NCUA LETTER TO FEDERAL CREDIT UNIONS

NATIONAL CREDIT UNION ADMINISTRATION 1775 Duke Street, Alexandria, VA 22314

DATE: August 22, 1997 LETTER NO.: FCU-97-2

TO: FEDERAL CREDIT UNIONS

SUBJECT: Year 2000 Compliance

As part of the ongoing process to address the Year 2000 issue, NCUA released two letters (96-CU-5, 97-CU-6) addressed to federally insured credit unions. These prior letters discussed the Year 2000 problem, provided guidance in addressing the problem, and discussed the steps NCUA is taking to assist credit unions in this endeavor. The purpose of this letter is to update federal credit unions on:

- NCUA's examination program and Year 2000 Plan;
- NCUA actions initiated subsequent to the last Letter to Credit Unions; and
- Additional information concerning vendor Year 2000 compliance.

Examination Procedures: Enclosed you will find the examination procedures that NCUA examiners will employ in evaluating credit union Year 2000 compliance. We have also enclosed a copy of the Agency's overall Year 2000 Plan. The examination procedures were developed by an interagency Year 2000 group consisting of the Federal Financial Institutions Examination Council, NCUA, Federal Reserve Board, Federal Deposit Insurance Corporation, Office of the Comptroller of the Currency, and Office of Thrift Supervision. You should expect your examiner to use those procedures to tailor their Year 2000 review to your individual credit union.

We divided the examination procedures into two programs – one designed for credit unions in an EDP vendor serviced environment and another for credit unions in an inhouse developed environment. Since many credit unions may exhibit characteristics of both environments, examiners may employ a mix of procedures when analyzing your credit union's Year 2000 compliance status.

We encourage you to review these procedures, as well as the prior NCUA Letters addressing the Year 2000 issue, to prepare your credit union for your examiner's assessment of your Year 2000 compliance status. Your examiner will expect to see and evaluate your Year 2000 plans which, as a minimum, should address the following phases (discussed in NCUA Letter #97-CU-6):

- awareness;
- assessment;
- renovation;
- validation and testing; and
- implementation.

Those credit unions not in compliance will need to reach formal agreements with their examiner to implement a Year 2000 plan prior to December 31, 1997, to ensure full compliance by December 31, 1999. NCUA will also expect these credit unions to demonstrate clear progress towards Year 2000 compliance and will monitor this progress through examiner supervision contacts. Finally, NCUA expects credit unions to test their various systems during 1998 to provide proof of compliance.

NCUA Actions: We have developed a Year 2000 area on our Web page (www.ncua.gov) which will contain the most up-to-date information concerning the Year 2000 issue as well as previously released material. Furthermore, we continue to work with the interagency Year 2000 group to identify, address, and disseminate additional Year 2000 concerns. If you have questions concerning the Year 2000 issue, you should contact your examiner or regional office.

Vendor Program: We are implementing the following initiatives concerning EDP vendors:

- updating our vendor database for vendors to which we have not issued a vendor letter (as discussed in our 97-CU-6 Letter); and
- planning an EDP vendor meeting to be held in the 4th quarter of this year to discuss:
 - Year 2000 hardware and software concerns:
 - 3rd party programs and utilities;
 - Year 2000 compliance certification; and
 - EDP contracts.

NCUA expects credit unions to exercise caution when entering into, or extending, any contract beyond the year 2000 for systems which may be impacted by the Year 2000 problem. Examples of these systems include electronic data processing systems, computer hardware, automated teller machines, security systems, etc. NCUA is concerned that legal issues may arise from the lack of specificity in contract terms dealing with Year 2000 commitments and responsibilities. Credit unions should ensure that current and future purchases require Year 2000 compliance. When reviewing contracts, credit unions should ascertain whether the vendor is Year 2000 compliant. If

the vendor is in the process of becoming compliant, you will need to know where the vendor is in that process and who is contractually responsible for ensuring compliance.

