NATWEST MARKETS

GTMIS

Flowcharts and Narrative

Guide

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DOCUMENT HISTORY

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RELATED DOCUMENTATION

These GTMIS documents can be found under Lotus Notes in the Technology Policies and Procedures database:

GTMIS User Guide

GTMIS System Manual

GTMIS Operations and Procedures Guide

PREFACE

About This Manual

This document is the *GTMIS Flowcharts with Narrative*, for the GTMIS version 2.1 application. It is intended to serve programmers as a guide to the day-to-day operations of the **Group Treasury Management Information System (GTMIS)**.

Document Scope

The purpose of the *GTMIS Flowcharts with Narrative* is to illustrate:

- The nightly flow of activity and the transferance of data run through the GTMIS application.
- The GTMIS series of command lines, their contents and the programs they run.
- The scheduled time slot for each command, and their overall sequence.
- The series of interactive commands, and the information and functions they share.
- The functions that compare and contrast GTMIS with the IBS and REMOS applications.
- The transference and updating of data through Global Risk Systems, Money Markets, and Foreign Exchange.

Font Usage

Fonts are used throughout this document to convey special meanings.

The constant width font signifies words you should type in *exactly* as they appear.
The *italic underlined* font is used to show references to other documents.
The **bold red font** is used to alert you to a right-click mouse procedure.

The  **Note** and  **Warning** indicators are used to give you details, which may be of special importance.

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INTRODUCTION

GTMIS System

Every night, GTMIS processes jobs unattended. Built-in controls allow for prerequisite and post-processing job flow to ensure data integrity. A sequence of command lines initiates various programs that verify, extract, and load data into the application's tables, which will then be used for reporting and On-line access. Some of the new information comes from external sources, including files under IBS and REMOS applications, and GLAS files in London.

The data processed includes:

- Money Markets transactions
- Foreign Exchange transactions
- Global Risk System transactions
- Internal and External Swap transactions

Many of the data tables updated by GTMIS are needed to refresh a series of other files, and some of the command lines are used to prepare data for programs run by other commands. Because of this, each program is run at a specific time slot, and in a sequence designed for interactivity, as well as speed and efficiency.

THE SCHEDULER

The Scheduler is a time management application that tracks all GTMIS programs during its overnight delivery and updating process. Overnight, the application makes sure that GTMIS command lines run during their allotted time frames and in their proper sequence. These GTMIS functions can be modified or changed only by Administrative Staff with proper authorization and UserID access.

Command Lines

Following are tables that list Scheduler's current events in GRS, Money Markets, and FX systems, and their weekday settings:

Global Risk Systems

GRS#	*Time*	*Description*	*Command Line*	*Working Directory*
GRS-1	6:15 pm	Customer download for GRS	c:\rwin\custgrs.rcl	c:\rwin
GRS-2	8:14 pm	Copy IBS Files files for GRS processing	copy_ibs.bat	t:\download\mm
GRS-3	9 pm	Get a GLAS file from LONDON	t:\fx\fxmain\ftpglas.bat	t:\fx\fxmain
GRS-4	9:30 pm	Run a program that generates the GRS feed	t:\fx\fxmain\grs.exe	t:\fx\fxmain
GRS-5	10 pm	Send GRS files to LONDON	t:\fx\fxmain\ftpgrs.bat	t:\fx\fxmain

Money Markets

MM#	*Time*	*Description*	*Command Line*	*Working Directory*
MM-1	1:25 am	Copy MM IBS files for BillBase processing	d:\download\mm\copy 2tem.bat	d:\download\mm
MM-2	1:35 am	Reindex MM DataBases	d:\download\mm\mm_	d:\download\mm

			index.exe	
MM-3	1:50 am	IBS to BillBase Comparison	d:\download\mm\ibs_2_bb.exe	d:\download\mm
MM-4	3:30 am	Copy Credit & Cust to live System	d:\download\mm\copy2liv.bat	d:\download\mm
MM-5	4:35 am	Doing TPL for NP1	d:\download\mm\tpl.exe NP1	d:\download\mm
MM-6	4:55 am	COPY tpl.npl To \download\mm\tpl.np1	d:\download\mm\copy_tpl.bat	d:\download\mm
MM-7	4:59 am	doing TPL for nr1 & nf1	d:\download\mm\tpl NR1 NF1	d:\download\mm
MM-8	5:15 am	Print tpl reports	d:\download\mm\printtpl.bat	d:\download\mm

Foreign Exchange

FX	***Time***	***Description***	***Command Line***	***Working Directory***
FX-1	2:15 am	Backup the downloads from the previous day	t:\fx\fxmain\backup.bat	t:\fx\fxmain
FX-2	2:30 am	GTMIS downloads	c:\rwin\gtmis.rcl	c:\rwin
FX-3	3:00 am	Parse new download into ALLOUTS(SQL)	t:\fx\gtmis\aoparser.exe	t:\fx\gtmis
FX-4	3:15 am	Parse rates to GTMIS(SQL)	t:\fx\gtmis\rp.exe /NEW:t:\fx\remosdls\rates.dls/OLD:t:\fx\remosdls\rates.old /AUTO	t:\fx\gtmis
FX-5	3:30 am	Run GTMIS calculations SQL script	t:\fx\gtmis\gtmisclc.bat	t:\fx\gtmis
FX-6	6 am	Gap Batch to create text files & excel imports	l:\temp\fx\gap\gap.bat	l:\temp\fx\gap
FX-7	7 am	Get a fresh copy of the curostd.rpt and IBS *.DAT file	t:\fx\gtmis\curostd.bat	t:\fx\gtmis
FX-8	7:15am	Run a GTMIS/REMOS/IBS position check	t:\fx\gtmis\ibschk1.exe curostd.rpt	t:\fx\gtmis
FX-9	7:45am	Print position checks	poschk.bat	poschk.bat
FX-10	9 am	Update customer information in GTMIS	t:\fx\gtmis\custin.bat	t:\fx\gtmis

Description of Primary Data Fields

Action: Specifies the action to take place, and gives you a choice of any of the following:

- Run a program or open a document (which is also the default setting).
- Display a message
- Run Anti-Virus to scan selected drives
- Run Optimizer to de-fragment selected drives

Description: Displays an optional descriptive line of text that appears in the main Scheduler window.

Message Text: Specifies the message you want to appear at the scheduled time. This box appears only if Display a Message is selected in the Action box.

Command Line: Specifies the name of the program to run and its command-line options. This box appears only if Run a Program is selected in the Action box. If the program you specify is not in your DOS path, you must include its path. Choose Browse to display a dialog box to help select the name and path.

Working Directory: Specifies the working directory for the program that you have chosen to run. This box appears only if Run a Program is selected in the Action box.

Drive List: Specifies the drives to perform an action on. This list appears when Central Point Anti-Virus, Optimizer, or DiskFix is selected in the Action box. You can specify multiple drives.

Setup File: Specifies the backup setup file you want to use for Central Point Backup. This list appears only when Central Point Backup is selected in the Action box.

Enabled: Turns on this event. The event is ignored if this box is not selected.

Prompt Before Run: Specifies that you want Scheduler to notify you before running the event at the scheduled time. This box does not appear if Display a Message is selected in the Action box. The prompt is a countdown dialog box that pops up 30 seconds before the event occurs.

GTMIS OVERVIEW

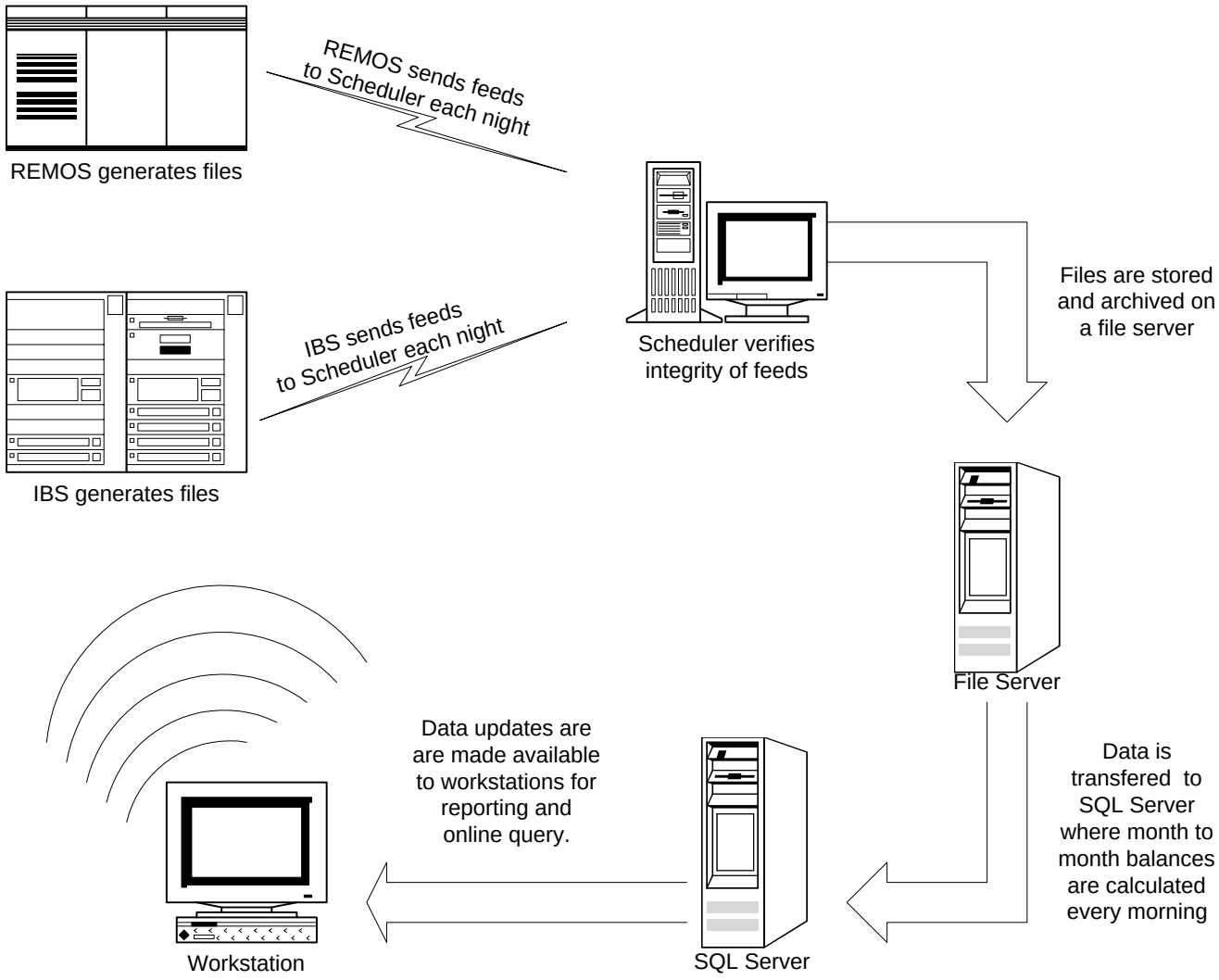
24 Hour Process

The following flowcharts are a basic overview of how data and information flow through GTMIS during a twenty-four hour process.

