru&date

/*************************************************************************
*         KEEP statement to select variables
*************************************************************************/

   (keep= cert name inscoml callymd);

/*************************************************************************
*            Read the Financial Time Series File
*************************************************************************/

   data fts;
         set fdic.fts&date

/*************************************************************************
*         KEEP statement to select variables
*************************************************************************/

   (keep= cert asset eq);




/*************************************************************************
*         MERGE Structure and FTS File , by Certificate number
*************************************************************************/


 data ris&date; merge stru (in=in1) fts (in=in2); by cert;
   if in1=1 and in2=1;



/*************************************************************************
*   Select criteria.
*************************************************************************/

   if inscoml =1;        *(Flag for Insured Commercial Bank);
                              *(This constraint is for STRU file);


        if asset > 1000000;  *(This constraint is for FTS file);


/*************************************************************************
*   Output selected data to file.
*************************************************************************/

   proc means data = ris&date;
   title "Means of the RIS File";
```

```
        data out.ris&date; set ris&date;
```

```
/************************************************************************
*
************************************************************************/
```

You have to modify the following

```
%let date=9412;
libname out 'your-path';
libname fdic 'SAS-data-library';
```

as well as the names of the variables in the KEEP statement. The

```
%let date=9412;
```

refers to quarter of data in question. The date takes on values of YY03, YY06, YY09, and YY12 where YY refers to the year, 03 refers to March (end of the first quarter), 06 refers to June (end of the second quarter), etc. The

```
libname out 'your-path';
```

specifies the path where you want your datasets saved and the

```
libname fdic 'SAS-data-library';
```

specifies where the SAS datatsets are stored. In one of the examples above the path was /final/fdicdata/sasdata. Type in the names of variables obtained through the Data Dictionary and run the program.

Keep in mind that the program RIS.SAS is a more advanced version of RIS1.SAS.

If you have any question please e-mail consultant@wharton.upenn.edu.