As we update our vendor database, we will inquire about the vendors' current status and Year 2000 plan for their various products. We hope to share this information with you, our examiners, other federal and state agencies, and the Congress when and as requested.

Other Date Issues: Two more date issues which we have not discussed in our prior correspondence are that of the leap year in year 2000 and the September 9, 1999 issue. All Year 2000 plans need to address the leap year, February 29, 2000, issue. Credit unions should ensure that their date dependent systems will correctly roll over to February 29th. In addition, all date and calculation routines need to be reviewed to ensure that leap year interest and other calculations are correct.

The September 9, 1999 issue may be a concern since some programs may store this date as "9999". It has come to our attention that in some cases programmers have used the value "9999" to signify the termination of program source code. Therefore, on September 9, 1999, there is a risk that some programs may fail to execute. As part of your Year 2000 compliance program, you should ensure that your programs operate correctly on, and after, September 9, 1999.

If you have any questions, please contact your examiner of regional office.

	Sincerely,	
	/s/	_
	Norman E. D'Amours Chairman	
Enclosures		
EI		

Year 2000 Agency Plan

Awareness

- 1. The Central Office will:
 - a) Develop and issue a Letter to <u>Federally Insured Credit Unions</u> addressing the following:
 - i) Provide an overview of the Year 2000 problem.
 - ii) Identify a method by which to address the problem:
 - a) awareness;
 - b) assessment;
 - c) renovation;
 - d) validation; and
 - e) implementation.
 - iii) Stress the Y2K impact on various hardware (mainframes, mid-frames, mini-frames, personal computers, networks, audio voice systems, elevators, ATMs, telephone systems, vaults, security and surveillance systems, etc.).
 - iv) Stress the credit union responsibility to assure that their systems (hardware and software) are Y2K compliant.
 - v) Seek timely outside assistance, if and when needed, such as:
 - a) credit union trade organizations;
 - b) NASCUS and state supervisory authorities; and
 - c) Y2K organizations.
 - vi) Advise credit unions to carefully review their EDP contract(s), prior to entering into the contract(s) or extending the contract(s), to determine which party is responsible for Y2K compliance.
 - b) Develop and issue a Letter to Federal Credit Unions addressing the following:
 - i) NCUA expects credit union to develop a Y2K compliance plan.
 - ii) Examiners will review and evaluate the credit union's Y2K compliance plan during all FY97 examinations.
 - iii) Credit unions not in compliance with Y2K must demonstrate progress towards compliance.
 - iv) Credit unions not in compliance will be placed under closer supervision, including, periodic onsite supervision contacts by examiners.
 - v) NCUA expects credit unions to have a compliant system developed prior to the end of 1998.
 - vi) NCUA expects credit unions to be fully compliant, with fully functional systems, prior to the end of 1999.
 - c) Develop and issue a letter to the major credit union EDP Vendors addressing the following:
 - i) Request for information concerning their conversion plan and status for each product offered.
 - ii) Request an independent assessment and/or outside compliance certification for each product offered.
 - iii) Request the vendor to develop and send a letter to each customer credit union:
 - a) advising the credit union of its current system status;

- b) advising the credit union of the status of the Y2K conversion in regards to the credit union's system; and
- c) advising the credit union of available alternatives to ensure compliance.
- d) Periodically notify our Regions and credit unions which vendors have certified Y2K compliance in order for credit unions to make proper and informed decisions and assessments regarding their vendor status.
- e) Develop and release articles for the *Inside NCUA* and *NCUA News* publications.
- f) Participate on various interagency committees addressing the Y2K.
- g) Provide additional EDP/Y2K training for examiners.
- h) Arrange for examiners to participate on 3rd party outside consultant reviews of EDP vendors.
- i) Arrange for examiners to participate on onsite EDP reviews of EDP vendors who appear to be facing conversion problems.

