



F E D E R A L
S T U D E N T A I D
We Help Put America Through School

FSA Modernization Partner

NSLDS II Reengineering
Reports Detailed Design:
Reasonability Quarterly Backup F2000
R-MBR-009

Version 1.1

November 26, 2002

Table of Contents

1	REASONABILITY QUARTERLY BACKUP F 2000 REPORT.....	3
1.1	OVERVIEW	3
1.2	MBR EXCEPTION REPORT PROCESS OUTLINE	3
2	REPORT PARAMETER PROCESS.....	3
2.1	PARAMETER DEFINITIONS	4
2.2	PARAMETER SCREEN.....	5
2.3	PARAMETER TABLE STORED PROCEDURE.....	5
3	INFORMATICA REPORT TABLE GENERATION.....	6
3.1	REASONABILITY DATA FILE RETRIEVAL.....	6
3.2	REASONABILITY FILE LAYOUT	7
3.3	REPORT TABLE LAYOUT.....	8
3.4	BACKUP TO GUARANTY AGENCY	10
4	INFORMATICA UNFORMATTED FILE GENERATION	10
5	EXCEPTION REPORT DOWNLOAD PROCESS	11

Document Control

Version Number	Description	Release Date	Author
1.0	Initial Issue	11/08/2002	Justin M. Miller
1.1	Updated Format	11/13/2002	Jason Patton

1 Reasonability Quarterly Backup F 2000 Report

Description	The Reasonability Quarterly Backup F2000 Report provides data backup of the loan details that were used to compose the Form 2000 quarterly summary data (line items AR-1 to AR-11, minus AR-5)
User Group	MBR
Data Source	Reasonability File
Output Media	Downloadable File
Frequency	On Request
Requirements Traceability	2.032
Output Media	Unformatted flat file (fixed character width)
Comments	This report corresponds to the MBR009 - Reasonability Quarterly Backup F2000 Report in NSLDS.

1.1 Overview

This report is a NSLDS II exception report, which has the following constraints that require the user to download the report instead of viewing it on the website.

- Result set is on average greater than 100,000 rows of data (affecting performance).
- Data must be able to be returned in formatted or unformatted flat file.
- Report must be available for download for up to 120 days.

1.2 MBR Exception Report Process Outline

Generating this MBR exception report is a multi-step process, which is initiated when a user enters the report parameters, through a custom coded ASP screen within the NSLDS II website. An Informatica stored procedure converts the contents of the cumulative or difference reasonability file to a report database table. Informatica will convert this report table to an unformatted flat file, which the user can download.

2 Report Parameter Process

A user will navigate to the report parameter page through the NSLDS II website. Here the user will select to run a particular MBR exception report. The user will enter the report parameters that are stored in a table for each specific report request.

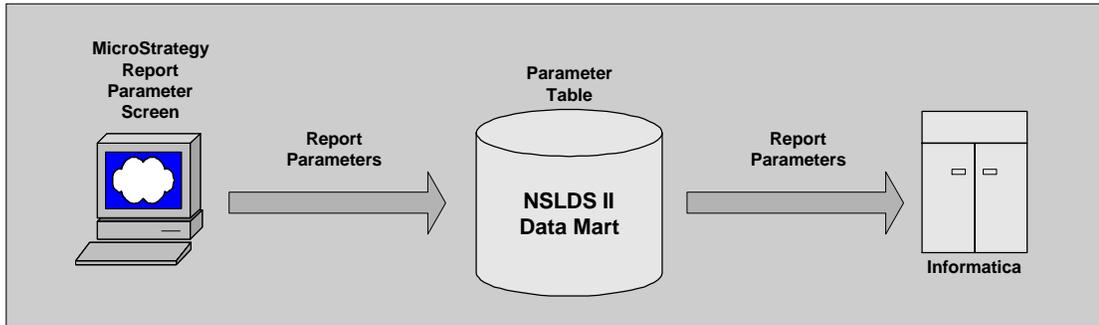


Figure 1, Report Parameter Process

2.1 Parameter Definitions

The parameter definitions for this report will be selected from a custom coded Microsoft ASP screen. Each parameter will be converted to an ASP form variable that is passed to an action page that passes each form variable to a stored procedure call statement. The stored procedure creates an ODBC connection to the DB2 server.

