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# YEAR 2000 COMPUTING CRISIS

# Federal Regulatory Efforts to Ensure Financial Institution Systems Are Year 2000 Compliant

Statement of Jack L. Brock, Jr.
Director, Governmentwide and Defense Information Systems
Accounting and Information Management Division

Mr. Chairman and Members of the Committee:

We are pleased to be here to discuss the progress of the federal regulatory agencies in ensuring that the thousands of financial institutions they oversee are ready for the upcoming century date change. These financial institutions—banks, thrifts, and credit unions—are at the center of our payment systems and credit flows. They also hold trillions of dollars of assets and deposits. To conduct business, these institutions rely heavily on computer systems for virtually every aspect of their operations. If they do not address the Year 2000 problem[1] in time, key systems—which assist these institutions in making loans, investing deposits, transferring funds, issuing credit cards, and handling routine business functions such as accounting and personnel management—can malfunction. At the very least, this could cause significant inconveniences to banks, thrifts, and credit unions and their customers. More significantly, system failures could lead to closings and serious disruptions.

This testimony is the latest in a series of reports we have conducted on the status of efforts by the five federal financial institution regulatory agencies to ensure that (1) the entities they oversee are ready to handle the Year 2000 computer conversion challenge and (2) internal regulator systems are made compliant by the millennium. We previously reported on the status of the Office of Thrift Supervision (OTS), the Federal Deposit Insurance Corporation (FDIC), and the National Credit Union Administration[2] (NCUA) and plan to report in the coming months on the Office of the Comptroller of the Currency and the Federal Reserve System. As you requested, today I will summarize our findings from our OTS, FDIC, and NCUA reports—focusing largely on their oversight responsibilities. I will also discuss the challenges ahead for all five regulators as they enter the more complex and difficult stages of their Year 2000 efforts.

[1]The Year 2000 problem is rooted in the way dates are recorded and computed in automated information systems. For the past several decades, systems have typically used two digits to represent the year, such as “97” representing 1997, in order to conserve on electronic data storage and reduce operating costs. With this two-digit format, however, the year 2000 is indistinguishable from 1900, or 2001 from 1901, etc. As a result of this ambiguity, system or application programs that use dates to perform calculations, comparisons, or sorting may generate incorrect results or, worse, not function at all.

[2]Year 2000 Computing Crisis: National Credit Union Administration’s Efforts to Ensure Credit Union Systems Are Year 2000 Compliant (GAO/T-AIMD-98-20, October 22, 1997), Year 2000 Computing Crisis: Actions Needed to Address Credit Union Systems’ Year 2000 Problem (GAO/AIMD-98-48, January 7, 1998), Year 2000 Computing Crisis: Federal Deposit Insurance Corporation’s Efforts to Ensure Bank Systems Are Year 2000 Compliant (GAO/T-AIMD-98-73, February 10, 1998), Year 2000 Computing Crisis: Office of Thrift Supervision’s Efforts to Ensure Thrift Systems Are Year 2000 Compliant (GAO/T-AIMD-98-102, March 18, 1998), and FDIC’s Year 2000 Preparedness (GAO/AIMD-98-108R, March 18, 1998).

To prepare for this testimony, we evaluated regulator efforts to date to ensure that the institutions they oversee have adequately mitigated the risks associated with the Year 2000 date change and compared these efforts to criteria detailed in our Year 2000 Assessment Guide[3] and Year 2000 examination guidance and procedures set forth by the Federal Financial Institutions Examination Council (FFIEC).[4] We reviewed procedures and guidance developed by the regulators to perform their initial industry assessment and the follow-on on-site examinations. We reviewed relevant correspondence from the regulators to their examiners and the institutions they supervise and interviewed officials responsible for overseeing the safety and soundness of financial institution management practices and procedures. We also interviewed officials from various trade associations representing banks, thrifts, and credit unions to obtain their views on the adequacy of regulatory efforts and determine what the bank, thrift, and credit union communities were doing to ensure Year 2000 readiness.

