

AL 96-4

Subject: Year 2000 Programming Code Risks

TO: Chief Executive Officers of all National Banks, Department
and Division Heads, and all Examining Personnel

Attached is a joint statement by the Federal Financial Institutions Examination Council that alerts financial institutions to risks that may be present in existing computer systems as the industry enters the new millennium (year 2000). The issue is whether computer systems will properly recognize date sensitive information when the year changes to 2000. Systems that do not properly recognize such information could generate erroneous data or cause a system to fail.

Senior bank management has a responsibility to analyze the risk of their internal computer systems. Further, they should consult with affected vendors and customers to ensure they are addressing the year 2000 issue. Based on the risk analysis and consultations, management should develop and implement an action plan to deal with any identified system coding changes required to achieve year 2000 compatibility.

For further information on year 2000 issues, contact the Examination Process Division in the Office of the Chief National Bank Examiner (202) 874-5190.

Jimmy F. Barton
Chief National Bank Examiner
Date: June 17, 1996

THE EFFECT OF YEAR 2000 ON COMPUTER SYSTEMS

To: Chief Executive Officers of all Federally Supervised Financial Institutions, Senior management of each FFIEC Agency, and all examining personnel.

PURPOSE

This interagency statement alerts financial institutions to substantial risks to the industry represented by the programming code in existing computer systems as the industry enters the new millennium (year 2000)

BACKGROUND

The "year 2000" problem is pervasive and complex. Virtually every organization will have its computing operations affected in some way by the rollover of the two digit year value to 00. The majority of computer operating systems and programs currently in use have been developed utilizing six digit date fields (YYMMDD). For example, December 31, 1999, would be represented by "991231" in computer code. The two digit field for the year (in example "99") is the basis for all calculation formulas within most computer systems, particularly those processed through mainframes.

Up until now, this two digit field has sufficed, using a subtraction of current date from some future date (up to 12-31-99).

As the industry enters the year 2000, the two digit field "00" will not permit accurate calculations based on the current formulas. January 1, 2000 would be read as 000101. Many computer systems will recognize this date as the year 1900. The potential impact is the date sensitive calculations would be based on erroneous data or could cause a system failure. This affects all forms of financial accounting (including interest computation, due dates, pensions, personnel benefits, investments, legal commitments). It can also affect record keeping, such as inventory, maintenance, and file retention. Reliable information is necessary for financial institutions to conduct business.

An institution should review all aspects of computer systems to include those provided by service bureaus, hardware vendors, and other software vendors. For any aspect of its information systems processing management must:

- o Ensure that external vendors and servicers are adequately addressing the system and software issues related to the coming millennium.
- o Ensure that the institution has taken adequate steps to ensure that critical operations will continue if the servicers or vendors are unable to achieve millennium requirements.

TESTING

All reprogramming efforts must be completed in time for adequate system testing. It is recommended that reprogramming efforts be completed by December 31, 1998. This will provide one full year for testing. It is important to note that all systems from mainframes to personal computers and local area networks are susceptible to the impact of year 2000 consequences.

The appendix to this issuance provides a suggested outline of the process that should be followed to ensure that issues concerning the millennium are addressed.

APPENDIX

Millennium Planning Processing

I. Establish a Year 2000 Team

- A. Management should consider utilizing both internal and external information systems and audit resources to ensure that a risk-based Year 2000 Action Plan is developed.
- B. An inventory of all computer operating systems, applications and files should be created. All those with year 2000 issues must be identified.

II. Develop an institution wide year 2000 plan.

- A. The initial step in developing the plan should be to consider whether current systems and files should be modified, replaced, outsourced, or discontinued. It should be noted that even if new systems are purchased, old files may still have to be modified. (All computer systems, including mainframes, personal computers, local area networks, etc., should be considered).
- B. The year 2000 plan should also identify and prioritize applications and processes that are the most date sensitive and those which are most vulnerable. Interdependent applications should be grouped together.
- C. Management and the board of directors need to ensure that adequate funds and resources are allocated so that all year 2000 projects are completed in a timely manner.

III. Year 2000 Plan Implementation.

- A. Initiate pilot projects to test solutions to identified problems. It may be feasible to work with more than one vendor in order to evaluate their various solutions/capabilities before making a final decision.
- B. Begin the process of systematically implementing year 2000 changes by priority in accordance to risk. These projects should be conducted within the framework of the system development life cycle process currently in place.
- C. Conduct post implementation reviews to ensure the integrity and functionality of the modified systems.