**Mr. Kelley discusses the Year 2000 issue** Testimony of Mr. Edward W. Kelley, Jr., a member of the Board of Governors of the US Federal Reserve System, before the Committee on Commerce, Science, and Transportation at the US Senate on 28/4/98.

I am pleased to appear before the Committee today to discuss the Year 2000 computer systems issue and the Federal Reserve's efforts to address it. The stakes are enormous, nothing less than the preservation of a safe and sound financial system that can continue to operate in an orderly manner when the clock rolls over at midnight on New Year's Eve and the millennium arrives. So much has been written about the difficulties ascribed to the Year 2000 challenge that by now almost everyone is familiar with the basic issue - specifically, that information generated by computers may be inaccurate or that programs may be terminated because they cannot process Year 2000 dates. The Federal Reserve System has developed and is executing a comprehensive plan to ensure its own Year 2000 readiness, and the bank supervision function is well along in a cooperative, interagency effort, to promote timely remediation and testing by the banking industry. This morning I shall first focus on the potential macroeconomic consequences of the Year 2000 issue. Then I shall discuss actions being taken by the Federal Reserve System to address its internal systems, including Reserve Bank testing with depository institutions, and its bank supervision efforts.

The Macroeconomic Effects of the Millennium Bug

The Year 2000 ("Y2K") problem will touch much more than just our financial system and could temporarily have adverse effects on the performance of the overall US economy as well as the economies of many, or all, other nations if it is not corrected. The spectrum of possible outcomes is broad, for the truth of the matter is that this episode is unique. We have no previous experiences to give us adequate guideposts. A few economists already are suggesting that Y2K-related disruptions will induce a deep recession in the year 2000. That is probably a stretch, but I do not think that we shall escape unaffected. Some of the more frightening scenarios are not without a certain plausibility, if this challenge were being ignored. But it is not being ignored. While it is probable that preparations may in some instances prove to be inadequate or ineffective, an enormous amount of work is being done in anticipation of the rollover of the millennium. It is impossible today to forecast the impact of this event, and the range of possibilities runs from minimal to extremely serious. In that spirit, let me review with you some of the ways in which the millennium bug already is influencing the US economy and discuss some of the possible outcomes for economic activity early in the next century.

Corporate business is spending vast amounts of money to tackle the Y2K problem. To try to get a handle on the magnitude of these Y2K expenditures, we have reviewed the most recent 10-K reports filed with the SEC by approximately 95 percent of the firms in the Fortune 500. These are the largest businesses in our economy, with revenues of around $5½ trillion annually, and are likely to be on the cutting edge of efforts to deal with the millennium bug. Before the end of the decade, these firms report that they expect to spend about $11 billion in dealing with the Y2K problem. (Of this total, financial corporations are planning expenditures of $3½ billion, while companies in the nonfinancial sector have budgeted funds of around $7½ billion.)

These estimates undoubtably understate the magnitude of the Y2K reprogramming efforts. In culling through the 10-K reports, we found that many companies

reported incurring no additional costs associated with Y2K remediation efforts. I doubt such firms are unaware of the problem. Rather, I suspect that some firms did not view their Y2K spending as having a "material" effect on their bottom line, and some companies probably have funded Y2K programs with monies already budgeted to their information technology functions. Making an allowance for all costs - whether explicitly stated or not - and recognizing that these Fortune 500 firms are only part of the picture, an educated guess of the sunk cost of Y2K remedial efforts in the US private sector might be roughly $50 billion. To put this number into perspective, the Gartner Group has estimated that Y2K remediation efforts will total $300 to $600 billion on a worldwide basis. The US economy accounts for about one-fifth of world output, and thus our estimate seems broadly consistent with the lower end of their range. Given the experience of our own Y2K efforts to date, I would expect to see costs rise further once all these Y2K programs are fully under way - ultimately pushing costs up within the Gartner Group range.