2. The Regional Offices will:

- a) Ensure examiners are knowledgeable in the Y2K problem and implications.
- b) Determine State Supervisory Authorities plans in regards to the Y2K problem.
- c) Work with their respective State Supervisory Authorities to disseminate Y2K information.
- d) Disseminate the information obtained from the EDP Vendor letter to field staff and State Supervisory Authorities.

Data Gathering

- 1. The Central Office will:
 - a) Develop and distribute an electronic Y2K questionnaire E-Form.
 - b) Develop and issue NCUA Instruction to Regions addressing, but not limited to, the following:
 - i) All examinations completed in FY97 must have a Y2K questionnaire, including those where an examination was completed prior to the release of the Instruction.
 - ii) All insurance reviews completed subsequent to the release of the Instruction must have a Y2K questionnaire.
 - iii) Examiners will identify high risk credit unions on the questionnaire and the Examiner Contact Information (110).
 - iv) Examiners will upload the questionnaire within 2 business days of completing and uploading the 110.
 - v) For all credit unions not in compliance, examiners will work with credit union management to develop a document of resolution.
 - vi) For all credit unions not in compliance, examiners will develop periodic supervisory contact plans until the credit union is in compliance.
 - c) Complete the initial data gathering process by December 31, 1997.

2. The Regional Offices will:

a) Ensure all examiners comply with the Instruction.

Monitoring

- 1. The Central Office will:
 - a) Create and maintain a database to accept the electronic E-Form.
 - b) Develop standard queries and reports to monitor the upload process.
 - c) Develop standard queries and reports to identify credit unions not in compliance as well as high risk credit unions.
- 2. The Regional Offices will:
 - a) Develop standard queries and reports to monitor the upload process.
 - b) Develop standard queries and reports to identify credit unions not in compliance as well as high risk credit unions.
 - c) Ensure document of resolutions are reasonable and attainable.
 - d) Ensure supervision plans are timely and adequate.

Implementation

- 1. The Year 2000 Agency Plan is effective immediately.
- 2. The individual parts of the Plan will be implemented by June '97.
- 3. The Central Office will develop and distribute general examination procedures to help examiners identify credit unions not in compliance with the Y2K conversion.

Solutions for Noncompliance

- 1. Examiners will work closely with the credit unions in their districts to resolve Y2K matters, especially in smaller credit unions with limited resources.
- 2. Regions will have all regulatory actions and remedies available to ensure credit unions are in compliance with Y2K.

SERVICED INSTITUTIONS AND TURNKEY ENVIRONMENTS

EXAMINATION OBJECTIVES

YEAR 2000 DATE CHANGE PROBLEM

- 1. To determine if the institution has an effective plan for identifying, correcting, testing, and implementing solutions necessary for Year 2000 processing.
- 2. To assess the impact of Year 2000 effort on the institution's strategic and operating plan.
- 3. To determine if the institution has effectively coordinated Year 2000 processing capabilities with its customers, vendors, and payment systems partners.
- 4. To assess the soundness of internal controls over the Year 2000 process.
- 5. To identify situations where further corrective action may be necessary to assure an appropriate level of attention to Year 2000 processing capabilities.

INTRODUCTION

The following work program procedures are intended for serviced institutions and turnkey environments. The examination procedures will help the examiner in determining if the institution is addressing or has successfully addressed the Year 2000 date change and associated problems inherent in many computer software and hardware systems. The examination procedures are designed to focus on the state of Year 2000 preparedness of each examined institution.

EXAMINATION PLANNING AND CONTROL

- 1. Determine the institution's source of Information Systems (IS) support for hardware (mainframe, mid-range, networks, personal computers) and related applications and operating system software. Note if the information systems processing is provided internally, externally, or a combination of both.
- 2. Review previous examination, audit, or consultant findings relative to Year 2000 issues.
- 3. Review management's responses to any significant Year 2000 findings.
- 4. Determine the scope of the Year 2000 examination based on findings from the steps above and discussions with the EIC.

Select from the following examination procedures the steps necessary to meet those objectives. Note: Examinations do not require completion of all steps.