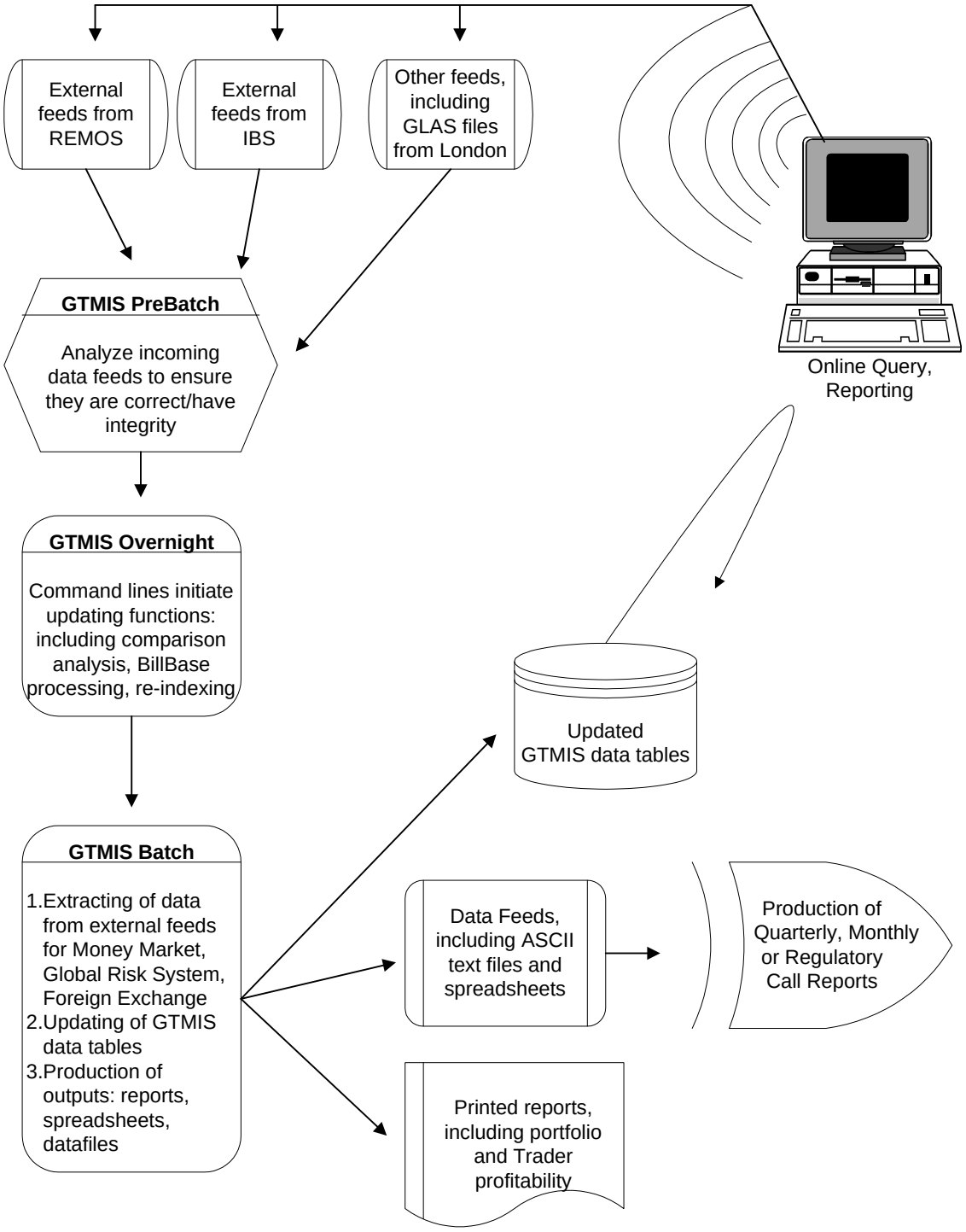
GTMIS Batch Overview

24 Hour Process Diagram

GTMIS Batch Flowchart



GTMIS Overnight Batch Production



Narrative

Batch Production Process

Between the close of day and morning of the next business day, new information that is stored in various files and directories must be shared with other files. Overnight, a sequence of command lines runs a series of programs and procedures that refresh data tables and files through any of the following activities:

Analyzing and correcting the integrity of new data

Replacing and updating old data

Moving, downloading and copying files

Creating and updating new files

Deleting, renaming and overwriting old files

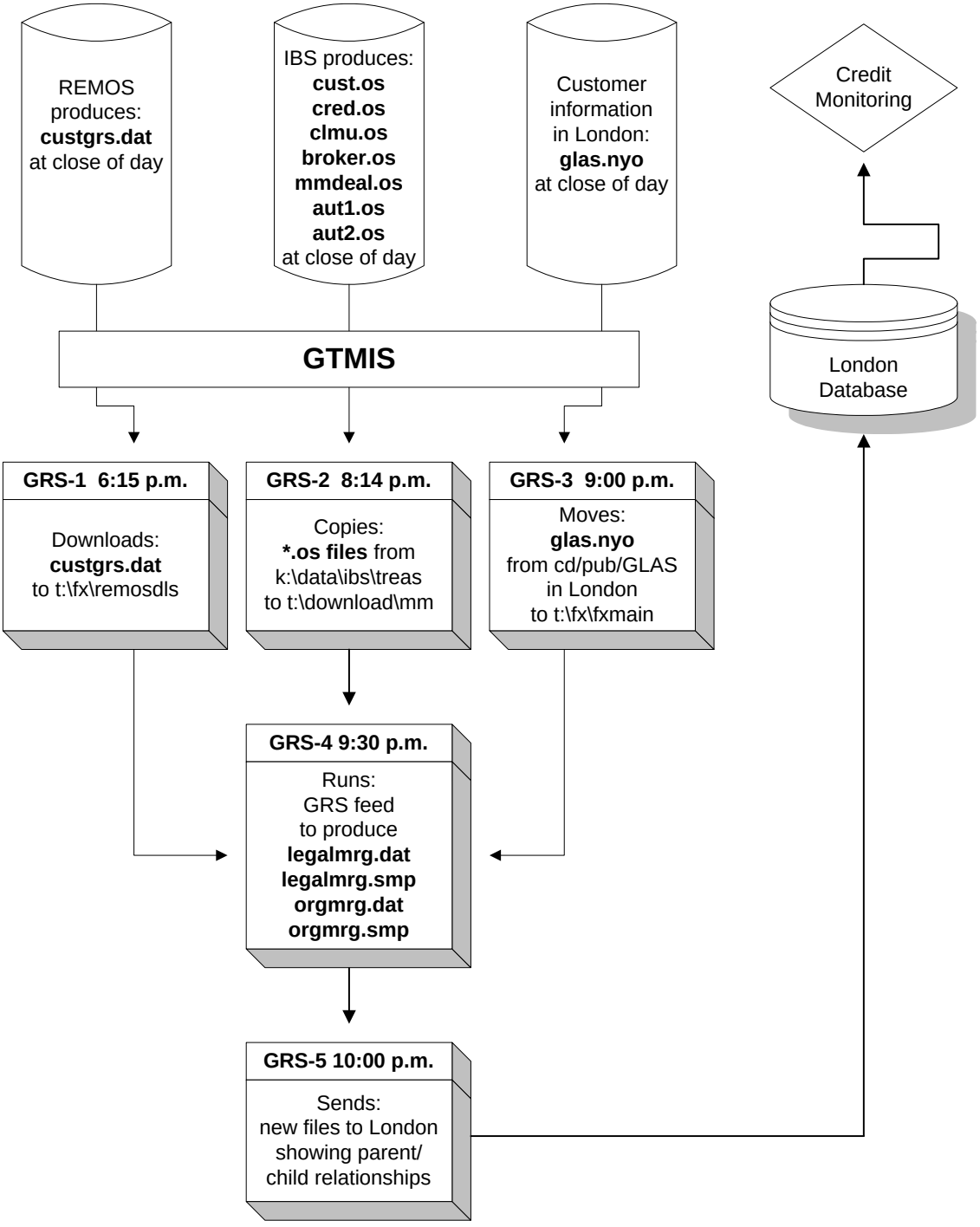
Establishing comparison and contrast data among IBS, REMOS and GTMIS as well as among the files these applications affect

GLOBAL RISK SYSTEMS

The following flowchart illustrates the overnight flow of activity and transference of data in the Global Risk Systems.

Global Risk Systems Overnight Batch Production, Overview of Steps 1-5

Global Risk Systems Overnight Batch Production
Overview of Steps 1-5



Narrative of GRS Process Steps

The following programs and command lines comprise the daily batch production process for GRS. This overnight process refreshes GRS datatables from external sources, including the REMOS and IBS applications, and from a GLAS file in London.

Step 1 at 6:15 p.m.

The command line **c:\rwin\custgrs.rcl** is run to download customer information from the REMOS system. This program downloads the file **custgrs.dat** from REMOS into the directory **t:\fx\remosdls.** When the run is complete, the file overwrites and replaces its version from the previous day, in preparation for Step 4 of the GRS Overnight Batch Production Process.

Following are the contents of c:\rwin\custgrs.rcl:

```
Receive t:\fx\remosdls from disk$remos01:[remos_shell.gateway]custgrs.dat ASCII Delete
```

Step 2 at 8:14 p.m.

The command line **copy_ibs.bat** is run to copy customer information from the IBS system. This program copies the *.os files from the **k:\data\ibs\treas** directory in IBS into the **t:\download\mm** directory of GTMIS. These new files are as follows:

- cust.os
- cred.os
- broker.os
- mmdeal.os
- aut1.os
- aut2.os

When the run is complete, these files overwrite and replace their versions from the previous day, in preparation for step 4 of the GRS overnight process.

Following are the contents of copy_ibs.bat:

```
copy k:\data\ibs\treas\*.os
```

Step 3 at 9:00 p.m.

The command line **t:\fx\fxmain\ftpglas.bat** is run to retrieve customer information from a GLAS file in London. This program moves the file **glas.nyo** from the London directory **cd/pub/GLAS** to the local GTMIC directory **t:\fx\main.** The moved file replaces its version from the previous day, in preparation for step 4 of the GRS overnight process.

Following are the contents of ftpglas.bat

```
ftp -s:ftpglas.ftp
```

These are the contents of the internal command line, ftpglas.ftp:

```
lcd t:\fx\output
open 191.1.250.54
ftp
ftp
cd /pub/GLAS
get glas.nyo
disconnect
lcd t:\fx\fxmain
quit
```

Step 4 at 9:30 p.m.

The command line **t:\fx\fxmain\grs.exe** is run to create the feed for GRS customer information. The program accesses three directories for the eight files that were downloaded, copied or moved during steps 1-3 of the GRS process. Next, the program generates the GRS feed and extracts data from the eight files. This process analyzes and compares the customer information from each of the IBS and REMOS systems, and from the GLAS file in London. When the run is complete, the following files are produced:

- legalmrg.dat
- legalmrg.smp
- orgmrg.dat
- orgmrg.smp

These files each list and illustrate various parent/child relationships, and how each relationship compares with other corporations and their subsidiary branches. These new files replace their versions from the previous day, in preparation for Step 5.

Step 5 at 10:00 p.m.

The command line **t:\fx\fxmain\ftpgrs.bat** is run to send GRS customer information to London. After the GRS feed during Step 4 generates four new files, this program sends them to London for credit monitoring, where they overwrite and replace their versions from the previous cycle.

Following are the contents of ftpgrs.bat:

```
ftp -s:ftpgrs.ftp
```

These are the contents of the internal command, **ftpgrs.ftp:**

```
lcd t:\fx\output
open 191.1.250.54
ftp
ftp
cd /pub/NYCust
put legalmrg.dat
put legalmrg.smp
put orgmrg.dat
put orgmrg.smp
disconnect
open 191.1.250.52
ftp
ftp
cd /pub/NYCust
put legalmrg.dat
put legalmrg.smp
put orgmrg.dat
put orgmrg.smp
disconnect
open 191.1.24.154
ftp
ftp
cd /pub/NYCust
put legalmrg.dat
put legalmrg.smp
put orgmrg.dat
put orgmrg.smp
lcd t:\fx\fxmain
disconnect
quit
```

MONEY MARKETS

The following flowcharts illustrate the overnight flow of activity and transference of data in Money Markets .