Corporate efforts to deal with the Y2K problem are affecting economic activity in a variety of ways. On the positive side, an important element in some Y2K programs is the replacement of aging computer systems with modern, state-of-the-art hardware and software. Such capital expenditures - which I should note are not included in the $50 billion cost estimate - will raise the level of productivity in those enterprises, and, in general, the need to address the Y2K problem has increased the awareness on the part of senior executives of the complexity and importance of managing corporate information technology resources. The increased replacement demand also has contributed to the spectacular growth recently in this country's computer hardware and software industries - a process that I would expect to continue for a while longer. But, ultimately, we are largely shifting the timing of these investment expenditures: Today's added growth is likely "borrowed" from spending at some time in the future. And, if analyzing the dynamics of this situation were not already complicated enough, some firms may "freeze" their systems in the middle of 1999 - effectively forgoing the installation of new hardware and software systems just before the millennium. This, too, could influence spending on computer equipment - shifting some of it from 1999 into 2000.

While Year 2000 remediation efforts may give a temporary boost to economic activity in some sectors, the net effect probably is negative. I suspect the majority of Y2K expenditures should be viewed as increased outlays for maintenance of existing systems, which are additional costs on businesses. Other than the very valuable ability to maintain its operations into the year 2000, few quantifiable benefits accrue to the firm - and overall productivity gains are reduced by the extra hours devoted to reprogramming and testing. Conservative estimates suggest that the net effect of Y2K remediation efforts might shave a tenth or two a year off the growth of our nation's overall labor productivity, and a more substantial effect is possible if some of the larger estimates of Y2K costs are used in these calculations. The effects on real gross domestic product are likely to be somewhat smaller than this but could still total a tenth of a percentage point or so a year over the next two years.

The United States is not alone in working to deal with the millennium bug. Efforts by our major trading partners also are under way, although in many cases they probably are not yet at so advanced a stage as in this country. In Europe, the need to reprogram computer systems to handle the conversion to the euro seems to have taken precedence over Y2K efforts, although there may be efficiencies in dealing with the two problems at once. The financial difficulties of Japan and other Asian economies certainly have diverted attention and resources in those countries from the Y2K problem, increasing the risk of a Y2K shock from one or more of these countries. But, on the positive side, large multinational corporations are acutely aware of the Y2K problem, and their remediation efforts are independent of national boundaries. There

also are anecdotal reports that many of these companies are extending their influence by demanding that their extensive networks of smaller suppliers prepare themselves as a condition of maintaining their business relationship.

Obviously, a great deal of work either is planned or is under way to deal with the Year 2000 problem. But what if something slips through the cracks, and we experience the failure of some "mission critical" systems? How will a computer failure in one industry affect the ability of other industries to continue to operate smoothly? The number of possible scenarios of this type is endless, and today no one can say with any confidence how severe any Y2K disruptions could be or how a failure in one sector would influence activity in others.

We have many examples of how economic activity was affected by disruptions to the physical infrastructure of this country. Although the Y2K problem clearly is unique, some of these disruptions to our physical infrastructure may be useful in organizing our thinking about the consequences of short-lived interruptions in our information infrastructure. In early 1996, a major winter storm paralyzed large portions of the country. Commerce ground to a halt for up to a week in some areas but activity bounced back rapidly once the roads were cleared again. Although individual firms and households were adversely affected by these disruptions, in the aggregate, the economy quickly recovered most of the output lost due to the storm. In this instance, the shock to our physical infrastructure was transitory in nature, and, critically, the recovery process was under way before any adverse "feedback" effects were produced. Last summer's strike by workers at the United Parcel Service is a second example. UPS is a major player in the package delivery industry in this country, and the strike disrupted the shipping patterns of many businesses. Some sales were lost, but in many instances alternative shipping services were found for high-priority packages. Some businesses were hurt by the strike, but its effect on economic activity was small in the aggregate. Hopefully, any Y2K shock to our information infrastructure would also be transitory and would share the characteristics of these shocks to our physical infrastructure.