In summary, we found that because financial institutions are heavily dependent on information technology, their viability hinges on whether they can successfully remediate systems before the Year 2000 deadline. Given this possibility, regulators must take every measure possible to assist banks, thrifts, and credit unions in their Year 2000 efforts as well as to identify and take swift enforcement measures against those in danger of failing. Regulators have recognized this responsibility and have begun an intense effort to raise awareness of the problem, develop guidance to facilitate remediation efforts, and determine where individual institutions stand in correcting their systems. In doing so, regulators have initially identified several hundred institutions at high risk of missing the deadline

[3]Year 2000 Computing Crisis: An Assessment Guide (GAO/AIMD-10.1.14, September 1997). Published as an exposure draft in February 1997 and finalized in September 1997, the guide was issued to help federal agencies prepare for the Year 2000 conversion. It advocates a structured approach to planning and managing an effective Year 2000 program through five phases: (1) raising awareness of the problem, (2) assessing the extent and severity of the problem and identifying and prioritizing remediation efforts, (3) renovating, or correcting, systems, (4) validating, or testing, corrections, and (5) implementing corrected systems. The guide also stipulates that interfaces with outside organizations be identified and agreements with these organizations executed for exchanging Year 2000-related data. Contingency plans must be prepared during the assessment phase to ensure that agencies can continue to perform even if critical systems have not been corrected. GAO and the Office of Management and Budget established a schedule for completing each of the five phases, including requiring agencies to complete assessment phase activities by last summer and the renovation phase by mid- to late-1998.

[4]FFIEC was established in 1979 as a formal interagency body empowered to prescribe uniform principles, standards, and report forms for the federal examination of financial institutions, and to make recommendations to promote uniformity in the supervision of these institutions. The Council's membership is composed of the federal bank regulators—FDIC, the Federal Reserve System, and the Comptroller of the Currency—plus the regulators for credit unions and thrift institutions—the National Credit Union Administration and the Office of Thrift Supervision, respectively.

due to their poor performance in conducting awareness and assessment phase activities.

Despite aggressive efforts, the regulators still face significant challenges in providing a high level of assurance that individual institutions will be ready. First, they were late in addressing the problem and, consequently, are behind the Year 2000 schedule recommended by both GAO and the Office of Management and Budget (OMB). They are also late in developing key guidance on contingency planning and dealing with servicers, vendors, and corporate customers (e.g., borrowers). This guidance is needed by financial institutions to complete their own preparations. In addition, their follow-on assessments to be completed by June 1998 were not in all cases designed to collect the complete data required to be definitive about the status of individual institutions. Furthermore, it is questionable whether all regulators have an adequate level of technical staff to completely evaluate industry readiness. Despite these problems, the regulators cannot turn back the clock and start again. Consequently, it will be important for regulators to address these problems quickly and confront their next challenge which is how they can best use their resources from here to the millennium to ensure that banks, thrifts, and credit unions mitigate Year 2000 risks.

With regard to their own systems, the regulators have generally done much to mitigate the risk to their mission-critical systems. In some areas, such as contingency planning, the regulators can do more to provide added assurance that they will be ready for the century date change and any unexpected problems.

Accordingly, we have made recommendations to strengthen both Year 2000 examination processes and internal system mitigation efforts. We have also made recommendations to sharpen the regulators' strategy for focusing limited resources over the limited time remaining.

## Background

The federal financial regulators are responsible for examining and monitoring the safety and soundness of approximately 22,000 financial institutions, which, together, manage more than $6 trillion in assets and hold over $3 trillion in deposits. Specifically,

- The Federal Reserve System supervises about 992 state-chartered, member banks and bank holding companies, which are responsible for $1.2 trillion in assets.

- The Office of the Comptroller of the Currency (OCC) supervises approximately 2,600 federally-chartered, national banks, which comprise about $2.9 trillion in assets—about 58 percent of the total $5 trillion assets of the FDIC-insured commercial banks. OCC also supervises federal branches and agencies of foreign banks.
- FDIC supervises about 6,200 state-chartered, nonmember banks, which are responsible for $1 trillion in assets. It is also the deposit insurer of approximately 11,000 banks and savings institutions that have insured deposits totaling upwards of $2.7 trillion.
- OTS oversees about 1,200 savings and loan associations (thrifts), which primarily emphasize residential mortgage lending and are an important source of housing credit. These institutions hold approximately $770 billion in assets.
- NCUA supervises and insures more than 11,000 federally- and state-chartered credit unions whose assets total about $345 billion. Credit unions are nonprofit financial cooperatives organized to provide their members with low-cost financial services.