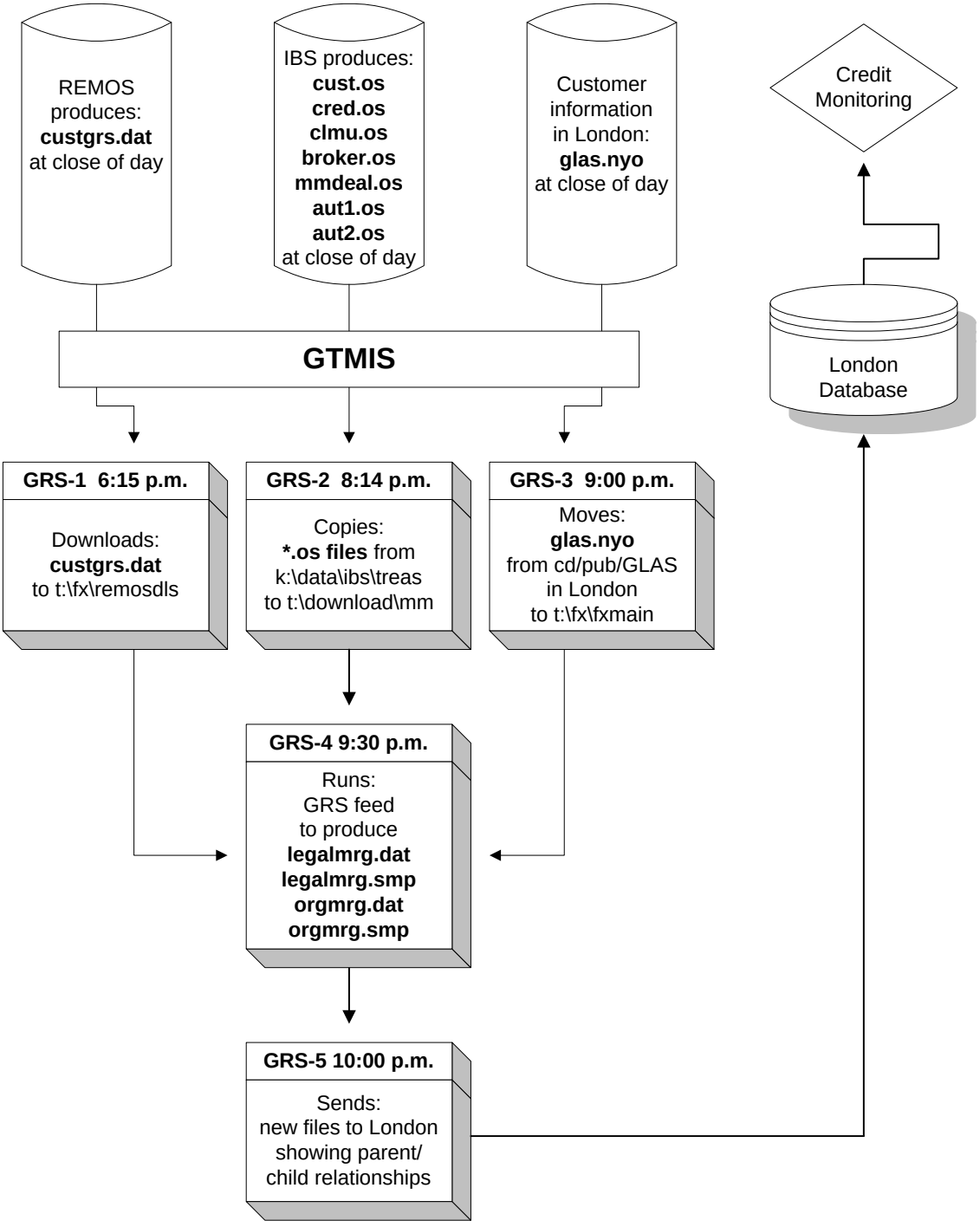
Money Markets Overnight Batch Production, Step 1

Money Markets Overnight Batch Production, Step 2

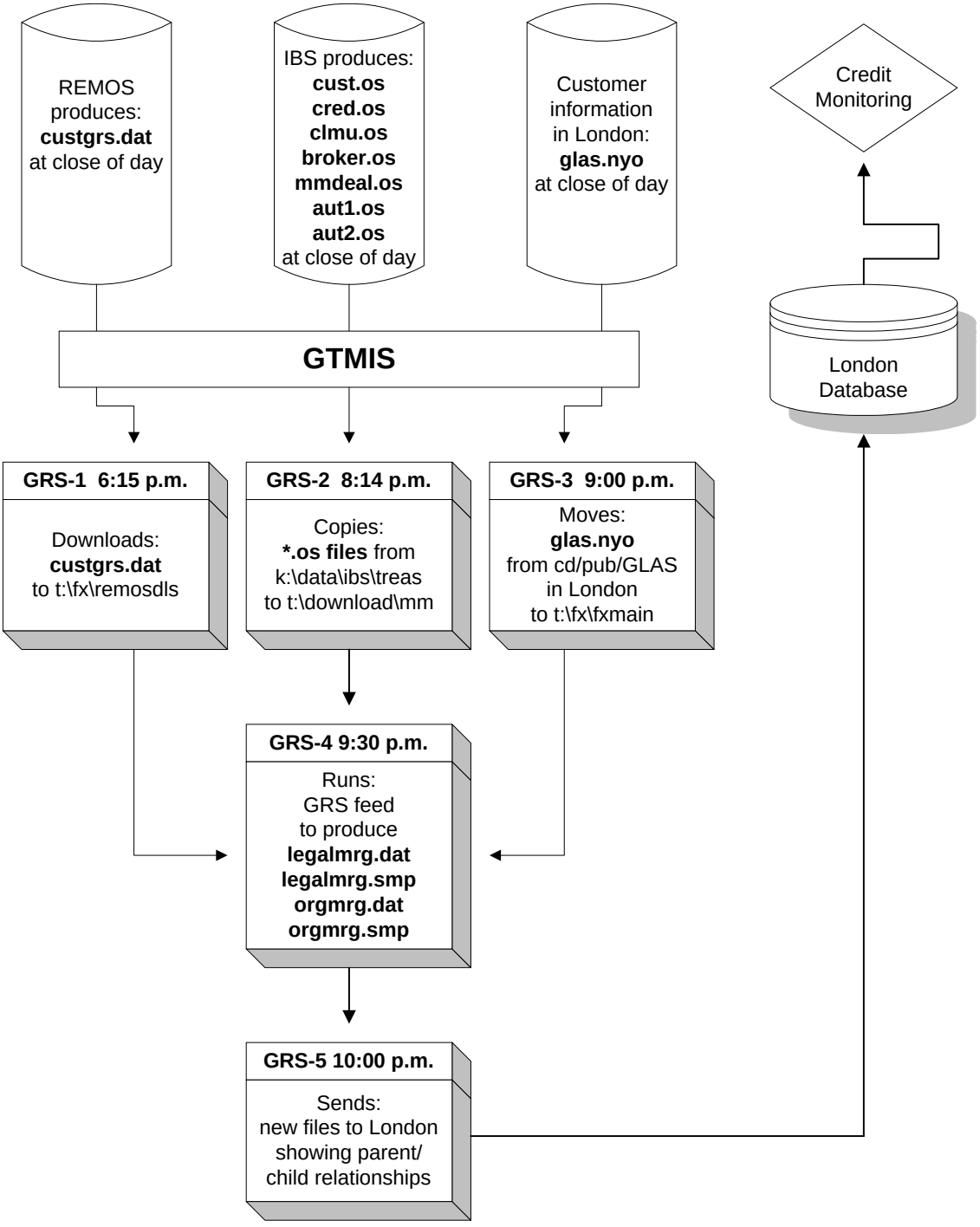
Money Markets Overnight Batch Production, Step 3

Money Markets Overnight Batch Production, Step 4

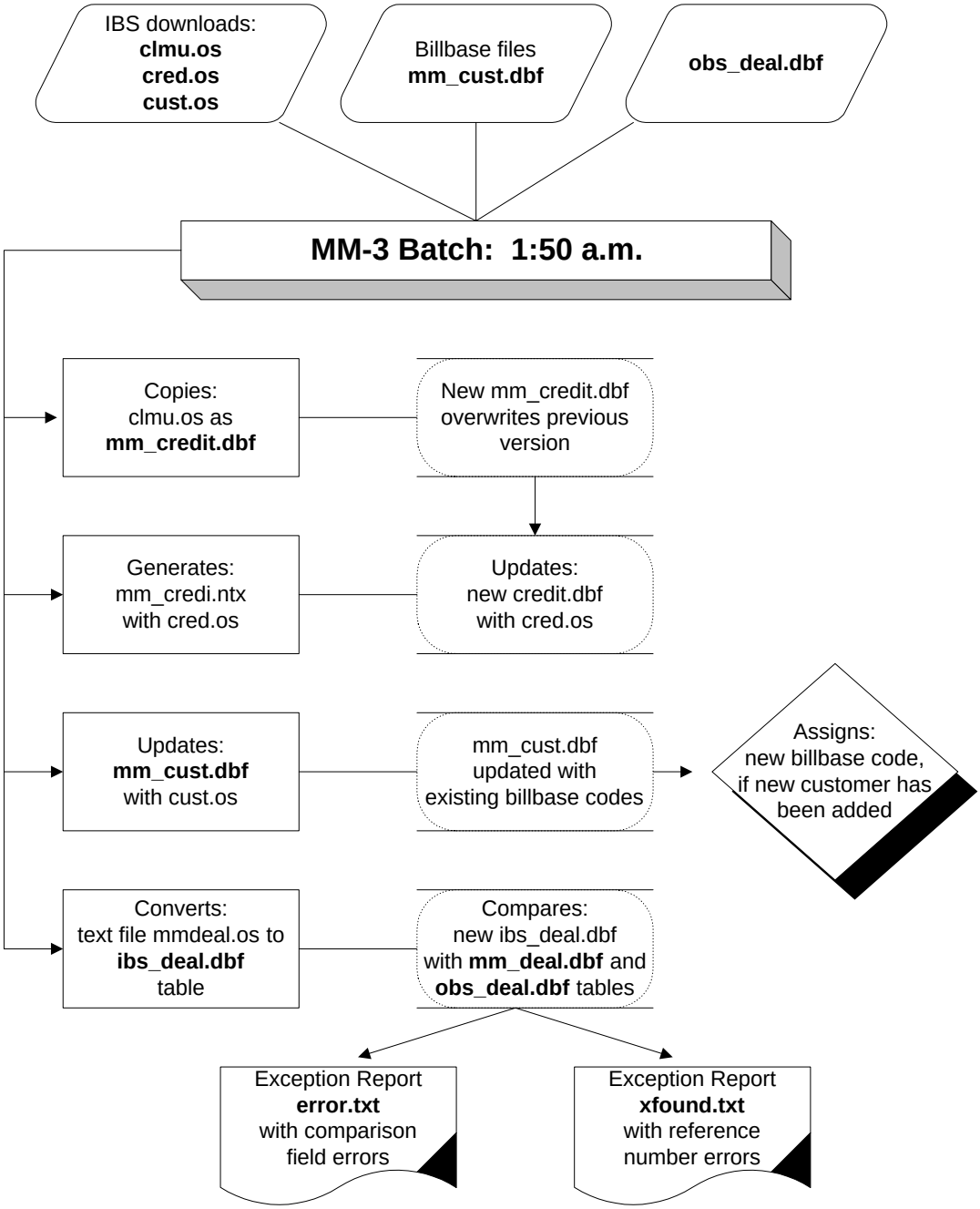
Global Risk Systems Overnight Batch Production
Overview of Steps 1-5