What can monetary policy do to offset any macroeconomic effects? The truthful answer is "not much". Just as we were not able to plow the streets in 1996 or deliver packages in 1997, the central bank will be unable to reprogram the nation's computers for the year 2000. The Y2K problem is primarily an issue affecting the aggregate "supply" side of the economy, whereas the Federal Reserve's monetary policy works mainly on aggregate "demand". We all understand how creating more money and lowering the level of short-term interest rates gives a boost to interest-sensitive sectors (such as homebuilding), but these tools are unlikely to be very effective in generating more Y2K remediation efforts or accelerating the recovery process if a company experiences some type of Year 2000 disruption. We will, of course, be ready if people want to hold more cash on New Year's Eve 1999, and we will be prepared to lend to financial institutions through the discount window under appropriate circumstances or to provide needed reserves to the banking system. But there is nothing monetary policy can do to offset the direct effects of a severe Y2K disruption. As a result, our Year 2000 focus has been in areas where we can make a difference: conforming our own systems, overseeing the preparations of the banking industry, preparing the payments system, and contingency planning. Additionally, we are doing all we can to increase awareness of this problem and to energize preparations both here at home and in other parts of the world.

Background on Federal Reserve Year 2000 Preparations

The Federal Reserve operates several payments applications that process and settle payments and securities transactions between depository institutions in the United States.

These systems are critical national utility services, moving funds much as the national power grid moves electricity. Fedwire is a large-value payments mechanism for US dollar interbank funds transfers and US government securities transfers primarily used by depository institutions and government agencies. These applications, as well as the supporting accounting systems and other payment applications such as the Automated Clearing House (ACH), run on mainframe computer systems operated by Federal Reserve Automation Services (FRAS), the internal organizational unit that processes applications on behalf of the Federal Reserve Banks and operates the Federal Reserve's national communications network.

The Reserve Banks also operate check processing systems that provide check services to depository institutions and the US government. In addition to centralized applications on the mainframe, the Reserve Banks operate a range of applications in a distributed computing environment, supporting business functions such as currency distribution, banking supervision and regulation, research, public information, and human resources. The scope of the Federal Reserve's Year 2000 activities includes remediation of all of these processing environments and the supporting telecommunications network, called FEDNET. Our Year 2000 preparations also address our computerized environmental and facilities management systems, such as power, heating and cooling, voice communications, elevators, and vaults.

Year 2000 Readiness of Internal Systems

The Federal Reserve is giving the Year 2000 its highest priority, consistent with our goal of maintaining the stability of the nation's financial markets and payments systems, preserving public confidence, and supporting reliable government operations. The Federal Reserve completed assessment of its applications in 1997; our most significant applications have been renovated; and internal testing is underway using dedicated Y2K computer systems and date-simulation tools. Changes to mission critical computer programs, as well as system and user-acceptance testing, are on schedule to be completed by year-end 1998. Further, systems supporting the delivery of critical financial services that interface with the depository institutions will be Year 2000 ready by this July and a depository institution test program will be in place at that time. This schedule will permit approximately 18 months for customer testing, to which we are dedicating considerable support resources.

Our Y2K project is being closely coordinated among the Reserve Banks, the Board of Governors, numerous vendors and service providers, approximately 13,000 customers, and government agencies. We are stressing effective, consistent, and timely communication, both internal and external, to promote awareness and commitment at all levels of our own organization and the financial services industry, more generally.

A significant challenge in meeting our Y2K readiness objectives is our reliance on commercial hardware and software products and services. Much of our information processing and communications infrastructure, as well as our administrative functions and other operations, is composed of hardware and software products from third-party vendors. As a result, we must coordinate with numerous vendors and manufacturers to ensure that all of our hardware, software, and services are Year 2000 ready. In many cases, compliance requires upgrading, or, in some cases, replacing, equipment and software. We have a complete inventory of vendor components used in our mainframe, telecommunications, and distributed computing environments, and vendor coordination and system change are progressing well. We are particularly sensitive to telecommunications, an essential infrastructure element in our ability to maintain a satisfactorily high level of financial and business services. We have been working with our financial institutions and our telecommunications servicers to find ways to facilitate

preparations and testing programs that will ensure Y2K readiness. Nonetheless, this is an area that many financial institutions regard as needing attention. We strongly support the FCC's program to draw increased attention to the Y2K issue and the progress of the telecommunications companies in the United States.