EXAMINATION PROCEDURES

- 1. Determine if the institution's board of directors and senior management are aware, and understand the risks and complexities, of the Year 2000 problem.
 - a) Obtain and review minutes of board of directors meetings for discussions of Year 2000 issues.
 - b) Obtain and review minutes of committees established to address Year 2000 issues.
- 2. Has management developed a plan to assure the institution's computer systems and any interfacing computers and networks are Year 2000 compliant?
- 3. Determine if the institution's Year 2000 assessment includes computer controlled systems such as ATM's, audio response systems, vaults, security and alarm systems, elevators, telephones, FAX machines, etc.
 - a) Has management identified critical and non-critical systems?
 - b) Has management prioritized both critical and non-critical systems?

- 4. Does management have on-going communications with its vendor(s) and/or servicers to determine their progress toward implementing Year 2000 compliance/solutions.
- 5. Determine if the institution has:
 - a) performed a third party software contract review to identify risks associated with licensing and maintenance agreements protections for Year 2000 compliance;
 - b) reviewed all data processing outsourcing agreements to determine if the vendors have Year 2000 maintenance obligations; and
 - c) a process in place that certifies that a vendor(s) and products(s) are Year 2000 compliant. If so, describe.
- 6. Determine if management has assessed the financial and operational capabilities of their hardware and software vendors to provide Year 2000 processing capabilities. Note the results of this assessment.
- 7. Determine the status of the Year 2000 project including any anticipated barriers and how management plans to address these barriers.
- 8. If it is evident that the institution's or vendor/servicer's systems are not fully Year 2000 capable:
 - a) determine if all critical applications will be Year 2000 capable and fully tested by December 31, 1998:
 - b) determine which significant applications will not be Year 2000 capable and fully tested by December 31, 1998;
 - c) has management anticipated the impact to the institution's operation in the event that all systems will not be Year 2000 capable by December 31, 1998; and
 - d) if the institution's systems will not be Year 2000 compliant by December 31, 1998, determine what steps management is taking to assure the institution's ongoing operations.
- 9. Has management discussed the impact of the Year 2000 issue with its customers to assure customers' ability to meet financial and informational obligations to the institution? Will customer PC Banking program interface be an issue, operationally or from a customer service viewpoint?
- 10. Determine if the institution has assessed the impact of Year 2000 processing capabilities, as applicable, with its payment systems providers including:
 - a) wire transfer systems;
 - b) automated clearing houses;
 - c) check clearing providers;
 - d) credit card merchant and issuing systems;
 - e) automated teller machine networks;

- f) electronic data interchange systems; and
- g) electronic benefits transfer systems.
- 11. Determine if management has assured the soundness of internal controls associated with the Year 2000 effort.

OVERALL CONCLUSIONS

- 1. If appropriate, discuss the following in the examination report:
 - a) the institution's computer system's Year 2000 processing capability;
 - b) management's effectiveness in managing the Year 2000 process;
 - c) the adequacy of plans for identifying, correcting, testing, and implementing solutions for Year 2000 processing;
 - d) the status of the plan and the capability to complete necessary changes by December 31, 1998:
 - e) management's effectiveness in coordinating Year 2000 processing capabilities with their hardware and software vendors, customers, and payment system providers;
 - f) the impact of the Year 2000 effort on the institution's strategic and operating plans including earnings, capital projections, and insurance; and
 - g) the effectiveness of the audit function and its assessment of internal controls over the Year 2000 process.
- 2. As appropriate, prepare recommendations for the EIC regarding any additional actions necessary to assure the institution's safety and soundness associated with Year 2000 processing capabilities.
- 3. Summarize the strengths and weaknesses and reach a conclusion regarding Year 2000 compliance.
- 4. Discuss the conclusions with the appropriate level of management and document responses.