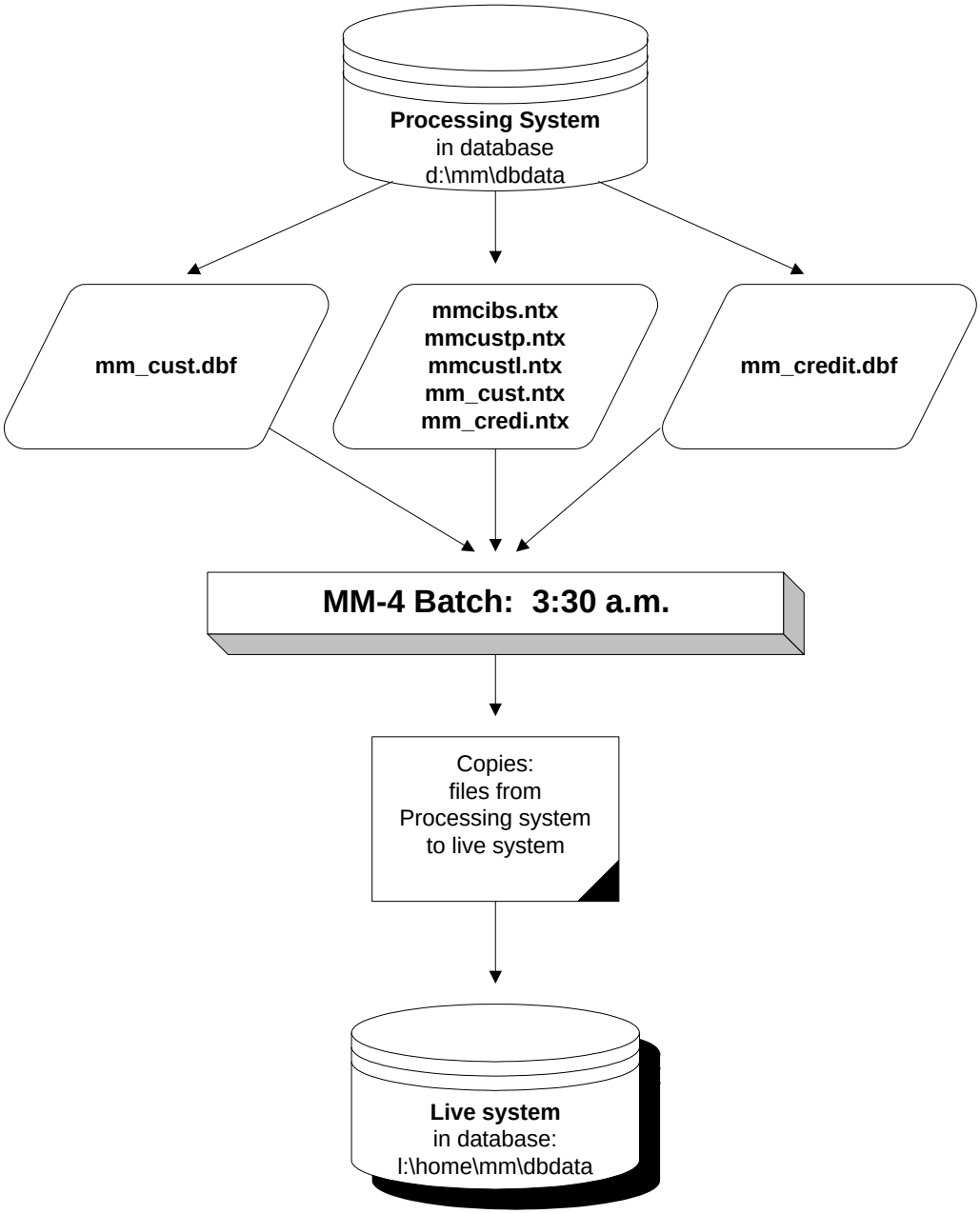
Global Risk Systems Overnight Batch Production
Overview of Steps 1-5



Money Markets Overnight Batch Production
Step 3



Money Markets Overnight Batch Production
Step 4



Narrative of MM Process Steps 1-4

The following programs and command lines comprise the daily batch production process for Money Markets. This overnight process refreshes MM datatables from external sources, including the REMOS and IBS applications.

Step 1 at 1:25 am

The command line **d:\download\mm\copy2tem.bat** is run to copy files from a live system to a processing system. The program accesses the l:\home\mm\dbdata directory and copies the following files into the **d:\mm\dbdata** directory:

IBS downloads:

- cust.os
- cred.os
- broker.os
- mmdeal.os
- aut1.os
- aut2.os

MM Bilbase files at close of day:

- mm_deal.dbf
- mm_cust.dbf

OBS Billbase file at close of day:

- obs_deal.dbf

These updates overwrite and replace their versions from the previous day.

Following are the contents of copy2tem.bat:

```
REM File copies from live system onto test system
REM It will copy the IBS Downloads
REM and the will copy (with shared file method) the BillBase Files required

echo "start of copy2tem"  >copy2tem.log
echo "start MM deal copy to process environment"  >>copy2tem.log
from_to l:\mm\dbdata\mm_deal.dbf      mm_deal.dbf

echo "start OBS deal copy to process environment"  >>copy2tem.log
from_to l:\obs\mm\dbdata\mm_deal.dbf  obs_deal.dbf

echo "start customer copy to process environment"  >>copy2tem.log
from_to l:\mm\dbdata\mm_cust.dbf      mm_cust.dbf

echo "start customer 2 copy to process environment"  >>copy2tem.log
copy mm_cust.dbf x_cust.dbf

REM NO NEED TO COPY CREDIT FILE BECAUSE IT GETS RE-CREATED

echo "start copy of IBS downloads to process environment"  >>copy2tem.log
copy k:\data\ibs\treas\*.os .
echo "end of copy2tem"  >>copy2tem.log
```

Step 2 at 1:35 a.m.

The command line d:\download\mm\mm_index.exe is run to reindex into alternative views the three *.odb files copied during Step 1. After the program accesses the **d:\mm\dbdata** directory, the *.odb copies are reindexed into *.cgp portfolios. Each *.cgp contains one or more alternative views with *.ntx extensions, as follows:

mm_deal.dbf converts to

- mm_deal.cgp, containing:
  - mm_deal.ntx
  - mmdmat.ntx
  - mmdtrd.ntx
  - mmdcust.ntx

mm_cust.dbf converts to

- mm_cust.cgp, containing:
  - mm_cust.ntx
  - mmcustp.ntx
  - mmcibs.ntx
  - mmcustl.ntx

obs_deal.dbf converts to

- obs_deal.cgp, containing:
  - obsdcust.ntx

These updates overwrite and replace their versions from the previous day.

Step 3 at 1:50 a.m.

The command line d:\download\mm\ibs_2_bb.exe is run to compare various IBS data to BillBase data. The program accesses the processing system's directory **d:\mm\dbdata,** and copies of the following files:

IBS Downloads

- clmu.os
- cred.os
- cust.os

BillBase files at close of day

- obs_deal.dbf
- mm_cust.dbf

Beginning with data extracted from the IBS downloaded *.os text files, five separate updates are run. Clmu.os is used to overwrite the current version of mm_credit.dbf. Immediately following this procedure, the new credit.dbf is updated with data from cred.os, which completes the credit line utilization update.

The Money Markets BillBase file mm_cust.dbf is updated with data from cust.os, then refreshed with the existing BillBase codes. When new customers have been added to the table, BillBase codes are created and assigned accordingly.

The text file mmdeal.os is converted into the **ibs_deal.dbf** datatable. This new table along with the **mm_deal.dbf** and **obs_deal.dbf** files are used to compare the deal databases of the IBS and BillBase systems, with emphasis in the following fields:

- deal_num
- branch
- deal_type
- start_dt
- maturity
- notional
- rate
- spread
- currency

When the process has completed its study, the following Exception Reports are produced:

- xfound.txt
- error.txt

The xfound report lists the individual deals whose BillBase reference numbers are not the same in all three files. The error.txt report lists whether there is a problem or error with one or more of the comparison fields.

Step 4 at 3:30 a.m.

The command line d:\download\mm\copy2liv.bat is run to copy seven credit and customer files to the live system. This program accesses the processing system's directory **d:\mm\dbdata** and copies the following files to the l:\home\mm\dbdata directory of the live system:

- mm_cust.dbf
- mm_credit.dbf
- mmcibs.ntx
- mmcustp.ntx
- mmcustl.ntx
- mm_cust.ntx
- mm_credi.ntx

These updates overwrite and replace their versions from the previous day.

Following are the contents of copy2liv.bat:

```
REM copy from the processes area to the live environment
```

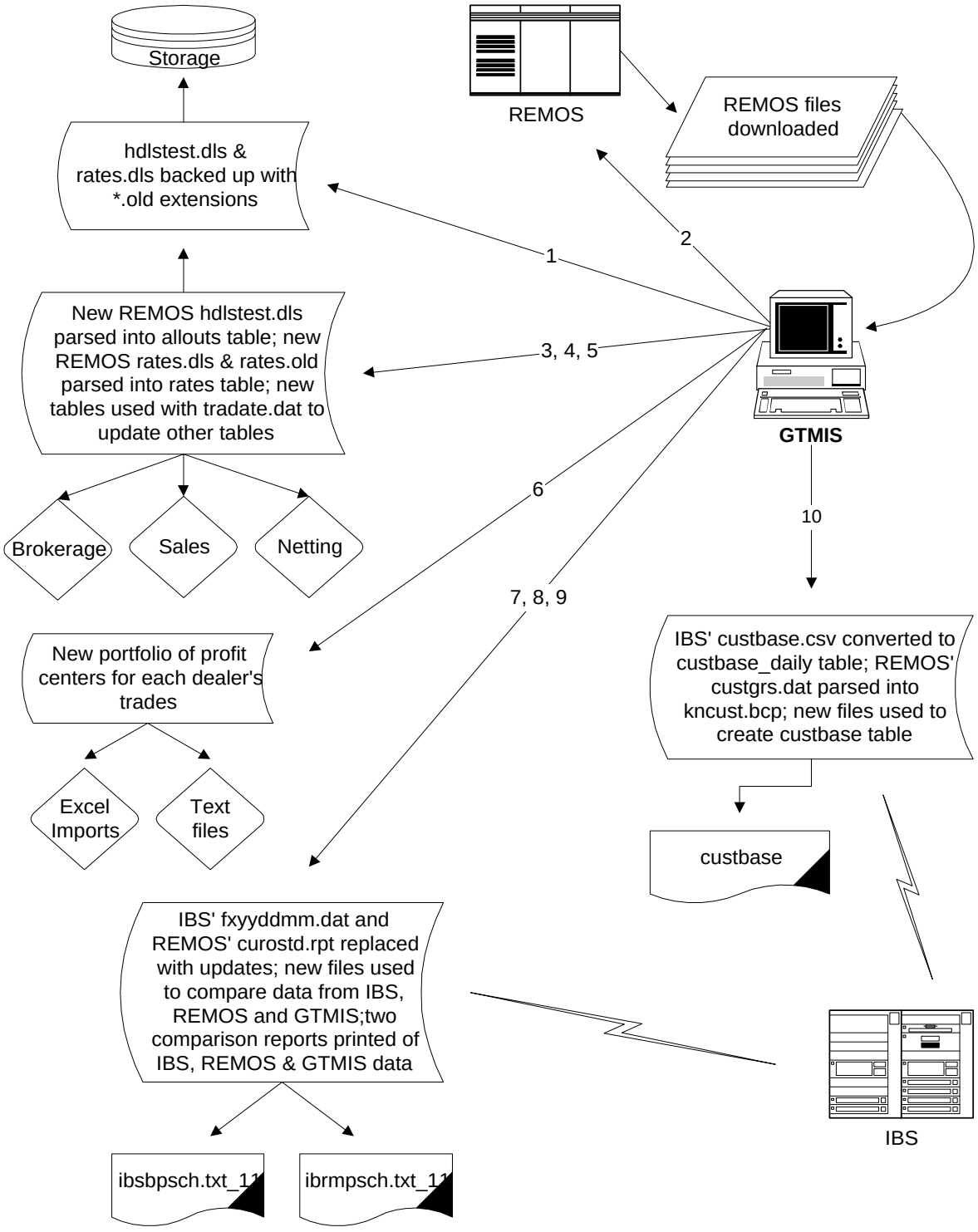
```
REM Copy credit
echo "start of copy2liv"  >>ibs2bb.log
echo "start credit copy to live environment"  >>ibs2bb.log
copy mm_credi.* l:\mm\dbdata
echo "end credit copy"  >>ibs2bb.log

REM copy customer
echo "start customer copy to live environment"  >>ibs2bb.log
copy mm_cust.*  l:\mm\dbdata
copy mm_cust.dbf          l:\download\mm\x_cust.dbf

REM copy customer index files
copy mmc*.ntx l:\mm\dbdata
echo "end customer copy"  >>ibs2bb.log
echo "end of copy2liv"  >>ibs2bb.log
```