Oversight of Banking Industry Preparations

Ultimately, the boards of directors and senior management of banks and other financial institutions must shoulder the responsibility for ensuring that the institutions they manage are able to provide high quality and continuous services beginning on the first business day in January of the Year 2000 and beyond. This critical obligation must be among the very highest of priorities for bank management and boards of directors. Nevertheless, bank supervisors can provide guidance, encouragement, and strong incentives to the banking industry to address this challenge. Accordingly, the Federal Reserve and the other banking supervisors that make up the Federal Financial Institutions Examination Council, the FFIEC, have been working closely to orchestrate a uniform supervisory approach to supervising the banking industry's efforts to ensure its readiness. Detailed information about our supervisory program is attached as an Addendum to this testimony and is readily available on a web site maintained by the Federal Reserve on behalf of these agencies.

Preparing the Payments Systems

In order to ensure the readiness of the payments system, the Federal Reserve has prepared a special central environment for the testing of high-risk dates, such as the rollover to the Year 2000 and leap year. Testing will be conducted through a combination of future-dating our computer systems to verify the readiness of our infrastructure, and testing critical future dates within interfaces to other institutions. Internal testing is expected to be completed by July, and external testing with customers and other counterparties will then commence and continue throughout 1999. Network communications components are also being tested and certified in a special test lab environment. We have published a detailed schedule of testing opportunities for Fedwire, ACH transactions and other services provided by the Federal Reserve. Our test environments have been configured to provide flexible and nearly continuous access by customers. The Reserve Banks are implementing processes to identify which depositories have tested with us, so that we may follow up on any laggards.

We are also researching, in conjunction with our counterparties, the benefits of Y2K testing that would span the entire business process. As part of this effort, the Federal Reserve is coordinating with the Clearing House for Interbank Payment Systems (CHIPS) and the Society for Worldwide Interbank Financial Telecommunication (SWIFT) to provide a common test day for customers of all three systems on September 26, 1998. The New York Clearing House is coordinating an effort to establish common global test dates among major funds transfer systems during April and May 1999.

We are also coordinating with the international community of financial regulators to help mobilize global preparations more generally. These efforts are discussed more fully in the Addendum. In particular, through the auspices of the Bank for International Settlements, international regulators for banking, securities, and insurance along with global payments specialists recently jointly hosted a Year 2000 Round Table, which was attended by over 50 countries. A Joint Council was formed that will promote readiness and serve as a global clearing house on Year 2000 issues. In the final analysis, however, the regulatory community recognizes that it cannot solve the problem for the financial industry. Every financial institution must

complete its own program and thoroughly test its applications with counterparties and customers if problems are to be avoided.

Contingency Planning

Despite our intensive efforts to prepare our computer systems, we must also make plans for dealing with problems that might occur at the Year 2000 rollover. As you know, the Federal Reserve has been involved in contingency planning and has dealt with various types of emergencies for many years. In response to past disasters we worked closely with the affected financial institutions to ensure that adequate supplies of cash were available to the community, and that backup systems supported our operations without interruption during the crisis period. These efforts primarily focused on the orderly resumption of business operations resulting from hardware failures or processing-site problems. In addition to disruptions to hardware or processing sites, Y2K contingency planning must be directed at potential software failures and interdependency problems with financial and non-financial counterparties. Within this context, business resumption is made more difficult because we cannot fall back to an earlier version of a software package as this version itself may not have been readied for the Year 2000. Y2K disruptions to utility services or depository institutions can also directly affect the Federal Reserve's ability to conduct business. So, in order to plan for the continuity of services, it may be necessary to consider available alternate ways to provide services if a Year 2000 problem is identified.