INSTITUTIONS WITH IN-HOUSE SOFTWARE DEVELOPMENT

EXAMINATION OBJECTIVES

YEAR 2000 DATE CHANGE PROBLEM

- 1. To determine if the institution has an effective plan for identifying, correcting, testing, and implementing solutions necessary for Year 2000 processing.
- 2. To assess the impact of Year 2000 effort on the institution's strategic and operating plan.
- 3. To determine if the institution has effectively coordinated Year 2000 processing capabilities with its customers, vendors, and payment systems partners.
- 4. To assess the soundness of internal controls over the Year 2000 process.
- 5. To identify situations where further corrective action may be necessary to assure an appropriate level of attention to Year 2000 processing capabilities.

INTRODUCTION

The following work program procedures are intended for <u>institutions with in-house software</u> <u>development capabilities</u>. The examination procedures will help the examiner in determining if the institution is addressing or has successfully addressed the Year 2000 date change and associated problems inherent in many computer software and hardware systems. The examination procedures are designed to focus on the state of Year 2000 preparedness of each examined institution.

EXAMINATION PLANNING AND CONTROL

- 1. Determine the institution's source of Information Systems (IS) support for hardware (mainframe, mid-range, networks, personal computers) and related applications and operating system software. Note if the information systems processing is provided internally, externally, or a combination of both.
- 2. Review previous examination, audit, or consultant findings relative to Year 2000 issues.
- 3. Review management's responses to any significant Year 2000 findings.
- 4. Determine the scope of the Year 2000 examination based on findings from the steps above and discussions with the EIC.

Select from the following examination procedures the steps necessary to meet those objectives. Note: Examinations do not require completion of all steps.

MANAGEMENT

- 1. Determine if the institution's board of directors and senior management are aware, and understand the risks and complexities, of the Year 2000 problem.
 - a) Obtain and review minutes of board of directors meetings for discussions of Year 2000 issues.
 - b) Obtain and review minutes of committees established to address Year 2000 issues.
- 2. Has management developed a plan to assure the institution's computer systems and any interfacing computers and networks are Year 2000 compliant?
- 3. Determine if the institution's Year 2000 assessment includes computer controlled systems such as ATM's, audio response systems, vaults, security and alarm systems, elevators, telephones, FAX machines, etc.
 - a) Has management identified critical and non-critical systems?

- b) Has management prioritized both critical and non-critical systems?
- 4. Does management have on-going communications with its vendor(s) and/or servicers to determine their progress toward implementing Year 2000 compliance/solutions.
- 5. Determine if the institution has:
 - a) performed a third party software contract review to identify risks associated with licensing and maintenance agreements protections for Year 2000 compliance;
 - b) reviewed all data processing outsourcing agreements to determine if the vendors have Year 2000 maintenance obligations; and
 - c) a process in place that certifies that a vendor(s) and products(s) are Year 2000 compliant. If so, describe.
- 6. Determine if management has assessed the financial and operational capabilities of their hardware and software vendors, including those operating under a facilities management agreement, to provide Year 2000 processing capabilities. Note the results of this assessment.
- 7. Determine the status of the Year 2000 project including any anticipated barriers and how management plans to address these barriers.
- 8. If it is evident that the institution's or vendor/servicer's systems are not fully Year 2000 capable:
 - a) determine if all critical applications will be Year 2000 capable and fully tested by December 31, 1998;
 - b) determine which significant applications will not be Year 2000 capable and fully tested by December 31, 1998;
 - c) has management anticipated the impact to the institution's operation in the event that all systems will not be Year 2000 capable by December 31, 1998; and
 - d) if the institution's systems will not be Year 2000 compliant by December 31, 1998, determine what steps management is taking to assure the institution's ongoing operations.
- 9. Has management discussed the impact of the Year 2000 issue with its customers to assure customers' ability to meet financial and informational obligations to the institution?
- 10. Determine if the institution has assessed the impact of Year 2000 processing capabilities, as applicable, with its payment systems providers including:
 - a) wire transfer systems;
 - b) automated clearing houses;
 - c) check clearing providers;
 - d) credit card merchant and issuing systems;
 - e) automated teller machine networks;
 - f) electronic data interchange systems; and