FOREIGN EXCHANGE

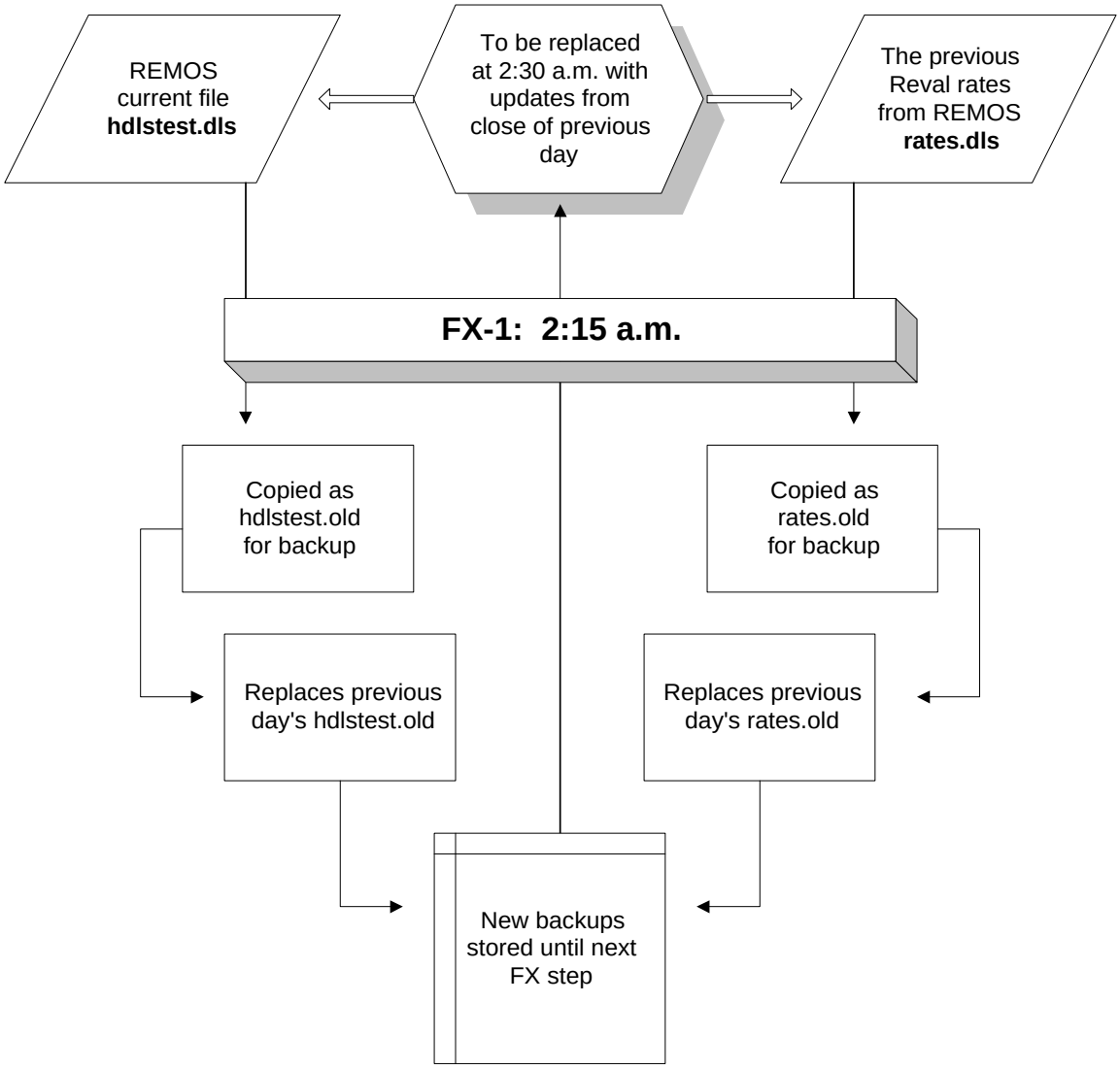
The following flowcharts illustrate the overnight flow of activity and transference of data in Foreign Exchange.

- Foregin Exchange Overnight Batch Production, Overview of Steps 1-10
- Foregin Exchange Overnight Batch Production, Step 1
- Foregin Exchange Overnight Batch Production, Steps 2-5
- Foregin Exchange Overnight Batch Production, Step 6
- Foregin Exchange Overnight Batch Production, Steps 7
- Foregin Exchange Overnight Batch Production, Steps 8
- Foregin Exchange Overnight Batch Production, Steps 9
- Foreign Exchange Overnight Batch Production, Step 10

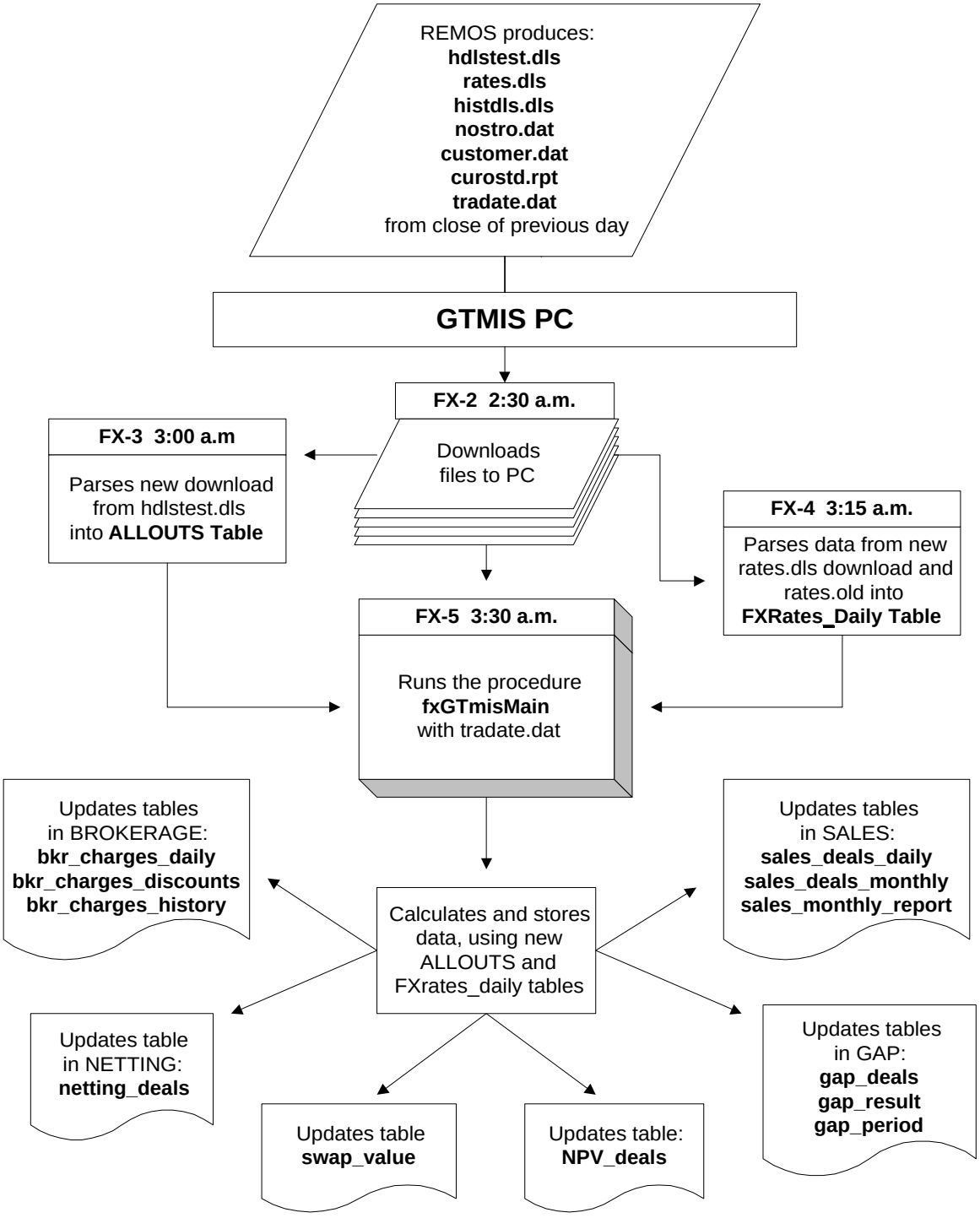
Foreign Exchange Overnight Batch Production
Overview of Steps 1-10



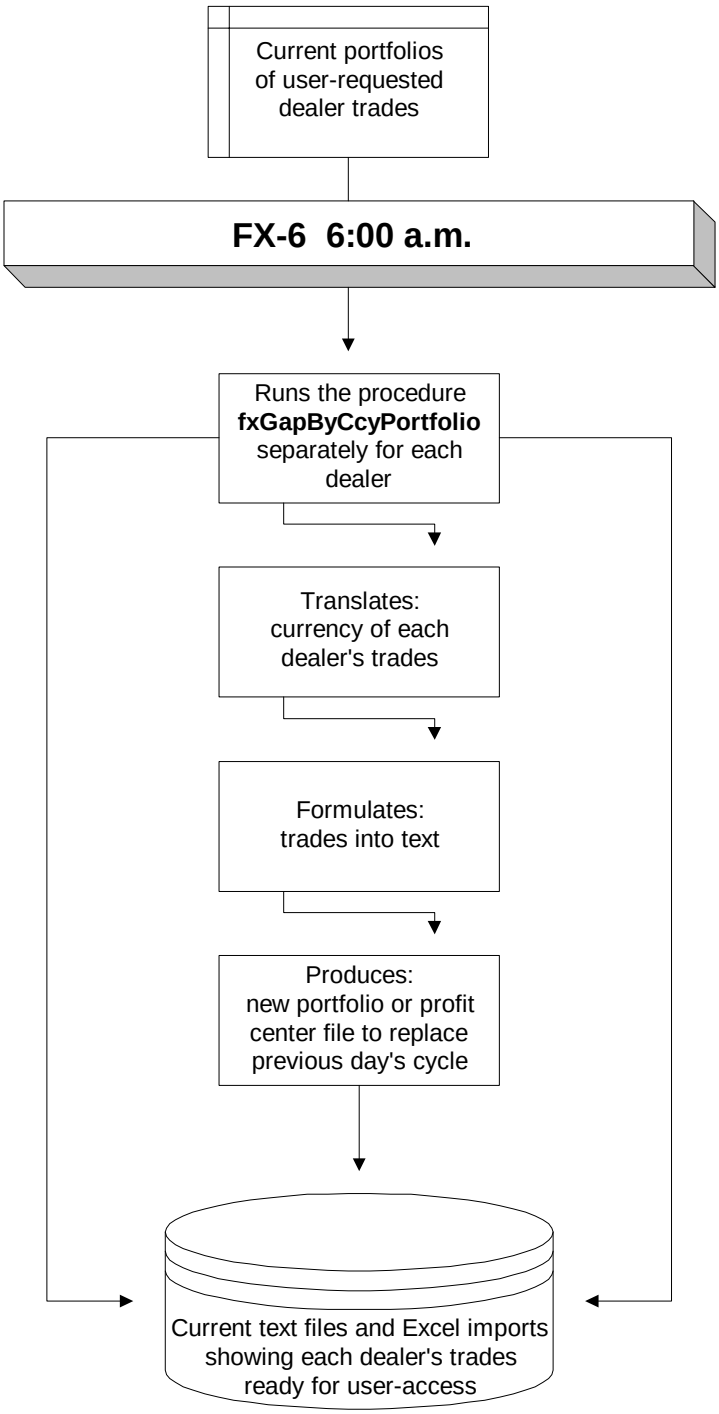
Foreign Exchange Overnight Batch Production
Step 1