The Federal Reserve has formed a task force to address the contingency readiness of our payments applications. Although we have no grounds for anticipating that specific failures could occur and we cannot act as an operational backstop for the nation's financial industry, we view it as our responsibility to take action to ensure that we are as well positioned as possible to address major failures should they occur. We are currently focusing on contingency planning for external Y2K-related disruptions, such as those affecting utility companies, telecommunications providers, large banks, and difficulties abroad that affect US markets or institutions. The Federal Reserve has established higher standards for testing institutions that serve as the backbone for the transactions that support domestic and international financial markets and whose failure could pose a systemic risk to the payments system.

We recognize that, despite their best efforts, some depository institutions may experience operating difficulties, either as a result of their own computer problems or those of their customers, counterparties, or others. These problems could be manifested in a number of ways and could involve temporary funding difficulties. The Federal Reserve plans to be prepared to provide information to depository institutions on the balances in their accounts with us throughout the day, so that they can identify shortfalls and seek funding in the market. The System will also be prepared to lend in appropriate circumstances and with adequate collateral to depository institutions when market sources of funding are not reasonably available.

Our preparations for possible liquidity difficulties extend as well to the foreign bank branches and agencies in the US that may be adversely affected directly by their own computer systems or through difficulties caused by the linkage and dependence on their parent bank. Such circumstances would necessitate coordination with the home country supervisor. Moreover, consistent with current policy, foreign central banks will be expected to provide liquidity support to any of their banking organizations that experience a funding shortfall.

Closing Remarks

To sum up, the macroeconomic effects of Year 2000 preparations are quite complex. As I have discussed, some industries may benefit in the near term from increased sales associated with the accelerated pace of replacement of obsolete computer systems, and their customers presumably will have more productive systems in place sooner than might otherwise have been the case. But, in the aggregate, preparing for the Y2K problem is likely exerting a slight drag on the US economy. The Y2K problem, in effect, raises the rate of depreciation of the nation's stock of plant and equipment. It forces businesses to devote additional programming resources simply to maintain the existing flow of services from its computers.

As a provider of financial services to the economy, we are on schedule with our own internal remediation efforts and will shortly begin testing our interfaces with financial institutions. While we have made significant progress in our Year 2000 preparations, our challenge now is to ensure that our efforts remain on schedule and that problems are addressed in a timely fashion. In particular, we shall be paying special attention to the testing needs of depository institutions and the financial industry and are prepared to adjust our support for them as required by experience.

As a bank supervisor, the Federal Reserve will continue to address the financial services industry's preparedness, monitor progress, and target for special supervisory attention those institutions that are most in need of assistance. In addition, we shall track the Y2K progress of external vendors and critical infrastructure suppliers, such as telecommunications and electrical power utilities.

The problems presented to the world by the potential for computer failures as the millennium arrives are real and serious. Because these problems are unique to our experience in many ways, and because the impact of computer-driven systems has become so ubiquitous, the event is unlikely to be trouble free. While we can't predict with any certainty, there clearly is the potential for problems to develop, but these need not be traumatic if we all do our part in preparation. As the world's largest economy, the heaviest burden of preparation falls on the United States. But it is truly a worldwide issue and, to the extent that some are not adequately prepared and experience breakdowns of unforeseeable dimension, we shall all be affected accordingly. There is much work to be done. We intend to do our utmost, and hope and trust that others will do likewise.

In this spirit, Mr. Chairman, I want to commend the Committee for inviting this panel to testify together on Y2K issues. This is the first time that the Board has testified next to representatives of the Departments of Commerce and Transportation, and the FCC. This is wholly appropriate because our success in preparing for the millennium will ultimately depend very much on one another's efforts.