- g) electronic benefits transfer systems.
- 11. Based on discussions with management and reviews of Year 2000 committee minutes, identify whether management has:
 - a) inventoried all hardware and software systems;
 - b) developed a risk assessment model identifying hardware and software systems requiring modifications for Year 2000 processing;
 - c) evaluated various alternatives for dealing with Year 2000 processing issues;
 - d) estimated financial and other resources necessary for Year 2000 modifications;
 - e) prioritized software and hardware systems to ensure that the most critical applications are addressed first;
 - f) considered all software systems including core banking, investments, fiduciary, management information, retail delivery, operating systems, subsidiary systems, backup systems, etc.;
 - g) considered the impact of Year 2000 issues on electronic data transactions throughout the institution;
 - h) reviewed and approved milestones to ensure the timely completion of Year 2000 efforts;
 - i) developed a testing strategy for Year 2000 modifications;
 - i) ensured that any new systems are Year 2000 compliant; and
 - k) addressed the establishment and review of an effective system of internal controls over the Year 2000 effort.
- 12. Has management's assessment of the Year 2000 issue determined:
 - a) the type of technical expertise needed;
 - b) the amount of time needed for corrective action;
 - the type and amount of financial resources needed and whether the institution has sufficient financial resources to make all hardware (mainframe, mid-range, networks, personal computers) and related application and operating system software Year 2000 capable;
 - d) if any other resources are required;
 - e) the budgetary impact for Year 2000 changes; and
 - f) the impact of the Year 2000 project on earnings, capital, and liquidity. Does the assessment appear reasonable?
- 13. Determine if the board of directors and/or senior management have approved and allocated resources, based on project management's (Year 2000 committee) assessments, for addressing Year 2000 issues including:
 - a) establishing appropriate Year 2000 budgets;
 - b) assigning adequate numbers of competent and skilled project managers and staff to accomplish the effort; and
 - c) requiring thorough project management techniques including periodic senior management and board project updates.

- 14. Determine if the institution has individuals, or access to individuals, with sufficient technical expertise to make all hardware and software systems Year 2000 compliant.
 - a) If outside resources will be used, are these resources under contract?
 - i) If not, what assurances does management have that these resources will be available when needed?
- 15. Determine how the board of directors and senior management are updated on the progress of Year 2000 efforts.
- 16. Determine if the board of directors and/or senior management has established clear lines of authority and responsibility for the Year 2000 effort.
- 17. Determine if Year 2000 project teams receive sufficient support from the board of directors and senior management.
- 18. Describe the institution's planning schedule including time frames for completing major steps necessary for Year 2000 processing. Does the schedule appear reasonable?
- 19. As applicable, review the selection process for any Year 2000 service provider(s). Does the process appear adequate?
- 20. Determine if management has developed an adequate Year 2000 conversion management process and procedure and whether the process considers:
 - a) who will perform the work;
 - b) institution of the conversion or development process;
 - c) use of outside resources:
 - d) which programming languages and tools the institution will use;
 - e) whether a common application development platform is required;
 - f) whether specific date conversion methodology is required;
 - g) the type and extent of testing required;
 - h) the establishment of priorities;
 - i) grouping of systems for conversion;
 - j) quality assurance;
 - k) the role of end users;
 - 1) the need for a configuration management plan; and
 - m) controls over project management.

AUDIT

- 1. Assess (internal and external) audit personnel's independence and involvement in reviewing the institution's Year 2000 efforts.
- 2. Review audit plans and budgets through 1999 and determine if they include the identification of specific audit resources necessary to review Year 2000 issues. Also, determine if these plans are based on a formal inventory of all critical systems impacted by Year 2000 issues.
- 3. Determine if auditors are actively involved in Year 2000 efforts to assess and monitor the effectiveness of the project management process and soundness of related internal controls. Is audit management communicating this information to the board of directors?
- 4. Review Year 2000 project audit reports and determine the adequacy of their scope and the timeliness and completeness of management responses. Also assess the appropriateness of audit follow-up on actions taken in response to Year 2000 project audit findings.