The following parameters are required on the Reasonability Quarterly Backup F2000 Report parameter screen.

Reasonability Quarterly Backup Report F2000 Parameters

Parameter	Description
Fiscal Year	This parameter will hold the fiscal year.
Reporting Quarter	This parameter will hold the reporting quarter for the report.
GA Code	This parameter will hold the GA Code. A user can enter in one GA code, or the * symbol to designate all GAs.
Official Run	This parameter will hold the determination of an official run or analysis run. Y - Official Run, N - Analysis Run
Run Date	This parameter will hold the run date of the report it is searching for. This field is required to an official run.
Run Time	This parameter will hold the run time for the file the report is searching for.
Back Up Date to GA	This parameter holds whether the report is to be backed up to the GA. The value will be a Y or N.
Cumulative Backup	This parameter holds whether the report will bring back cumulative date or difference data. The value will be a Y - Cumulative data, or N - Difference Data.
Guaranty Activity	This parameter designates guaranty activity. The value will be a Y or N.
Cancellation Activity	This parameter designates cancellation activity. The value will be a Y or N.
GTY Transfer In	This parameter designates whether the loan is transferred in and the GA is responsible for the loan. The value will be a Y or N.
GTY Transfer Out	This parameter designates whether the loan has been transferred and the GA is no longer responsible for the loan. The value will be a Y or

Parameter	Description
	N.
Insurance Claim Refund	This parameter designates if the report will contain insurance claim refunds. The value will be a Y or N.
Repurchase Activity	This parameter designates if the report will contain any repurchase activities. The value will be a Y or N.

2.2 Parameter Screen

Please refer to the NSLDS II Reengineering Screens Detail Design: Reports document for further details on this parameter screen.

2.3 Parameter Table Stored Procedure

A stored procedure populates the parameter table with the report parameters from the ASP action page. This parameter table, called MBR009_PARM, is a specifically created table for the Reasonability Quarterly Backup Report's parameters. A UNIX script will be triggered to call an Informatica procedure that will extract the date elements from the parameter table. The UNIX script will also pass the values for the user ID, report ID, and the report timestamp value within the parameter table. These three values are needed by Informatica to identify the correct record.

MBR009_PARM Table

Column	Type	Length	Description
ID	N	6	This column is the primary key of the table. This number uniquely identifies each row. This ID creases incrementally by 1 with each new row. This column is system generated.
USER_ID	C	8	This column records the user ID of the individual requesting the report.
RPT_ID	C	6	This column stores the report ID. Example value of this column would be 'MBR009. Each MBR report has a unique ID.
TIMESTAMP	D	8	This column holds the time stamp when the report request is generated.
FISCAL_YEAR	D	4	This column stores the fiscal year of the report request.
RPT_QUARTER	D	1	This column stores the report quarter.
GA_CODE	C	3	This column stores the GA Code. If the user enters in the * symbol, to designate all GAs, a separate report file will be generated for each GA.
OFF_RUN	C	1	This column stores whether the user wants to retrieve an official run or an analysis run.
RUN_DT	D	8	This column holds the run date of the file to search for.
RUN_TIME	D	8	This column holds the run time of the file to search for.
BACK_GA	C	1	This column designates whether to run a backup to a GA. Will hold a Y or N.
CUM_BACK	C	1	This column holds whether the file retrieved will contain cumulative or difference data. Will hold a Y or N.

Column	Type	Length	Description
GA_ACTIV	C	1	This column holds the value of whether the report will contain GA activity. Will hold a Y or N.
CAN_ACTIV	C	1	This column holds the value of whether the report will contain cancellation activity. Will hold a Y or N.
GTY_IN	C	1	This column holds whether the report will include loan transfers to the GA. Will hold a Y or N.
GTY_OUT	C	1	This column holds whether the report will include loan transfer from the GA. Will hold a Y or N.
INSUR_CL_PMT	C	1	This column holds whether the report will include insurance claim payments. Will hold a Y or N.
INSUR_CL_RFD	C	1	This column holds whether the report will include insurance claim refunds. Will hold a Y or N.
REPUR_ACT	C	1	This column holds whether the report will repurchase activities. Will hold a Y or N.