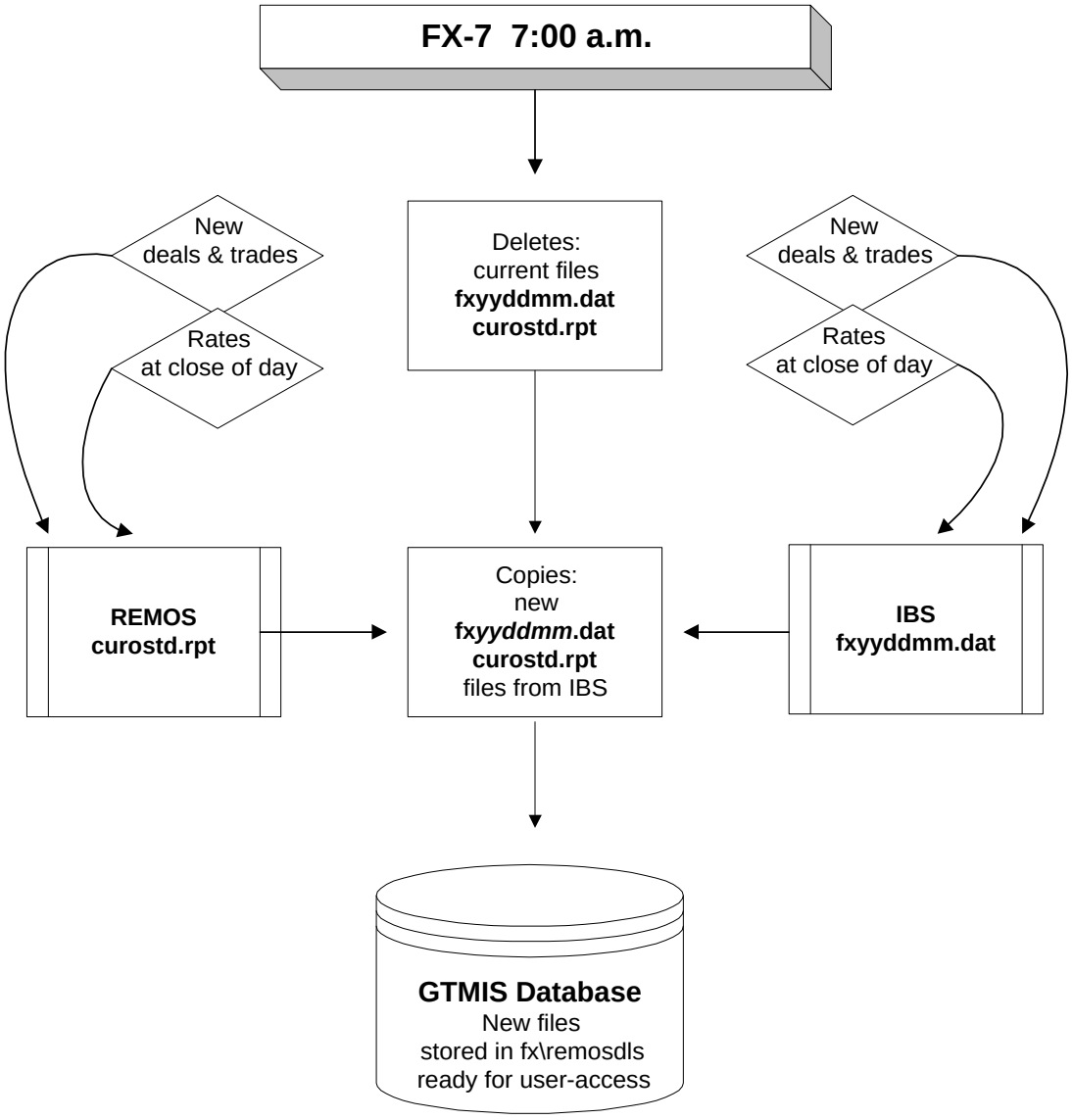
Foreign Exchange Overnight Batch Production
Steps 2 - 5



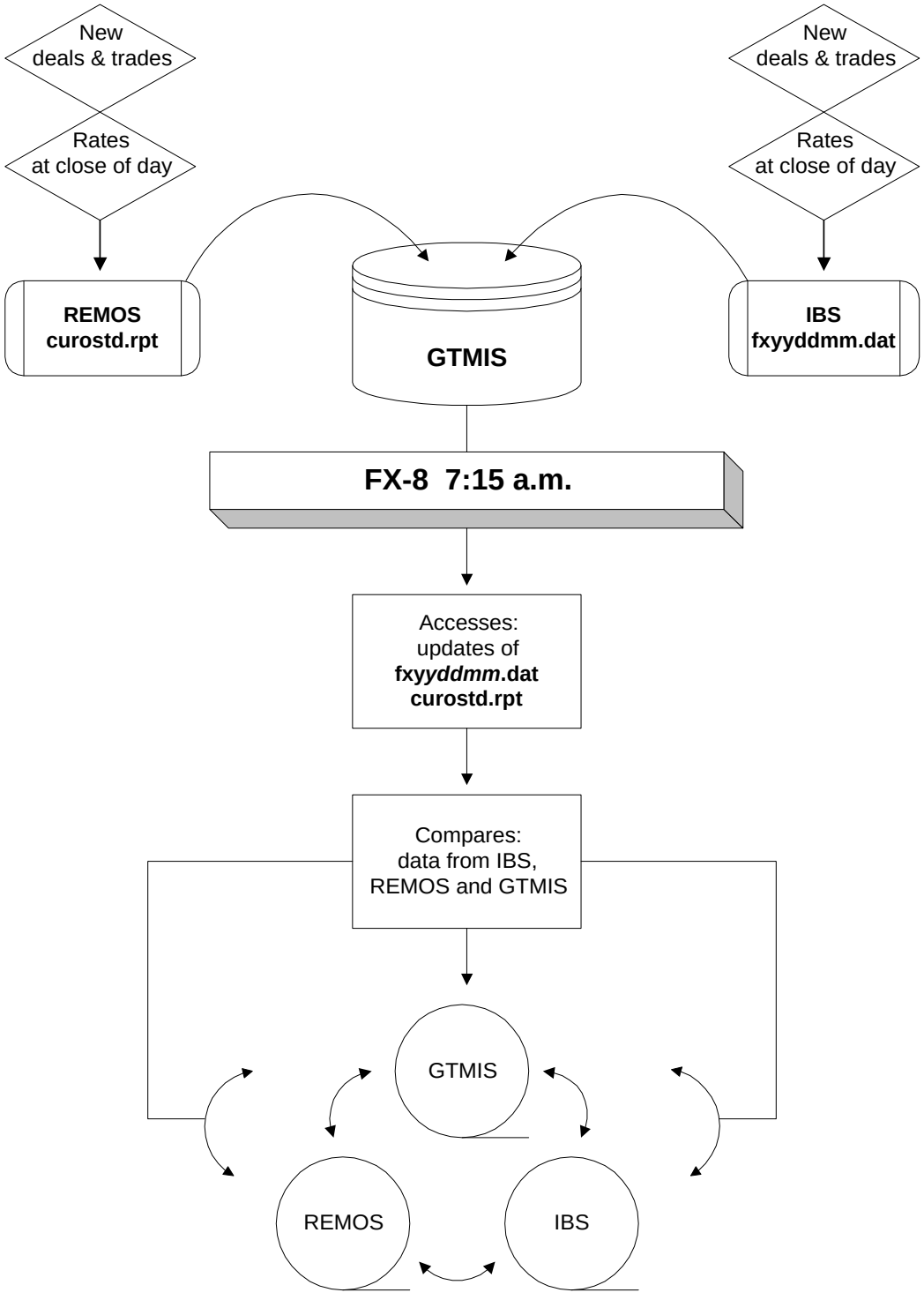
Foreign Exchange Overnight Batch
Step 6



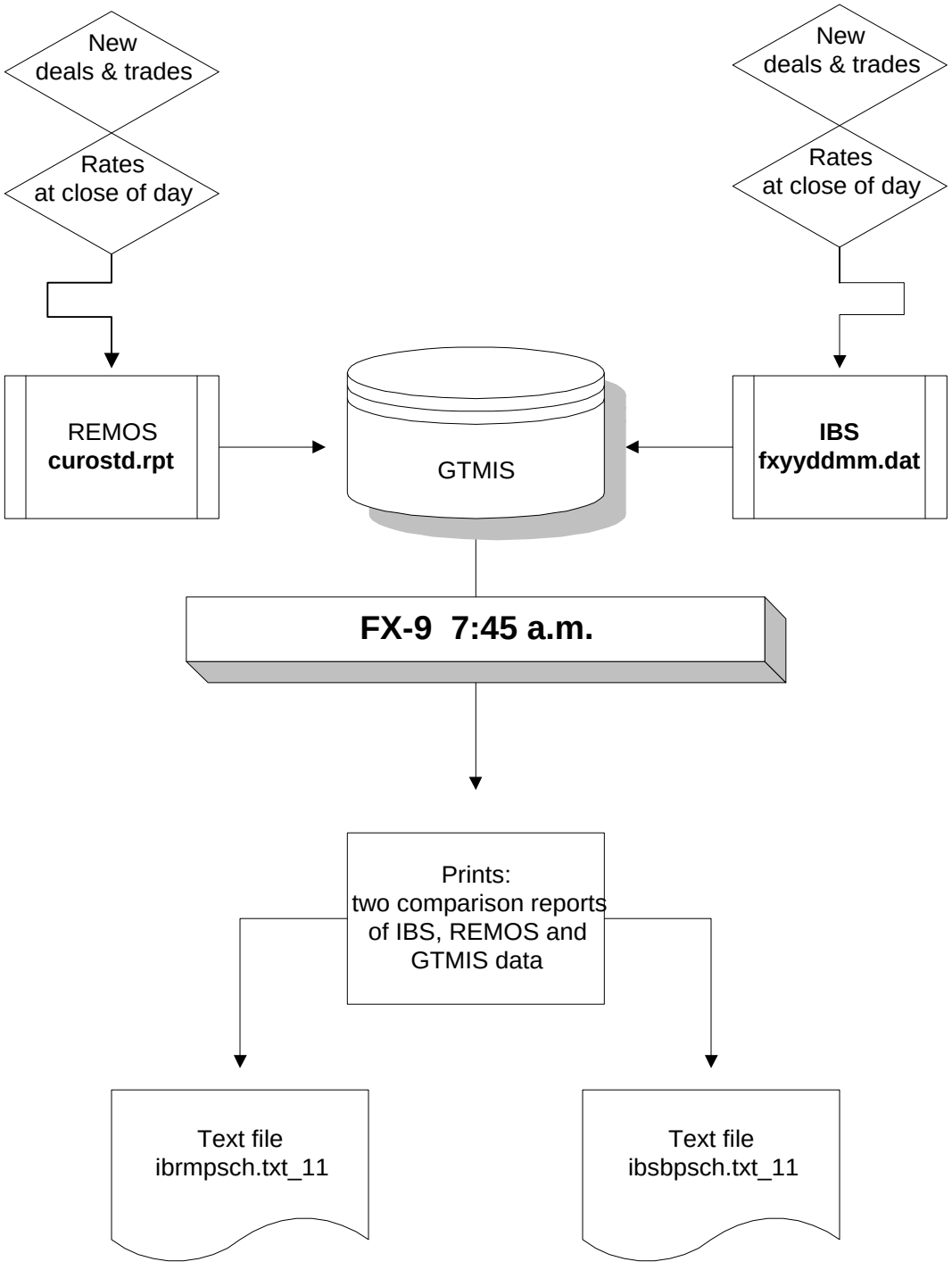
Foreign Exchange Overnight Batch Production
Step 7