Addendum: Supervisory Elements of the Federal Reserve's Year 2000 Preparations

1. Interagency Statements and Other Guidance

The Federal Financial Institutions Examination Council(FFIEC) - composed of the Federal Reserve, the Federal Deposit Insurance Corporation, the Office of the Comptroller of the Currency, the Office of Thrift Supervision, and the National Credit Union Administration - has issued a series of six advisory statements since June 1996, including statements on the

Year 2000 effect on computers, project management, business risk, readiness of service providers, guidance to address customer risk, and testing for readiness. An advisory on contingency planning is being prepared. As a result of these advisory statements, the industry's awareness and the extent of its remediation efforts have significantly increased over the past two years. The FFIEC is considering additional guidance to financial institutions on the development of customer awareness programs and the need to communicate with and address questions of retail customers regarding Year 2000 issues.

2. Supervisory Reviews

In May 1997, the banking agencies committed to conduct a supervisory review by June 30, 1998, of all insured depositories to assess the state of their Y2K readiness. Subsequent reviews and examinations will continue throughout 1999. Through March 31, 1998, the Federal Reserve has conducted reviews of approximately 1,100 organizations. The Federal Reserve and the other agencies appear to be on schedule to meet their stated goal. These reviews have resulted in a significant focus of attention on the subject matter within the industry and the agencies as well.

Deficient organizations are subject to increased monitoring and supervisory follow-up including more frequent reviews. Restrictions on expansionary activities by organizations that are deficient in their Year 2000 preparations have also been put into place.

3. Assessment of Supervision Review Results

The Federal Reserve has been conducting Year 2000 supervisory reviews of financial organizations subject to our supervisory authority, coordinating closely with state banking departments and other federal banking agencies that may share responsibility for the banking organizations. Based on these reviews, we conclude that management awareness of, and attention to, the Year 2000 problem has improved notably since the Federal Reserve and the other banking agencies escalated efforts in early 1997 to focus the industry's attention on ensuring Y2K readiness. Banking organizations are making substantial progress in renovating their systems and, with some exceptions, are on track to meet FFIEC guidelines. Most large organizations are actively engaged in the renovation and testing of their mission critical systems. Smaller organizations are working closely with their service providers in an effort to confirm the readiness and reliability of the services and products on which they depend. Similarly, many of the US offices of foreign banks are heavily dependent on their parent bank for their Year 2000 readiness.

4. Supervision Follow up

To address deficient organizations, the Federal Reserve is issuing a confidential Deficiency Notification Letter to those rated less than satisfactory with respect to their Y2K readiness program. We call for a corrective action plan and put the organization on a 30-day reporting regimen to monitor its progress. Given our concern that the organization needs to use its resources to address its deficiencies, rather than expanding, the Federal Reserve also asks the organization for advance notification before entering into any contractual commitments or making public announcements pertaining to prospective acquisitions that require Federal Reserve approval. The agency can then determine the possible effects of the expansionary

proposal on the organization's deficient Y2K readiness efforts, and possibly discourage or deny expansion if financial and managerial factors are inconsistent with approval of the application.

5. Outreach Initiatives

The Federal Reserve is actively participating in numerous outreach initiatives with the banking industry, trade associations, regulatory authorities and other groups that are hosting conferences, seminars and training opportunities that focus on the Year 2000 and help participants understand better the issues that need to be addressed. Throughout the country, the federal banking agencies have been working with state banking departments and local bankers associations in order to develop coordinated and comprehensive efforts to improve the local and regional programs intended to focus attention on the Year 2000. These efforts will continue consistent with the requirements contained in the Examination Parity and Year 2000 Readiness for Financial Institutions Act (Public Law 105-164), enacted March 20, 1998, which call, in part, for the banking agencies to conduct seminars for depository institutions on the implications of the Y2K problem on their ability to conduct safe and sound operations.