As part of their goal of maintaining safety and soundness, these regulators are responsible for assessing whether the institutions they supervise are adequately mitigating the risks associated with the century date change. To ensure consistent and uniform supervision on Year 2000 issues, the five regulators are coordinating their supervisory efforts through FFIEC. For example, they jointly prepared and issued Year 2000-related guidance and letters to banks, thrifts, and credit unions. They also worked together to develop and issue, in May 1997, Year 2000 examination procedures and guidance for all examiners to use in performing their work at the institutions. Additionally, the regulators—under the auspices of FFIEC—are jointly examining the major data service providers and software vendors that support the financial institutions.

## The Year 2000 Poses a Serious Problem for Financial Institutions

According to the regulators, virtually every insured financial institution relies on computers—either their own or those of a third-party contractor—to provide for processing and updating of records and a variety of other functions. Because computers are essential to their survival, the regulators believe that all institutions are vulnerable to the problems associated with the year 2000. Failure to address Year 2000 computer issues could lead, for example, to errors in calculating interest and amortization schedules. Moreover, automated teller machines may malfunction, performing erroneous transactions or refusing to process transactions. In addition, errors caused by Year 2000 miscalculations may expose institutions and data centers to financial liability and loss of customer confidence. Other supporting systems critical to the day-to-day business of financial institutions may be affected as well. For example, telephone systems, vaults, and security and alarm systems could malfunction.

In addressing the Year 2000 problem, financial institutions must also consider the computer systems that interface with, or connect to, their own systems. These systems may belong to payment system partners, such as wire transfer systems, automated clearinghouses, check clearing providers, credit card merchant and issuing systems, automated teller machine networks, electronic data interchange systems, and electronic benefits transfer systems. Because these systems are also vulnerable to the Year 2000 problem, they can introduce errors into bank, thrift, and credit union systems.

In addition to these computer system risks, many financial institutions also face business risks from the Year 2000: exposure from their corporate customers' inability to manage their own Year 2000 compliance efforts successfully. Consequently, in addition to correcting their computer systems, these institutions have to periodically assess the Year 2000 efforts of large corporate customers to determine whether they are sufficient to avoid significant disruptions to operations. FFIEC established a working group to develop guidance on assessing the risk corporate customers pose to financial institutions and the group issued guidance on March 17, 1998.

## Regulators Are Taking Steps to Ensure Institution Year 2000 Readiness

The Year 2000 efforts of the five regulators began in June 1996, when, through FFIEC, they formally alerted banks, thrifts, and credit unions to the potential dangers of the Year 2000 problem by issuing an awareness letter to chief executive officers. This letter described the Year 2000 problem and highlighted concerns about the industry's Year 2000 readiness. It also called on institutions to perform a risk assessment of how systems are affected and develop a detailed action plan to fix them.

In May 1997, the regulators issued a second, more detailed awareness letter that described the five-phase approach to planning and managing an effective Year 2000 program and highlighted external issues requiring management attention, such as reliance on vendors, risks posed by exchanging data with external parties, and the potential effect of Year 2000 noncompliance on corporate borrowers. The letter also related regulatory plans to facilitate Year 2000 evaluations by using uniform examination procedures. It directed institutions to inventory their core computer functions and set priorities for Year 2000 goals by September 30, 1997. It also directed them to complete programming changes and to have testing of mission-critical systems underway by December 31, 1998.

