FEDERAL RESERVE BANK
OF DALLAS

HELEN E. HOLCOMB
FIRST VICE PRESIDENT AND
CHIEF OPERATING OFFICER

August 21, 1997

DALLAS, TEXAS
75265-5906

Notice 97-69

TO: The Chief Operating Officer of each
financial institution and others concerned
in the Eleventh Federal Reserve District

SUBJECT

**Federal Reserve System
Compliance Information for Fedline, Bulkdata, and CIPS**

DETAILS

To ensure that our automation systems are prepared for the Year 2000, the
Federal Reserve is continuing to work on all aspects of the Century Date Change project. As of
this date, we have completed the evaluation of all our systems and determined our strategies for
addressing the century date change to ensure that there is no impact on service delivery.

To keep you fully informed about our plans and to provide you with information you
will need as you work on your own Year 2000 project, we are enclosing the first *Century Date
Change Bulletin*. This bulletin contains century date change compliance information for Fed-
line, Bulkdata and Computer Interface Protocol Specifications (CIPS). Please circulate this
bulletin to the appropriate management and technical staff in your institution responsible for
your Year 2000 project.

As our plans progress, we will continue to share information with you through the
Century Date Change Newsletter and additional bulletins. Please watch for our next CDC
newsletter in November. Our second CDC bulletin, scheduled for early fall, will contain infor-
mation on the Federal Reserve's testing strategy.

ENCLOSURE

A copy of the Federal Reserve System's *Century Date Change Bulletin*, issue No. 1,
is enclosed.

For additional copies, bankers and others are encouraged to use one of the following toll-free numbers in contacting the Federal
Reserve Bank of Dallas: Dallas Office (800) 333-4460; El Paso Branch *Intrastate* (800) 592-1631, *Interstate* (800) 351-1012;
Houston Branch *Intrastate* (800) 392-4162, *Interstate* (800) 221-0363; San Antonio Branch *Intrastate* (800) 292-5810.

MORE INFORMATION

If you have any questions regarding the Century Date Change project or need more information on the contents of this bulletin, please contact Sarah Jennings by phone at (800) 333-4460, ext. 5259 or via E–mail at sarah.jennings@dal.frb.org. Up-to-date information on our CDC project is also available on the Internet at http://www.dallasfed.org and http://www.frbsf.org/fiservices/cdc/. For additional copies of this Bank's notice, please contact the Public Affairs Department at (214) 922 5254.

Sincerely,

Helen E. Holcomb

Compliance Information for Fedline®,[1] Bulkdata, and Computer Interface Protocol Specifications (CIPS)

Over the next two years, you will receive a series of bulletins that contain critical information regarding the Federal Reserve's Century Date Change (CDC) Project. This first issue of the **Century Date Change Bulletin** provides information on plans for CDC compliance for Fedline and Bulkdata software, and for the Computer Interface Protocol Specifications (CIPS). It describes what you need to know and what actions you may need to take to ensure that you, as Federal Reserve electronic access customers, are ready for the year 2000.

CDC and Fedline

The Federal Reserve's plans for the Fedline software product are described below.

Date Formats in the Fedline Applications

Fedline software includes dates in many of its internal processes, as well as in the messages and files that are exchanged with customers. Many Fedline applications use a two-digit year and do not include the century. For example, the year appears as "97" rather than "1997." For those Fedline applications that currently use a two-digit year in a file or message exchanged with a Federal Reserve host application, a decision was made either to expand the year to four digits or to continue with two digits.

In almost all cases, we will continue to use two digits. (Please see Table A for a detailed listing of the changes planned for each application.) To determine the accurate century, a logic-based approach within the

processing host system will be used. Only the Tax Payer Deposit (TD) service will expand the year fields to include the century. This change will be included in a release planned for installation at the Federal Reserve in early 1998.

What Does This Mean for You?

Many Fedline applications allow you to either import or export transaction or file-based information between your Fedline software and other processing systems. If you use front-end or back-end systems to transfer data between your internal systems and the Fedline software, your software may require programming logic to interpret two-digit year date fields correctly, depending on the processing and date manipulation performed within your software. For example, dates that cross the century must sort correctly. That means in an ascending date sequence sort, the year (20)00 must follow (19)99 if your software includes sorting on date fields.