6. International Scope

The Federal Reserve has worked actively within the Bank for International Settlements (BIS) to ensure that financial regulators around the world are aware of the dangers posed by the Year 2000 and are working to see that the markets and institutions they oversee are ready for the century date change. Last September, the G-10 Governors issued a Year 2000 advisory that included a paper prepared by the Basle Committee on Banking Supervision (Basle Supervisors) describing the serious nature of the problem, identifying the issues that must be addressed, and outlining how programs to address the issue should be structured. The BIS Committee on Payment and Settlement Services (CPSS) has established a web site on which payment systems around the world are posting short reports describing the status of their readiness in order to promote the transparent sharing of Year 2000 information.

We continue to participate in international meetings focusing on the Year 2000 issue in order to increase awareness and promote greater understanding and cooperation. Earlier this month, the BIS was the site for the Year 2000 Round Table sponsored jointly by the CPSS, Basle Supervisors, the International Organization of Securities Commissioners, and the International Association of Insurance Supervisors. This meeting, which was attended by financial supervisors and representatives from the private sector from more than 50 countries, highlighted cross-border dependencies and the need for international cooperation to ensure that the issue is managed to minimize any disruptions and possible economic ramifications.

As a result of the Round Table, a Joint Year 2000 Council of financial regulators was formed with the First Vice-President of the Federal Reserve Bank of New York serving as the chair. The Council will serve as a contact point between the financial market regulators and market participants including private sector groups specifically focused on international issues. It will also promote readiness, identify sound practices for dealing with the issue, and serve as a global clearing house on Year 2000 issues more generally.

A survey by the Basle Supervisors conducted late last year indicated that global awareness of the issue is increasing rapidly but that much work remains to be done. While most central banks and regulators express cautious optimism that their payments systems and financial

institutions will generally be ready, there is increasing recognition that some problems are inevitable. To this end, increasing attention is being focused on the need to identify likely potential problems before reaching the century date change and to develop contingency plans to ensure the stability of global financial markets.

The majority of foreign central banks are confident that payment and settlement applications under their management will be Y2K ready. Like the Federal Reserve, however, the operation of foreign central bank payment systems is dependent on compliant products from hardware and software suppliers and the readiness of telecommunication and electric power infrastructures. Foreign central banks consider Y2K readiness testing to be a critical and complex issue. The approach of foreign central banks toward raising banking industry awareness varies widely. We are aware that many European banks are stretched for resources as a result of the world-wide demand for information technology staff resources and their conversion to a single currency. Similarly, Asian financial institutions are focusing on their well-known problems, possibly placing full Y2K preparations in jeopardy.

## 7. Communications Efforts

We have been working intensively to address the issues faced by the industry and to formulate an effective communications program tailored to those issues. Our public awareness program concentrates on communications with the financial services industry related to our Y2K readiness, our testing efforts, and our overall concerns about the industry's readiness. We have inaugurated a Year 2000 industry newsletter, have published periodic bulletins addressing specific technical issues, and have established an Internet Web site that can be accessed at the following Internet address: http://www.frbsf.org/fiservices/cdc. In addition, we have published a set of guidelines for small businesses, including depository institutions, on Year 2000 issues and project management.

On behalf of the FFIEC, the Federal Reserve has developed a Year 2000 information distribution system, including an Internet Web site and a toll free Fax Back service (888-882-0982). The Web site provides easy access to policy statements, guidance to examiners, and paths to other Year 2000 Web sites available from numerous other sources. It can be accessed at the following Internet address: http://www.ffiec.gov/y2k.

The Federal Reserve has also produced a ten-minute video entitled "Year 2000 Executive Awareness", intended for viewing by a bank's board of directors and senior management, that presents a summary of the Year 2000 five-phase project management plan outlined in the interagency policy statement. In introductory remarks on the video, it is stressed that senior bank officials should be directly involved in managing the Year 2000 project to ensure that it is given the appropriate level of attention and sufficient resources to address the issue on a timely basis. The video can be ordered through the Board's Web site: http:\\www.bog.frb.fed.us/y2k.