As regulators alerted institutions to the Year 2000 problem, they began assessing whether banks, thrifts, and credit unions had established a structured process for correcting the problem; estimated the costs of remediation; prioritized systems for correction; and determined the Year 2000 impact on other internal systems important to day-to-day operations, such as vaults, security and alarm systems, elevators, and telephones. This initial assessment was completed during November and December 1997. Among other things, it revealed that most institutions were aware of Year 2000 and taking actions to correct their systems. However, the three regulators we reviewed reported—based on the initial assessment—that in total, over 5,000 institutions were not adequately addressing the problem. For example, OTS designated about 170 thrifts as being at high risk due to poor performance in conducting awareness and assessment phase activities. Additionally, FDIC identified over 200 banks that were not adequately addressing Year 2000 risks and 500 banks that were very reliant on third-party servicers and software providers but had not followed up with them to determine their Year 2000 readiness. Furthermore, NCUA reported that it had formal agreements for corrective action with 4,862 credit unions deemed not to be making sufficient progress in at least one awareness or assessment phase activity.

The regulators are now conducting a more detailed assessment of Year 2000 readiness. This assessment will involve on-site examinations of institutions and their major data processing services and software vendors. These visits are expected to be completed by the end of June 1998. The results of the servicer assessments will be provided to the banks, thrifts, and credit unions that use these services. Once the on-site assessments are completed, the regulators expect to have a better idea of where the industry stands, which institutions need close attention, and, thus, where to focus supervisory efforts.

## Regulators Face Problems in Ensuring Institutions Are Ready

As noted in our summary, the regulators must successfully address a number of problems to provide adequate assurance that financial institutions will meet the Year 2000 challenge. First, all were behind in assessing individual institution's readiness due to the fact that they got a late start. For example, the regulators did not complete their initial institution assessments until November and December 1997. According to OMB guidance and GAO's Assessment Guide, these activities should have occurred by the summer of 1997. Because the regulators are behind the recommended timelines, the time available for assessing institutions' progress during renovation, validation, and implementation phases and for taking needed corrective actions is compressed.

Second, we also found that the FFIEC-developed examination work program and guidance for the initial and follow-on assessments were not designed to collect all the data needed to determine where (i.e., in which phase) the institutions are in the Year 2000 correction process. For example, the guidance for the work program does not contain questions that ask whether specific phases have been completed. In addition, the work program used to perform the on-site assessments is not organized by the 5 phases of the Year 2000 correction process. Furthermore, the terms used in the guidance to describe progress are vague. For example, it notes that banks should be *well into* assessment by the end of the third quarter of 1997, that renovation for mission-critical systems should *largely* be completed, and testing should be *well underway* by December 31, 1998. Without defining any of these terms, it would be very hard to deliver uniform assessments on the status of institutions' Year 2000 efforts.

At the time of our reviews, OTS had issued additional examination guidance and procedures to supplement those of FFIEC. This supplemental guidance, if implemented correctly, will address the FFIEC examination procedure's shortcomings. However, although we reviewed FDIC and NCUA earlier in the process, we found that both were using or planning to use the FFIEC guidance for their initial and follow-on assessments. We were concerned at the time that by using the FFIEC guidance, FDIC and NCUA would not be able to develop an accurate picture of their institutions' Year 2000 readiness. In the case of FDIC, this problem was compounded by the fact that the tracking questionnaire FDIC examiners were to complete after their on-site assessment also did not ask enough questions to determine whether the bank had fully addressed the phases. Since our work, FDIC and NCUA have responded to our findings by providing examiners with supplemental guidance, which we think is a positive development. FDIC officials told us that they are also in the process of going back to institutions and asking more detailed questions to provide added assurance that the corporation can tell precisely where each bank is in the Year 2000 correction process.

Third, FFIEC is still developing key Year 2000 guidance. For example, as of the time of our review, the regulators had not yet completed critical guidance related to (1) developing contingency plans to mitigate the risk of Year 2000-related disruptions and (2) ensuring that their data processing services, software vendors, and large corporate customers are making adequate Year 2000 progress. In May 1997, the regulators—through FFIEC—recommended that institutions begin these actions. FFIEC recently issued the servicer/vendor and corporate customer guidance on March 17, 1998, but does not plan to provide contingency planning guidance until the end of April 1998. This time lag has increased the risk that institutions have taken little or no action on contingency planning and dealing with servicers, vendors, and corporate customers in anticipation of pending regulator guidance. Moreover, in the absence of guidance, institutions may have initiated action that does not effectively mitigate risk of Year 2000 failures.