3 Informatica Report Table Generation

Informatica extracts the parameter requirements stored in the parameter table. Informatica will then take these parameters and extract the report data from the reasonability data file and send it to a report table.

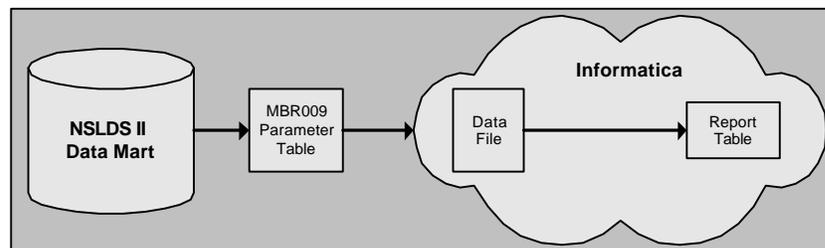


Figure 2, Flat File Process

3.1 Reasonability Data File Retrieval

Before Informatica can extract the relevant loan detail records from the reasonability data file it must find the appropriate file. Numerous files are stored on the DB2 database server. There are four types of files and each are uniquely named according to fiscal quarter end date, and the timestamp.

Official Run

Data from an official run can either be populated cumulative data or difference data. These files will contain naming conventions in the following format:

- Difference Data - NSLPOIFFIC +User ID +RSNQ + Fiscal Quarter End Date + Time Stamp
- Cumulative Data - NSLPOIFFIC +User ID +RSNQCUM + Fiscal Quarter End Date + Time Stamp

Unofficial Run

Data from an unofficial run can either be populated cumulative data or difference data. These files will contain naming conventions in the following format:

- Difference Data - NSLPUN +User ID +RSNQ + Fiscal Quarter End Date + Time Stamp
- Cumulative Data - NSLPUN +User ID +RSNQCUM + Fiscal Quarter End Date + Time Stamp

The logic to find the correct reasonability file is as follows:

```

If Official Run parameter = Y
    If Cumulative Backup parameter = Y
        Pull the Official Run/Cumulative file
    Else
        Pull the Official Run/Difference file
    End
Else
    If Cumulative Backup parameter = Y
        Pull the Unofficial Run/Cumulative file
    Else
        Pull the Unofficial Run/Difference file
End
    
```

Informatica will extract data from either the cumulative or difference flat file. This extracted data will also be filtered according to those parameters that were chosen on the parameter screen. If the user entered in the * symbol on the GA Code parameter input then a separate report will be generated for each specific GA.

3.2 Reasonability File Layout

The layout of the reasonability flat files is described below:

Cumulative File

Date Element	Field Position	Length
NSLDS Code	1-4	4
Extract Begin Date	5-12	8
Extract End Date	13-20	8
GA Code	21-23	3
Loan Guarantor Responsibility Begin Date	24-31	8

Date Element	Field Position	Length
Loan Guarantor Responsibility End Date	32-39	8
Loan Number	40-48	9
Loan ID Sequence Student Sequence Number	49-52	4
Loan Sequence Number	53-56	4
Loan Type	57-58	2
Date	59-66	8
Amount	67-72	6
GA Transfer Indicator	73	1
Transfer Cancellation Date	74-81	8
Transfer Cancellation Amount	82-87	6
Reason Code	88-89	2
Lender Responsibility Begin Date	90-97	8
Lender Responsibility End Date	98-105	8

Difference File

Date Element	Field Position	Length
NSLDS Code	1-4	4
Extract Begin Date	5-12	8
Extract End Date	13-20	8
GA Code	21-23	3
Loan Guarantor Responsibility Begin Date	24-31	8
Loan Guarantor Responsibility End Date	32-39	8
Loan Number	40-48	9
Loan ID Sequence Student Sequence Number	49-52	4
Loan Sequence Number	53-56	4
Loan Type	57-58	2
Date	59-66	8
Amount Current	67-72	6
Amount Previous	73-78	6
Amount Difference	79-84	6
GA Transfer Indicator	85	1
Transfer Cancellation Date	86-93	8
Transfer Cancellation Amount	94-99	6
Reason Code	100-101	2
Lender Responsibility Begin Date	102-109	8
Lender Responsibility End Date	110-117	8