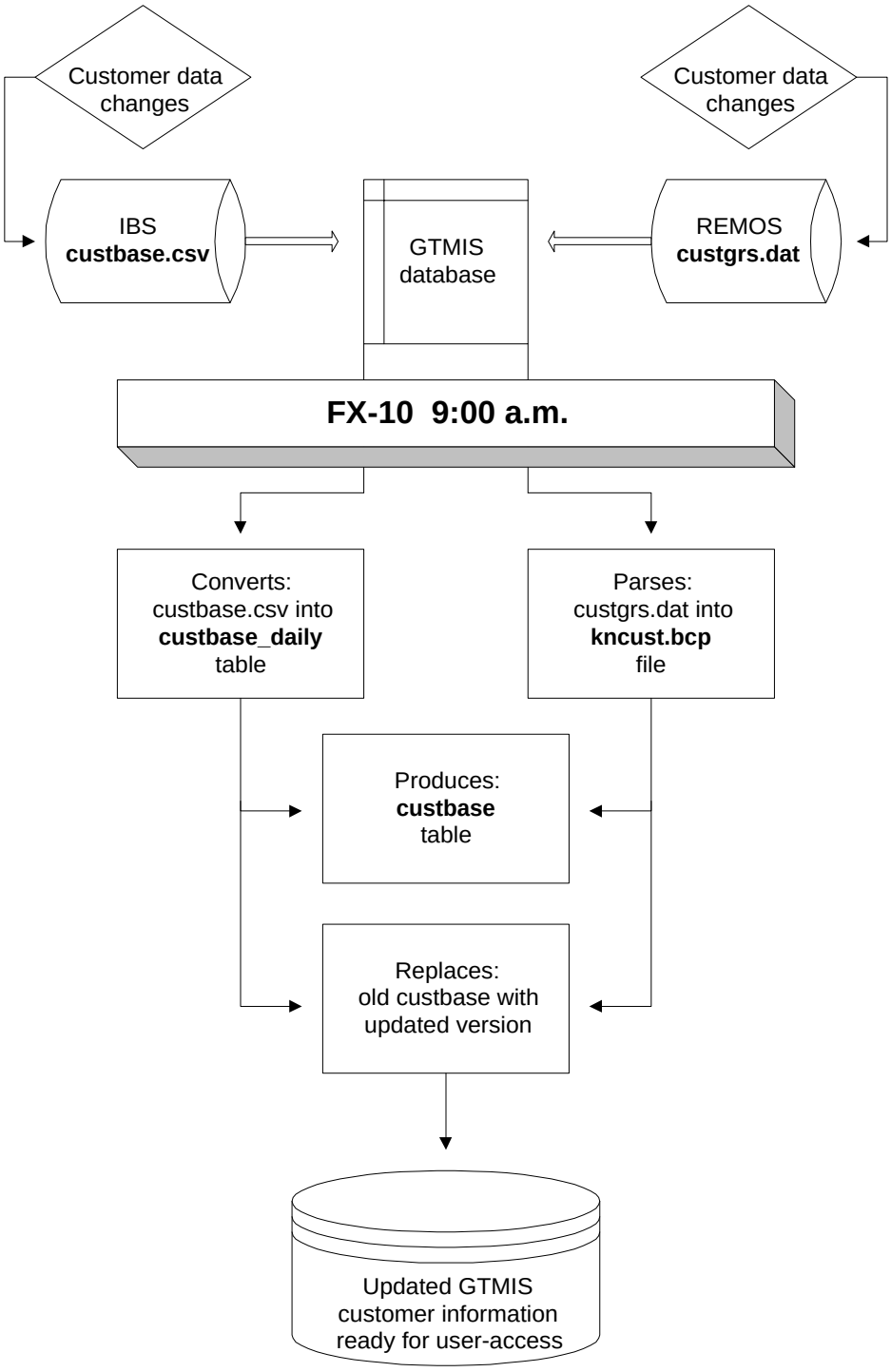
Foreign Exchange Overnight Batch Production
Step 8



Foreign Exchange Overnight Batch Production
Step 9



Foreign Exchange Overnight Batch Production
Step 10



Narrative of FX Process Steps 1-10

The following programs and command lines comprise the daily batch production process for Foreign Exchange. This overnight process refreshes Foreign Exchange datatables from external sources, including the REMOS and IBS applications.

Step 1 at 2:15 a.m.

The command line **t:\fx\fxmain\backup.bat** is run. This program copies the current **hdlstest.dls** file as a backup with an **.old** extension, which overwrites the current **hdlstest.old** created the previous day.

The new backup is stored in the same directory until the end of the business day, when this updating process is repeated. Later, the command line in Step 2 will replace the pre-existing hdlstest.dls file when it downloads a new version.

Following are the contents of t:\fx\fxmain\backup.bat:

```
copy t:\fx\remosdls\hdlstest.dls t:\fx\remosdls\hdlstest.old
copy t:\fx\remosdls\rates.dls t:\fx\remosdls\rates.old
```

Step 2 at 2:30 a.m.

The command line **c:\rwin\gtmis.rcl** is run. This program accesses the **t:\fx\remosdls** directory and downloads seven files from the REMOS VAX into a GTMIS PC:

- histdls.dls
- rates.dls
- nostro.dat
- customer.dat
- curostd.rpt
- hdlstest.dls
- tradate.dat

These REMOS updates overwrite and replace their versions from the previous day.

Following are the contents of c:\rwin\gtmis.rcl:

```
Receive T:\FX\REMOSDLS\HISTDLS.DLS  from
DISK$REMOS01:[REMOS_SHELL.GATEWAY]HISTDLS.DLS ASCII Delete
Receive T:\FX\REMOSDLS\RATES.DLS     from
DISK$REMOS01:[REMOS_SHELL.GATEWAY]RATES.DLS ASCII Delete
Receive t:\fx\remosdls       from disk$remos01:[remos_shell.gateway]nostro.dat ASCII Delete
```

```
Receive T:\FX\REMOSDLS        from
DISK$REMOS01:[REMOS_SHELL.GATEWAY]CUSTOMER.DAT ASCII Delete
Receive T:\FX\REMOSDLS        from DISK$REMOS01:[20.FX_1]CUROSTD.RPT ASCII Delete
Receive T:\FX\REMOSDLS         from
DISK$REMOS01:[REMOS_SHELL.GATEWAY]HDLSTEST.DLS ASCII Delete
Receive T:\FX\REMOSDLS\tradate.dat  from DISK$spare07:[pre.20.fx_dir1]fx_trade_date.dat ASCII
Delete
```

Step 3 at 3:00 a.m.

The command line **t:\fx\gtmis\aoparser.exe** is run. The program parses data from the new hdlstest.dls that was downloaded during Step1, from which it produces a new **ALLOUTS_Table** that will be used to complete Step 5.

Step 4 at 3:15 a.m.

The command line

t:\fx\gtmis\rp.exe/NEW:t:\fx\remosdls\rates.dls/OLD:t:\fx\remosdls\rates.old/AUTO

is run. This program parses data from both the new rates.old and the rates.dls files that were created during Step 1. The parsing produces a new **FXrates_Daily_Table** that is immediately used in the following stage of the Foreign Exchange updating process.

Step 5 at 3:30 a.m.

The command line **t:\fx\gtmis\gtmisclc.bat** is run. This program accesses the tradate.dat file and uses it to initiate the stored procedure fxBTmisMain. This precedure uses a number of methods and sources to calculate and store data from both the ALLOUTS_Table and the FXRates_Daily_Table.

During this procedure, both tables are updated along with the following:

⇒ In Brokerage:

- ♦ bkr_charges_daily
- ♦ bkr_charges_discounts
- ♦ bkr_charges_history

⇒ In Sales:

- ♦ gap_deals
- ♦ gap_result
- ♦ gap_period

⇒ In Netting:

- ♦ netting_deals

⇒ Other tables:

- swap_value
- NPV_deals

Following are the contents of t:\fx\gtmis\gtmisclc.bat:

```
rem dump log
isql -Usa -SUS_NYNT_S03 -P********* -Q"dump tran fxprod with truncate_only" -t0
rem run the fxGtmisMain procedure
isql -Usa -SUS_NYNT_S03 -P********* -Q"exec fxprod.dbo.fxGtmisMain" -t0
```

Step 6 at 6:00 a.m.

The command line l:\temp\fx\gap\gap.bat is run. This program initiates the stored procedure fxGapByCcyPortfolio separately for each dealer. The procedure analyzes and updates each dealer's trading portfolio, or profit center, in the following ways:

- Translates the currency of each dealer's trades into the American dollar.
- Formulates the data from the trades into text.
- Produces a new profit center of trades for this dealer.

After completing its run through each dealer's trades, the procedure produces a comparative list of all the ccy text files and Excel imports of each dealer's profit center, and a single portfolio of all the individual profit centers. The results provide additional information regarding how the dealers' trades compare daily. These files replace their versions of the previous day.

Following are the contents of l:\temp\fx\gap\gap.bat gtmis *********:

```
rem FODM1
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'DEM', 'FODM1'" -n >
FODM1.DEM
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'CHF', 'FODM1'" -n > FODM1.CHF
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'GBP', 'FODM1'" -n > FODM1.GBP
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'JPY', 'FODM1'" -n > FODM1.JPY
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'NLG', 'FODM1'" -n >
FODM1.NLG
rem FOBM1
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'DEM', 'FOBM1'" -n >
FOBM1.DEM
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'CHF', 'FOBM1'" -n > FOBM1.CHF
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'GBP', 'FOBM1'" -n > FOBM1.GBP
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'JPY', 'FOBM1'" -n > FOBM1.JPY
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'NLG', 'FOBM1'" -n >
FOBM1.NLG
rem FOJP1
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'DEM', 'FOJP1'" -n > FOJP1.DEM
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'CHF', 'FOJP1'" -n > FOJP1.CHF
```

```
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'GBP', 'FOJP1'" -n > FOJP1.GBP
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'JPY', 'FOJP1'" -n > FOJP1.JPY
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'NLG', 'FOJP1'" -n > FOJP1.NLG
rem FOGB1
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'DEM', 'FOGB1'" -n >
FOGB1.DEM
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'CHF', 'FOGB1'" -n > FOGB1.CHF
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'GBP', 'FOGB1'" -n > FOGB1.GBP
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'JPY', 'FOGB1'" -n > FOGB1.JPY
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'NLG', 'FOGB1'" -n > FOGB1.NLG
rem FUEX1
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'ATS', 'FUEX1'" -n > FUEX1.ATS
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'BEF', 'FUEX1'" -n > FUEX1.BEF
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'CAD', 'FUEX1'" -n > FUEX1.CAD
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'CHF', 'FUEX1'" -n > FUEX1.CHF
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'DEM', 'FUEX1'" -n > FUEX1.DEM
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'DKK', 'FUEX1'" -n > FUEX1.DKK
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'ESP', 'FUEX1'" -n > FUEX1.ESP
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'FIM', 'FUEX1'" -n > FUEX1.FIM
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'FRF', 'FUEX1'" -n > FUEX1.FRF
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'GBP', 'FUEX1'" -n > FUEX1.GBP
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'IEP', 'FUEX1'" -n > FUEX1.IEP
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'ITL', 'FUEX1'" -n > FUEX1.ITL
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'JPY', 'FUEX1'" -n > FUEX1.JPY
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'NLG', 'FUEX1'" -n > FUEX1.NLG
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'NOK', 'FUEX1'" -n > FUEX1.NOK
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'PTE', 'FUEX1'" -n > FUEX1.PTE
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'SEK', 'FUEX1'" -n > FUEX1.SEK
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'XEU', 'FUEX1'" -n > FUEX1.XEU
rem NYCW1
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'MYR', 'NYCW1'" -n
>NYCW1.MYR
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'SGD', 'NYCW1'" -n >
NYCW1.SGD
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'BHT', 'NYCW1'" -n >
NYCW1.BHT
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'IDR', 'NYCW1'" -n > NYCW1.IDR
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'HKD', 'NYCW1'" -n >
NYCW1.HKD
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'ZAR', 'NYCW1'" -n >
NYCW1.ZAR
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'AUD', 'NYCW1'" -n >
NYCW1.AUD
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'NZD', 'NYCW1'" -n >
NYCW1.NZD
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'CAD', 'NYCW1'" -n >
NYCW1.CAD
rem NYPB1
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'AUD', 'NYPB1'" -n > NYPB1.AUD
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'NZD', 'NYPB1'" -n > NYPB1.NZD
rem NYCH1
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'AUD', 'NYCH1'" -n >
NYCH1.AUD
```

```
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'CAD', 'NYCH1'" -n >
NYCH1.CAD
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'BHT', 'NYCH1'" -n > NYCH1.BHT
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'GBP', 'NYCH1'" -n > NYCH1.GBP
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'HKD', 'NYCH1'" -n >
NYCH1.HKD
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'IDR', 'NYCH1'" -n > NYCH1.IDR
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'JPY', 'NYCH1'" -n > NYCH1.JPY
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'MYR', 'NYCH1'" -n >
NYCH1.MYR
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'NZD', 'NYCH1'" -n >
NYCH1.NZD
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'ZAR', 'NYCH1'" -n > NYCH1.ZAR
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'SGD', 'NYCH1'" -n > NYCH1.SGD
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'DEM', 'NYCH1'" -n >
NYCH1.DEM
rem ALL
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'ATS', 'ALL'" -n > ALL.ATS
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'AUD', 'ALL'" -n > ALL.AUD
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'BEF', 'ALL'" -n > ALL.BEF
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'BHT', 'ALL'" -n > ALL.BHT
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'CAD', 'ALL'" -n > ALL.CAD
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'CHF', 'ALL'" -n > ALL.CHF
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'DEM', 'ALL'" -n > ALL.DEM
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'DKK', 'ALL'" -n > ALL.DKK
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'ESP', 'ALL'" -n > ALL.ESP
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'FIM', 'ALL'" -n > ALL.FIM
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'FRF', 'ALL'" -n > ALL.FRF
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'GBP', 'ALL'" -n > ALL.GBP
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'HKD', 'ALL'" -n > ALL.HKD
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'IDR', 'ALL'" -n > ALL.IDR
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'IEP', 'ALL'" -n > ALL.IEP
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'ITL', 'ALL'" -n > ALL.ITL
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'JPY', 'ALL'" -n > ALL.JPY
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'MYR', 'ALL'" -n > ALL.MYR
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'NLG', 'ALL'" -n > ALL.NLG
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'NOK', 'ALL'" -n > ALL.NOK
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'NZD', 'ALL'" -n > ALL.NZD
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'PTE', 'ALL'" -n > ALL.PTE
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'SEK', 'ALL'" -n > ALL.SEK
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'XEU', 'ALL'" -n > ALL.XEU
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'SGD', 'ALL'" -n > ALL.SGD
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'ZAR', 'ALL'" -n > ALL.ZAR
rem
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'DEM', 'DMCAY'" -n >
DMCAY.DEM
isql -s , -S US_NYNT_S03 -U %1 -P %2 -Q "fxGapByCcyPortfolio 'JPY', 'JPCAY'" -n > JPCAY.JPY
```