A commonly used approach is to interpret the century from the two-digit year, based on an established year range "window." An example of this logic is: if Year = 00 through 50, Century = 20; if Year = 51 through 99, Century = 19. Fedline and Federal Reserve host systems use a variety of windowing logic techniques based on business needs (such as data aging) and on the expected life span of the data or the system. The windowing logic that will be used by Federal Reserve applications is described in Table B. Your choice of century interpretation processing logic should be based on your own data system's and business needs, and may not need to duplicate the Federal Reserve windowing approach.

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[1] *"Fedline" is a registered trademark of the Federal Reserve Banks.*

The **Fedline File Interface Guide** continues to be your reference for Fedline's import and export capabilities. Please use that document and the date formats listed in Table A to verify that your internal Fedline transaction processing systems are appropriately prepared for the century date change.

New Releases of Fedline Software

Fedline's underlying internal processing systems include programming logic that will properly process dates that do not include the century. However, the current Fedline for DOS software will require updates to correctly present dates. This update of Fedline for DOS is planned for distribution by mid-1998.

The same application message and file formats processed today by Fedline for DOS also will be processed by the new FedLine for the Windows® operating systems, currently in development.[2] If you convert to the new product prior to the year 2000, your preparations for handling the date formats will be the same as described above.

The new FedLine for the Windows® operating systems will be thoroughly tested for correct century handling. Please watch for additional information regarding the deployment of the new FedLine software in newsletters and other correspondence.

Fedline Hardware

Another critical year 2000 preparation step is to verify the ability of your PC hardware to run Fedline software into the year 2000. The Federal Reserve Bank will test Fedline software on a variety of PC types, using a representative range of communications products and operating systems. If we identify any specific hardware problems during our testing, we will share that information with you in future Century Date Change Bulletins. Nonetheless, because we cannot conceivably test on all hardware combinations, you must conduct your own hardware assessment to ensure year 2000 date readiness.

Customer Actions Required

To summarize, in order for you to continue successful Fedline communications with us, you will need to:

- ensure that the logic of any front-end and back-end systems which interface with Fedline software can correctly interpret all date fields found in Fedline;

- install in mid-1998 the new release of Fedline for DOS (that provides correct presentation of dates) and/or install the new FedLine for the Windows® operating systems (which will also be year 2000 compatible) when it is released later in 1998;

- analyze the hardware on which you run Fedline software for year 2000 compatibility; and

- request testing of your changes with us if appropriate.

CDC and Bulkdata

The Federal Reserve's plans for transition to the year 2000 for Bulkdata are described below.

Bulkdata User File Header Date Format

The Bulkdata User File Header will not be changed; it will retain its two-digit year format. As a result, no Bulkdata CIPS changes will be required.

New Releases of Bulkdata

The Federal Reserve plans one MVS Bulkdata and two Unisys Bulkdata releases:

- MVS (XA/ESA only) Bulkdata Version 5.1.3C[3] is scheduled for release first quarter of 1998;

- Unisys V Series Bulkdata Version 2.4.1 was released in July 1997; and

- Unisys A Series Bulkdata Version 3.0 is scheduled for release in October 1998.

These new releases are needed in order to process files correctly— to prevent queued files from being inadvertently deleted when the date changes from December 31, 1999 to January 1, 2000.

DOS/VSE Bulkdata will not be made year 2000 compliant, and will be phased out and replaced by alternative electronic access mechanisms, such as TCP/IP (FTP).

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[2] *"Windows" is registered trademark of Microsoft Corporation.*
[3] *For computer interface (CI) customers only.*

What Does this Mean for You?

Since the User File Header will still use two-digit years, if your application interprets the Bulkdata User File header as part of its programming logic, you may need to modify your code to calculate 00 as greater than 99.

Also, you will need to install the appropriate compliant versions of Bulkdata as soon as possible after receipt in order to perform CDC compliance testing.

CDC and CIPS

The Federal Reserve's plans for our Customer Interface Protocol Specifications are detailed below:

CIPS Date Strategies

In most cases, the date formats specified in the current versions of the Federal Reserve System's CIPS documentation will not change. This means that if the current version specifies two-digit years, this will remain the protocol specification for CDC date compliance. The only applications for which new date formats will be specified are:

- *Billing*

  Years within the Billing CIPS will be expanded to four digits. This change will take place effective January 1998 as part of the changes associated with Interstate Branching.

- *Funds Transfer*

  Transfer message dates within the Funds application are being expanded to eight digits as part of the expanded Funds format changes, which will be complete by year-end 1997. One final revision to expand the date field on the Short Acknowledgment to a four-digit year will become effective September 1998.