3.3 Report Table Layout

The extracted data will be inserted into the cumulative or difference database report table based on which type of flat file that is read from. The columns user ID, report ID, report timestamp will be added to help uniquely identify each report.

The table below defines the MBR009_CUM report table with column names and lengths.

MBR009_CUM

Date Element	Column Name	Length
User ID	USER_ID	10
Report ID	RPT_ID	10
Report Timestamp	RPT_TIMESTAMP	8
NSLDS Code	NSLDS_CODE	4
Extract Begin Date	EXTR_BEG_DT	8
Extract End Date	EXTR_END_DT	8
GA Code	GA_CODE	3
Loan Guarantor Responsibility Begin Date	LOAN_GUA_RESP_BEG_DT	8
Loan Guarantor Responsibility End Date	LOAN_GUA_RESP_END_DT	8
Loan Number	LOAN_NO	9
Loan ID Sequence Student Sequence Number	LOAN_ID_STU_SEQ_NO	4
Loan Sequence Number	LOAN_SEQ_NO	4
Loan Type	LOAN_TYPE	2
Date	DT	8
Amount	AMT	6
GA Transfer Indicator	GA_TRANSFER_IND	1
Transfer Cancellation Date	TRANSFER_CAN_DT	8
Transfer Cancellation Amount	TRANSFER_CAN_AMT	6
Reason Code	RSN_CODE	2
Lender Responsibility Begin Date	LNDR_RESP_BEG_DT	8
Lender Responsibility End Date	LNDR_RESP_END_DT	8

The table below defines the MBR009_DIFF report table with column names and lengths.

MBR009_DIFF

Date Element	Column Name	Length
User ID	USER_ID	10
Report ID	RPT_ID	10
Report Timestamp	RPT_TIMESTAMP	8
NSLDS Code	NSLDS_CODE	4
Extract Begin Date	EXTR_BEG_DT	8
Extract End Date	EXTR_END_DT	8
GA Code	GA_CODE	3
Loan Guarantor Responsibility Begin Date	LOAN_GUA_RESP_BEG_DT	8
Loan Guarantor Responsibility End Date	LOAN_GUA_RESP_END_DT	8
Loan Number	LOAN_NO	9
Loan ID Sequence Student Sequence Number	LOAN_ID_STU_SEQ_NO	4
Loan Sequence Number	LOAN_SEQ_NO	4
Loan Type	LOAN_TYPE	2
Date	DT	8
Amount Current	AMT_CURR	6
Amount Previous	AMT_PREV	6
Amount Difference	AMT_DIFF	6
GA Transfer Indicator	GA_TRANSFER_IND	1
Transfer Cancellation Date	TRANSFER_CAN_DT	8

Date Element	Column Name	Length
Transfer Cancellation Amount	TRANSFER_CAN_AMT	6
Reason Code	RSN_CODE	2
Lender Responsibility Begin Date	LNDR_RESP_BEG_DT	8
Lender Responsibility End Date	LNDR_RESP_END_DT	8

3.4 Backup to Guaranty Agency

If the user selected 'Y' on the Back up to GA input box on the parameter screen then a copy of the report will be put on tape and sent to the corresponding Guaranty Agency. A separate output distribution procedure will be developed. The details for this process are still being determined but the basic functionality will allow TIF labels to be printed and detail data to be put to tape (utilizing the dataset naming convention). The outline of the TIF label is described below.