Step 7 at 7:00 a.m.

The command line **t:\fx\gtmis\curostd.bat** is run. This program accesses the **t:\fx\remosdls** directory and deletes the **fxyyddmm.dat** file, which was downloaded from the IBS system, and the **curostd.rpt file** from REMOS. These files are immediately replaced with copies of updated versions.

Following are the contents of curostd.bat:

```
del t:\fx\remosdls\fx*.dat
copy k:\data\ibs\treas\fx*.dat t:\fx\remosdls
```

Step 8 at 7:15 a.m.

The command line t:\fx\gtmis\ibschk1.exe curostd.rpt is run. This program accesses the updated versions of the fxyyddmm.dat and curostd.rpt files, which had just copied into in the t:\fx\remosdls directory during Step 7. With these files, the program runs various tests and procedures to compare the efficasies of the IBS, REMOS and GTMIS systems.

Step 9 at 7:45 a.m.

The command line poschk.bat is run. This program prints the two comparison reports that were created during the FX-8 process, and which display various comparisons and contrasts that group and distinguish the IBS, REMOS and GTMIS systems. These reports are:

- ibrmpsch.txt_11
- ibsbpsch.txt_11

Following are the contents of poschk.bat:

```
rem 1 copy of ibs/remos
prt t:\fx\remosdls\ibrmpsch.txt l1
rem 1 copy of remos/gtmis
prt t:\fx\remosdls\ibsbpsch.txt l1
```

Step 10 at 9:00 a.m.

The command line t:\fx\gtmis\custin.bat is run to produce GTMIS Customer Information. This program has a series of Steps and functions, beginning with accessing the newest versions of the IBS file custbase.cvs and the REMOS file custgrs.dat, which were earlier downloaded into the GTMIS PC.

During the next stage of the FX-10 process, custbase.cvs is converted into the custbase_daily table and custgrs.dat is parsed into the kncust.bcp file. Out of these new files, the custbase file is produced, replacing the version from the previous day.

Following are the contents of custin.bat:

```
isql -S US_NYNT_S03 -U gtmis -P ********* -Q "delete from CUSTBASE_DAILY"
isql -S US_NYNT_S03 -U gtmis -P ********* -Q "delete from KNCUST"
grsparse T:\FX\REMOSDLS\CUSTGRS.DAT KNCUST.BCP
bcp CUSTBASE_DAILY in t:\fx\output\custbase.csv -SUS_NYNT_S03 -Ugtmis -P********* -t ~ -r \n
-c
bcp KNCUST in KNCUST.BCP -SUS_NYNT_S03 -Ugtmis -P********* -t ~ -r \n –c
```

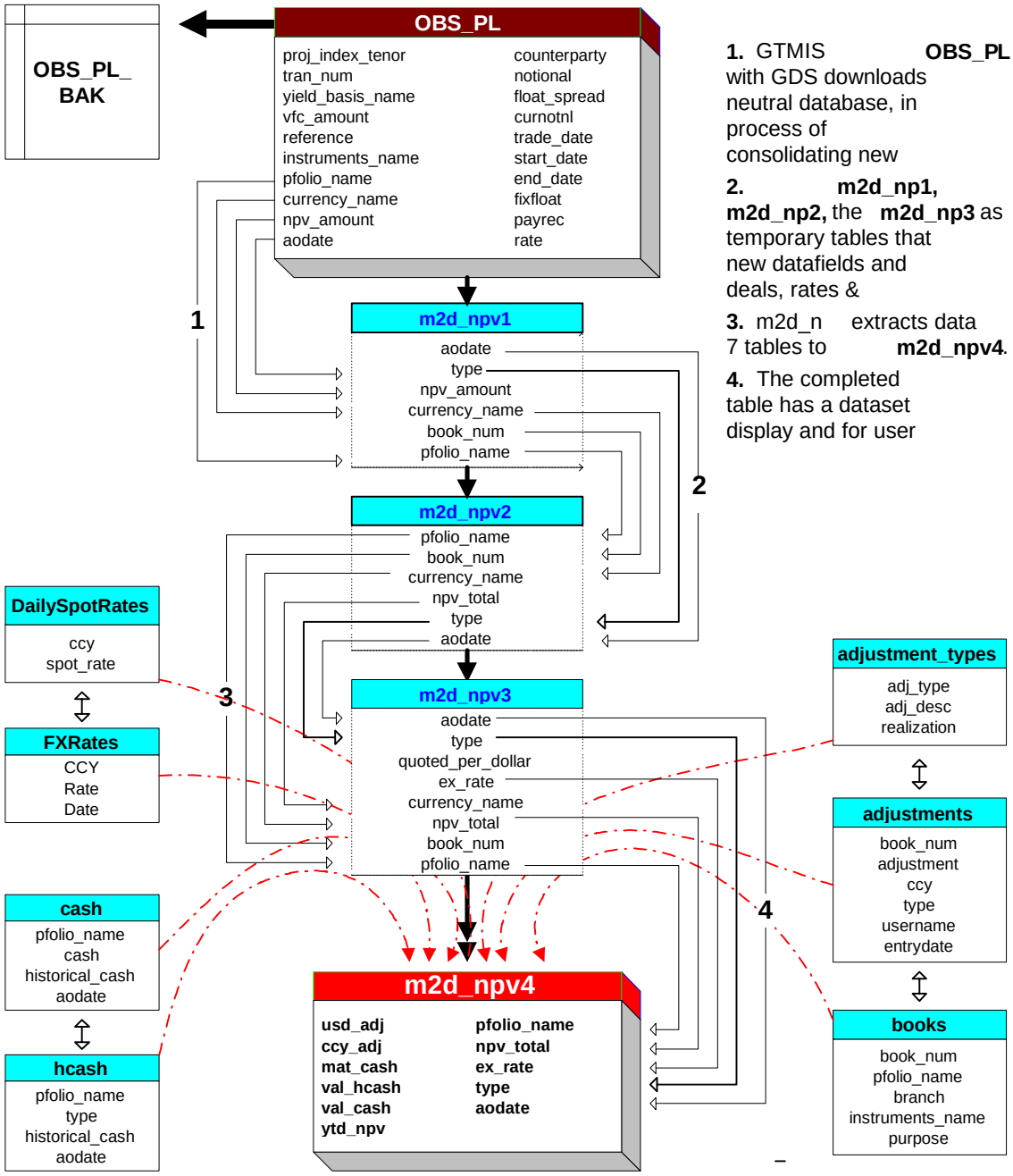
OBS P/L

The following flowchart illustrates the overnight flow of activity and transference of data from GDS to GTMIS datatables.

- Batch Flowchart of OBS P/L Tables

GDS to GTMIS Diagram

Batch Flowchart of OBS P/L Tables



1. GTMIS **OBS_PL** with GDS downloads neutral database, in process of consolidating new

2. **m2d_np1, m2d_np2,** the **m2d_np3** as temporary tables that new datafields and deals, rates &

3. m2d_n extracts data 7 tables to **m2d_npv4**.

4. The completed table has a dataset display and for user

Narrative

To refresh the OBS P/L tables, the batch file **Gds2gtmis.bat** is run at 6:33 a.m. before every business day. The tables affected by this batch run are as follows:

- adjustment_types
- adjustments
- books
- cash
- DailySpotRates
- FXRates
- hcash
- m2d_npv1
- m2d_npv2
- m2d_npv3
- m2d_npv4
- OBS_PL
- OBS_PL_BAK
- temp_cash
- temp_hcash

The gds2gtmis.bat batch file is generated by 8 stored procedures that are consecutively run consecutively. In order, 1-6 of the procedures are GDS-generated while 7-8 are GTMIS-generated. As these final 2 procedures are the primary means by which GTMIS refreshes its datatables, they are described in detail in this section.

Note: For further information on GDS-generated Stored Procedures, please refer to any available documentation on the GDS System.

Gds2gtmis.bat

Gds2gtmis.bat extracts data from the GDS system and processes this data for GTMIS. This batch file consists of 8 stages that serve in updating the OBS P/L Datables. The first 6 generated by GDS and the final 2 run from GTMIS. Much of the GDS data must be extracted to temporary files where GTMIS can access it. The final two stages of Gds2gtmis.bat are the primary means by which GTMIS updates its datatables.

Following are the contents of Gds2gtmis.bat:

```
REM gbd works as follows.  It takes system date and it subtracts until it reaches a good business day
isql -S US_ULTRA_B01 -U %1 -P %2 -Q "trs_gds.dbo.ap_fx_mtm_report %5" -h-1 -o hex -w 500 -s ~

isql -S US_NYNT_S03 -U %3 -P %4 -Q "delete from gds_treas.dbo.OBS_PL where aodate = %5"
bcp gds_treas.dbo.OBS_PL in hex -S US_NYNT_S03 -U %3 -P %4 -t ~ -c
```

```
REM delete information from tables prior to update
isql -S US_NYNT_S03 -U %3 -P %4 -Q "delete from gds_treas.dbo.cash where aodate = %5"
isql -S US_NYNT_S03 -U %3 -P %4 -Q "delete from gds_treas.dbo.hcash"

REM cash report for gtmis
isql -S US_ULTRA_B01 -U %1 -P %2 -Q "trs_gds.dbo.ap_fx_cash_report_detail %5" -h-1 -o cash.txt -
w 500 -s ~

REM historical cash report for gtmis
isql -S US_ULTRA_B01 -U %1 -P %2 -Q "trs_gds.dbo.ap_fx_hcash_report_detail '01/01/1996'" -h-1 -o
hcash.txt -w 500 -s ~

bcp gds_treas.dbo.cash in cash.txt -S US_NYNT_S03 -U %3 -P %4 -t ~ -c
bcp gds_treas.dbo.hcash in hcash.txt -S US_NYNT_S03 -U %3 -P %4 -t ~ -c

REM retrieval of daily spot rates for gtmis obs_pl
isql -S US_NYNT_S03 -U gtmis -P ********* -Q "gds_treas..fxGetDailySpotRates %5"

REM calculation script for gds_gtmis
isql -S US_NYNT_S03 -U gtmis -P ********* -Q "gds_treas..OBS_PL_Month2Day %5"
```