- *Home Mortgage Disclosure Application (HMDA)*

  The HMDA mainframe application will expand to a four-digit year, with implementation scheduled for December 1998.[4]

Table C provides the detailed information on the CDC compliant version of each CIPS application and the associated date format.

What Does this Mean for You?

For those Federal Reserve applications which use a date format other than the one you use in your front- or back-end systems, you will need to take the appropriate steps to ensure that the century date changes are processed accurately. In addition, you will need to modify interface specifications for those applications in which the date format has changed.

CDC Compliance Testing

The Federal Reserve will rigorously test Bulkdata, and both Fedline for DOS and the new FedLine for the Windows® operating systems for year 2000 compliance. However, the software is furnished strictly on an "as-is" basis. We do not warrant that our software will meet the needs of a customer's applications or that it will be compatible with customer-owned equipment or that all software defects can be corrected. We will, however, provide reasonable assistance in resolving software problems.

The Federal Reserve will be prepared to begin testing with customers who wish to test their transaction processing systems no later than June 1998. Details on the Federal Reserve's testing strategy and schedule will be published in future Century Date Change Bulletins fourth quarter 1997 and first quarter 1998.

Additional Information

The Federal Reserve will continue to provide you with the information necessary to facilitate the century date change as soon as this information becomes available.

If you have any questions or need additional information regarding CDC, please call your Business Development representative at the Federal Reserve Bank serving your area, or call the contact listed in the cover letter.

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[4] *The HMDA PC software will also expand to a four-digit year, and will be available to all depository institutions December 1997.*

Table A

CDC Fedline Date Format Summary

The following matrix provides a summary of date formats within Fedline applications that may be of concern to you if you use Fedline import and export functions to transfer transaction information between online Fedline terminals and your own computer systems. Check the matrix to determine if you have systems that may need attention.

This is not a comprehensive listing of all Fedline date formats. Please refer to the **Fedline File Interface Guide** for detailed information regarding Fedline message and file formats and Fedline import and export functions.

Business Application	Changes will be made	Date fields and formats	Customer Impact/Action
Automated Auction - AA	No	With the exception of IMAD and OMAD fields, all dates include four-digit years.	N/A. Import and export functions are not supported in AA.
Automated Clearing House - AH	No	NACHA[5] format registers and advice files - YYMMDD	If front-end or back-end systems are used to submit, store, or process ACH files, logic may be needed to interpret the year/century from dates without year or century.
		Detail records for SHR, MTE, POS, RET, and COR standard entry classes - include two-digit years in MMYY and MMDDYY fields.	
		Batch Header - MMDDYY	
Accounting Services - AS	No	IAS Account Inquiry - MMDDYY	N/A. Import and export functions are not supported in AS.

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5   *National Automated Clearing House Association (NACHA) formats will not be expanded to include the century prior to the year 2000.*

   (Note: Date field symbols are defined as follows: CC=century, YY=year, MM=month, and DD=day.)

Business Application	Changes will be made	Date fields and formats	Customer Impact/Action
Book Entry Securities Application - BA	No	Standard Securities Transfer- IMAD and OMAD fields do not include the year. Sending and Receiving Matching Instructions- Matching date and IMAD and OMAD fields do not include the year. Acknowledgments - IMAD and OMAD fields do not include the year.	BA supports the import and export of Securities Transfer messages. If front-end or back-end systems are used to submit, store, or process Securities Transfer messages, logic may be needed to interpret the year/century from dates without year or century.
Check Adjustments - CA	No	Check Adjustments date formats include fully compliant four-digit years - MMDDCCYY.	CA supports the import and export of Check Adjustments messages. Verify 21st century- compliant date handling in front-end and back-end systems.
Check Services - CH	No	Return Item Notifications - MMDD and MMDDYY formats Although Fedline Check Services screens include a number of MMDDYY fields, Fedline adds the century to the date (CCYYMMDD) when preparing files for transmission, per CIPS format. Batch Header and Control Data Process Dates - CIPS format - CCYYMMDD Check Return/Retrieval Requests - CIPS format - CCYYMMDD Direct Sends - CIPS format - CCYYMMDD	CH supports the import and export of Return Item Notification messages. If front-end or back-end systems are used to submit, store, or process Return Item Notifications, logic may be needed to interpret the year/century from dates without year or century. CH also supports the import of Check Return/Retrieval Requests and Direct Sends in file format. If a front-end system is used to create Checks files, logic may be needed to interpret the year/century from dates without year or century.