Data Element	Field Position	Length	Type	Description	Mapping
First Name	1	12	Char.	First Name	TIF_INFO.FST_NM
Last Name	13	35	Char.	Last Name	TIF_INFO.LST_NM
Organization	48	60	Char.	Organization Name	TIF_INFO.ORG
Address line 1	108	50	Char.	Address Line 1	TIF_INFO.ADD_LN1
Address line 2	158	50	Char.	Address Line 2	TIF_INFO.ADD_LN2
City	208	20	Char.	City	TIF_INFO.CITY
State	228	2	Char.	State	TIF_INFO.STATE
Country	230	20	Char.	Country	TIF_INFO.COUNTRY
Zip	250	9	Char.	Zip Code	TIF_INFO.ZIP
Tape Format	259	3	Char.	Tape format	TIF_INFO.TAPE_FMT
Dataset Name	262	44	Char.	Dataset name for output distribution	See Section 4 of this document for proposed naming conventions.

4 Informatica Unformatted File Generation

Upon completion of the population of the report table, either MBR009_CUM or MBR009_DIFF, Informatica will extract the data from the table and convert it to an unformatted flat file.

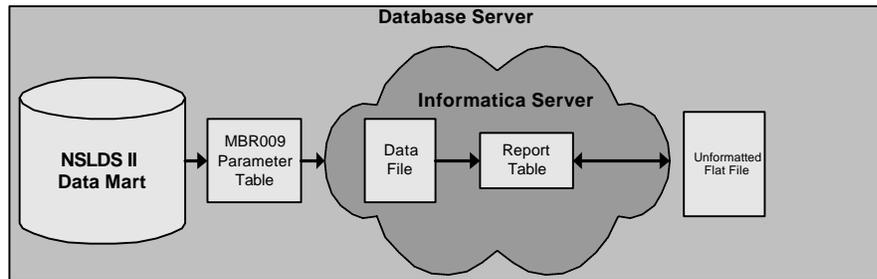


Figure 3, Flat File Generation Process

Upon completion the file will be housed in the exception reports file directory on the DB2 database server.

This file will have a unique naming convention based on the user ID, report ID, and report timestamp.

Naming format: User ID + Report ID + Report Timestamp

After the file is created Informatica will trigger a post-process script file that will check if a directory on the database server with the same name as the user_id parameter exist. If it does exist then the file will be stored in that directory. If the file does not exist then it will create the directory and store the file in it.

5 Exception Report Download Process

Exception Reports will be stored on the DB2 database server in a file directory specifically reserved for exception reports. This directory will have a separate folder structure for each user that requests an exception report. Users will be able to retrieve and download these reports from the NSLDS II website interface through an FTP connection to the database server. Users will have access to these reports up to 120 days after they have been created.

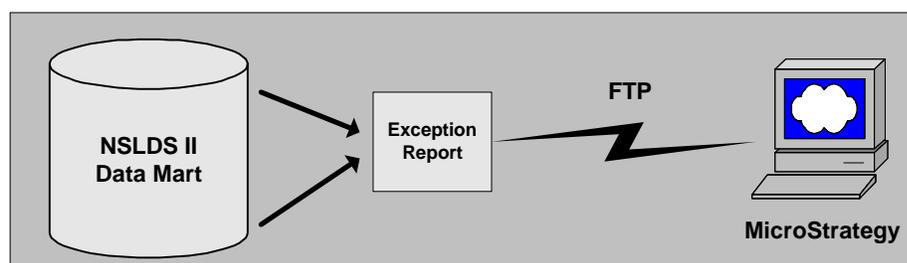


Figure 4, Report Download Process

In the MicroStrategy Web environment, there will be a specific screen where users will be able to retrieve their exception reports for download. On this screen will be an ASP code module

that checks the DB2 database server file directory for any exception reports that have been generated each time the exception reports download page is accessed.

Displayed on this screen will be a dropdown box that will perform the following logic to only display those exception reports that the specific user has requested. This logic would check all files stored for the user inside their respective database file directory folder and match the user name embedded within file name to the current MicroStrategy user name:

```
If (User Name File on data set) = (MicroStrategy User Name)
    Display Exception Report Name in dropdown box
Else
    Do not display Exception Report Name in dropdown box
End
```

Once the dropdown is completely populated the user will select the requested report. The user will be prompted for their download directory on their computer where they can view the file.