Finally, although the regulators have been working hard to assess industrywide compliance, it is not clear all have an adequate level of technical resources needed to adequately evaluate the Year 2000 conversion efforts of the institutions and the service providers and software vendors that service them. As institutions and vendors progress in their Year 2000 efforts, we are concerned that the evaluations of the examiners will increase in length and technical complexity, and put a strain on an already small pool of technical resources. Without sufficient resources, the regulators could be forced to slip their schedules for completing the current on-site exams or, worse, reduce the scope of their exams in order to meet deadlines. In the first case, institutions would be left with less time to remediate any deficiencies. In the second, regulators might overlook issues that could lead to failures. In either case, the risk of noncompliance by institutions and service bureaus—and the government's exposure to losses—is significantly increased. OTS and NCUA have responded to this concern by adding more technical staff or augmenting it with contractors.

## Serious Year 2000 Challenges Ahead for Regulators

It will be important for regulators to quickly address problems associated with their late start since the challenge for them is certain to grow as banks progress into the later and more complex stages of their Year 2000 efforts. For example, regulators will soon have to pinpoint which, if any, of the thousands of banks, thrifts, and credit unions are not going to meet their Year 2000 deadline. In doing so, they will have to weigh a range of factors, including the financial condition of the institution, the resources it has to address the problem, how far behind it is in correcting its systems, whether its service provider's systems are Year 2000 compliant, etc. Once these decisions are made, regulators will have to then determine which enforcement actions—which include increased on-site supervision, directives to institution boards of directors, written supervisory agreements, cease-and-desist orders, civil monetary penalties—are appropriate. All of this needs to be done *before* the Year 2000 deadline, which is less than 21 months away.

In addition, as institutions and vendors progress in their Year 2000 efforts, regulatory evaluations will increase in length and technical complexity and put a strain on an already small pool of technical resources. Thus, the regulators will need to ensure that they have the technical capacity to complete their Year 2000 examinations as well as their routine safety and soundness examinations. Already, some are finding this to be a difficult task. OTS officials, for example, expressed the concern that even if they could hire more technical examiners, it is very hard to find and hire staff with these skills.

The regulators will be better prepared to handle these challenges once the on-site assessments are completed. This information should provide good definition as to the size and magnitude of the problem, that is, how many institutions are at high risk of not being ready for the millennium and require immediate attention and which service providers are likely to be problematic. Further, by carefully analyzing available data, the regulators should be able to identify common problems or issues that are generic to institutions that are of similar size, use specific service providers, etc. This in turn will allow regulators to develop a much better understanding of which areas require attention and where to focus limited resources. In short, regulators have an opportunity to regroup, develop specific strategies, and have a more defined sense of the risks and the actions required to mitigate those risks.

In conclusion, Mr. Chairman, we believe that the financial regulators have a good appreciation for the Year 2000 problem and have made significant progress in assessing the readiness of banks, thrifts, and credit unions. However, the regulators are facing a finite deadline that offers no flexibility. They need to take several actions to improve their ability to enhance the ability of financial institutions to meet the century deadline with minimal problems and to enhance their own ability to monitor the industry's efforts and to take appropriate and swift measures against institutions that are neglecting their Year 2000 responsibilities.

Accordingly, we have made recommendations to the regulators individually, and collectively via FFIEC, to work together to, among other things, (1) improve their Year 2000 examination and reporting processes, (2) provide additional guidance to the institutions on contingency planning and the latter phases of the Year 2000 correction process, (3) develop a tactical plan that details the results of their on-site assessments, provides a more explicit road map of the actions to be taken based on those results, and includes an assessment of the adequacy of technical resources to evaluate the Year 2000 efforts of institutions and the servicers and vendors that support them, and (4) improve the regulators' internal system mitigation programs. So far, we have been generally pleased with the regulators' responsiveness to implementing our recommendations.

Mr. Chairman, that concludes my statement. We welcome any questions that you or Members of the Committee may have.

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