SYSTEMS AND PROGRAMMING

- 1. Evaluate the adequacy and level of experience of internal and external software development personnel to address Year 2000 issues and determine any impact on operating plans.
- 2. Has the institution determined that the computer system environment is adequate to support the implementation of software changes? If so, describe.
- 3. Determine which method(s) the institution is using or will use to resolve Year 2000 date calculations (e.g. conversion to four position year fields, windowing, etc.). Note, a combination of methods may be utilized.
- 4. Has the institution determined the software development function's ability to have Year 2000 software changes in effect by December 31, 1998. If so, describe.
- 5. Has/will the institution devote(d) appropriate time to testing and error checking of all software changes?
- 6. Determine if the institution has software development resources necessary to respond to Year 2000 issues associated with various computing environments including mainframes, midrange, networks, and personal computers.
- 7. Obtain a list of programming tools that the institution is, or will be, using to fix the Year 2000 problem(s). Examples of the tools may include software inventory, cost estimation, Year 2000 date reference identification, altering of dates, impact analysis, editors, debuggers, code generators, testing and systems conversion, etc. Have the institution describe the tools.
- 8. Describe how the institution will maintain sound internal controls over the software change

- process for Year 2000 issues.
- 9. Determine if the institution has/will be coordinating modification and testing activities with vendors, servicers, and institutions with whom critical data is received or sent.

COMPUTER OPERATIONS

- 1. Review management's assessment of the institution's anticipated systems resources required specifically for operating systems, telecommunications (including ATM) networks, and security software, to handle Year 2000 processing. Describe the results of the assessment.
- 2. Does the institution's Year 2000 assessment include determining if adequate computer resources exist for testing Year 2000 changes and performing day-to-day processing activities?
- 3. Determine if the institution's Year 2000 assessment includes computer controlled devices such as ATM's, audio response systems, vaults, doors, alarms, elevators, security systems, telephones, FAX machines, etc.
- 4. Describe management's assessment of the impact of any changes in operating practices from the Year 2000 effort.
- 5. Determine if any interim work procedures are required as part of the Year 2000 effort.
- 6. Has the institution assessed the impact of Year 2000 efforts on business continuity/recovery planning? If so, describe.
- 7. Has the institution compromised sound internal controls over operations as a result of addressing Year 2000 issues?

OVERALL CONCLUSIONS

- 1. If appropriate, discuss the following in the examination report:
 - a) the computer system's Year 2000 processing capability;
 - b) management's effectiveness in managing the Year 2000 process;
 - c) the adequacy of the institution's plans for identifying, correcting, testing, and implementing solutions for Year 2000 processing;
 - d) the appropriateness of the date methodology/methodologies selected to provide Year 2000 processing;
 - e) the status of the institution's plan and the capability to complete necessary changes by December 31, 1998;
 - f) management's effectiveness in coordinating Year 2000 processing capabilities with their hardware and software vendors, customers, and payment systems providers;

- g) the impact of the Year 2000 effort on the institution's strategic and operating plans including earnings, capital projections and insurance;
- h) the effectiveness of the audit function and its assessment of internal controls over the Year 2000 process; and
- i) the impact of the Year 2000 issue on the institution's earnings, capital, and liquidity.
- 2. Note the date methodology/methodologies (four position year codes, windowing, etc.) the institution uses or plans to use to meet their Year 2000 challenges.
- 3. As appropriate, prepare recommendations for the EIC regarding any additional actions necessary to assure the institution's safety and soundness associated with Year 2000 processing capabilities.
- 4. Summarize the strengths and weaknesses and reach a conclusion regarding Year 2000 compliance.
- 5. Discuss the conclusions with the appropriate level of management and document responses.