(Note: Date field symbols are defined as follows: CC=century, YY=year, MM=month, and DD=day.)

Business Application	Changes will be made	Date fields and formats	Customer Impact/Action
Funds Transfer - FT	Yes	Standard Funds Transfer - IMAD and OMAD include year and century with expanded format - CCYYMMDD.	FT supports the import and export of Funds Transfer messages. Verify 21st century-compliant date handling in any front-end and back-end systems.
		Funds Structured Drawdown - IMAD and OMAD include year and century with expanded format - CCYYMMDD.	
		Acknowledgments - IMAD and OMAD will be expanded to include the year and century - CCYYMMDD.	
Reporting and Reserves - RR	No	Banking Statistics series (e.g. FR2900, 2950, 2951) - YYMMDD.	The import of banking statistics reports (e.g. FR Y9-C, FR2900) is supported by the Fedline generic file transfer function. If a front-end system is used to create any of these banking statistics report files, logic may be needed to interpret the year/century from dates without year or century.
		Estimated Reserve Requirements Submission - Displayed dates are in MMDD format.	
Savings Bonds - SB	No	All dates include four-digit years in MMDDCCYY format.	Savings Bonds supports the import of files containing Savings Bonds orders. If a front-end system is used to create Savings Bonds files, verify 21st century-compliant date handling.
Tax Payer Deposit - TD	Yes	Dates will be expanded to include four-digit years - MMDDCCYY - in early 1998.	N/A. Import and export functions are not supported in TD.
Treasury Tax & Loan - TT	No	Advice of Credit - MMDDYY Host Account Activity Report - MMDDYY Acknowledgment of Advice - OMAD date is "yearless."	TT&L supports the import of TT&L Advice of Credit files. If a front-end system is used to create TT&L files, logic may be needed to interpret the year/century from dates without year or century.

(Note: Date field symbols are defined as follows: CC=century, YY=year, MM=month, and DD=day.)

Table B

Windowing Logic for Applications Using Two-Digit Years

Application	Windowing Logic
ACH	If Year = 00 through 90, Century = 20 If Year = 91 through 99, Century = 19
Funds	If Year = 00 through 89, Century = 20 If Year = 90 through 99, Century = 19
IAS	If Year = 00 through 79, Century = 20 If Year = 80 through 99, Century = 19
NBES	If Year = 00 through 89, Century = 20 If Year = 90 through 99, Century = 19
Statistics and Reserves	If Year = 00 through 50, Century = 20 If Year = 51 through 99, Century = 19
TAAPS	If Year = 00 through 80, Century = 20 If Year = 81 through 99, Century = 19 For verification of tenders only: If Year = 00 through 90, Century = 20 If Year = 91 through 99, Century = 19
TT&L	If Year = 00 through 49, Century = 20 If Year = 50 through 99, Century = 19

Table C
CDC CIPS Compliance

Application	Latest Revision Date	Release Number	CDC Compliant Version	Comments
ACH	1/1/98	2.0	Yes	Two-digit year
BESS	12/31/90	1.0	N/A	Obsolete 2/98
Billing	1/1/98	1.0	Yes	Four-digit year
Check	6/30/93	1.0	Yes	Four-digit year
CRR *(Statistics and Reserves)*	9/30/90	1.0	Yes	Two-digit year
Funds	1/1/98	1.1	No	Expand date field to four-digit year on short ACK: Compliance version will be in production 9/98.
HMDA	5/31/93	1.0	No	Four-digit year: in production 12/98.
IAS	1/1/98	1.1	Yes	Two-digit year
NBES	5/29/97	1.0	Yes	Two-digit year
Savings Bonds	1/1/98	1.0	Yes	Four-digit year
SHARE	12/31/95	1.0	N/A	Obsolete 10/97
STAT *(Statistics and Reserves)*	3/31/97	1.1	Yes	Two-digit year. Although no format change, Statistics and Reserves will distribute explanatory information regarding date formats on 7/98.
TT&L	4/3/95	1.1	Yes	Two-digit year
TRAPS	6/2/97	2.0	Yes	Four-digit year
FLASH	2/1/97	1.0	N/A	Not date sensitive
FRISC	9/30/90	1.0	N/A	Not date sensitive