Federal Reserve Board Oral History Project

Interview with

Stephen R. Malphrus

Former Staff Director, Division of Management

Date: May 21, 2013; June 17, 2013; and July 16, 2015

Location: Washington, D.C.

Interviewers: David H. Small and Tillena Clark (May 21, 2013, and June 17, 2013);

David H. Small (July 16, 2015)

Federal Reserve Board Oral History Project

In connection with the centennial anniversary of the Federal Reserve in 2013, the Board undertook an oral history project to collect personal recollections of a range of former Governors and senior staff members, including their background and education before working at the Board; important economic, monetary policy, and regulatory developments during their careers; and impressions of the institution's culture.

Following the interview, each participant was given the opportunity to edit and revise the transcript. In some cases, the Board staff also removed confidential FOMC and Board material in accordance with records retention and disposition schedules covering FOMC and Board records that were approved by the National Archives and Records Administration.

Note that the views of the participants and interviewers are their own and are not in any way approved or endorsed by the Board of Governors of the Federal Reserve System. Because the conversations are based on personal recollections, they may include misstatements and errors.

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May 21, 2013 (First Day of Interview)

MR. SMALL. Today is Tuesday, May 21, 2013. This interview is part of the Oral History Project of Board of Governors of the Federal Reserve System. We are interviewing Stephen R. Malphrus, who was the Staff Director for Management at the time of his retirement from the Board in 2011. Steve joined the Board staff in 1975. I am David Small from the FOMC (Federal Open Market Committee) Secretariat in the Division of Monetary Affairs. I am joined by Tillena Clark, an officer in the Board's Division of Information Technology (IT). This interview is taking place at the Board.

Background and Joining Board Staff

MR. SMALL. Tell us a little bit about your background and how you came to work at the Board.

MR. MALPHRUS. I am from Washington state. I did my undergraduate degree at Washington State University. Washington State University and the University of California at Berkeley were the first major universities on the west coast to implement IBM 360 mainframe computers. Washington State University is the state's polytech university, and it receives a lot of funding from Boeing. Boeing hires many of its engineers from the university. Boeing funded the major acquisitions of computers at Washington State University. The president of the university insisted that all students take at least one class in computer science. I was interested in quantitative topics and in high school my favorite class was physics. So computer science was natural. But that made me somewhat unusual in those days as computer science was just being phased into many universities.

I was in the Army Reserve Officer Training Corps (ROTC) and after I received my degrees, I was commissioned. I was assigned to the Army Chief of Staff. Given my quantitative undergraduate and graduate studies in computer science, economics, and management, I was assigned to the Pentagon. I was recruited to come to the Board when I completed my military service.

The military was an early implementer of computer technology. During the Cold War, the military led the country in the collection and processing of data in real time. So I was recruited by the Board to help lead the automation, processing, and transmission of economic, financial, and regulatory data in real time. The Federal Reserve System was just beginning to implement a program to automate the data that were coming into the Board. Data from the private sector was collected on paper by the Reserve Banks and then the paper reports were sent to the Board. That's the way data was received from the private sector—for example, bank holding company reports and the Call and Income reports for banks, as well as economic and financial data that were inputs to monetary policy, financial analysis, and supervision of institutions.

MR. SMALL. Hard copy information was coming in. And then people would key punch the information onto computer cards?

MR. MALPHRUS. Yes, that's the way it was working when I came to the Board in 1975. One goal was to build a system that could process all the different types of data that were collected in the System as opposed to building custom software for each data collection, and then use the telecommunications system that the Fed had put into place for funds transfer purposes as the way to transmit the data so the paper wasn't sent in and then keypunched at the Board.[1] Data would be entered electronically by the Reserve Banks and then would be transmitted electronically. For small amounts of data, it was essentially a messaging system. Where you

[1] The Fed was implementing an electronic system for payments. Fedwire and the Automated Clearing House were being implemented.

had large amounts of data, we used something called "bulk data"—think of the electronic version of a tape on which the data was transmitted to us. That eventually replaced all of the paper that had been flowing in.

MR. SMALL. What were your first impressions of the Board?

MR. MALPHRUS. I had a number of job opportunities as I was completing military service. I was careful and I did the research. And having studied economics, I knew what the role of the central bank was. When I joined the Board, my first impressions were good and were consistent with what I knew about the Federal Reserve and what I learned when I was recruited. In my career at the Board, I worked in the division of Information Technology (IT). I also worked in the Division of Research and Statistics (R&S) and I worked for William "Bill" Taylor in the Division of Banking Supervision and Regulation (BS&R) where I served as a bank examiner with the Reserve Banks and as a bank holding company analyst. I also worked in Reserve Bank Operations and Payment Systems (RBOPS) where I participated in reviews of the Reserve Banks.

I was also assigned to work at the FFIEC (Federal Financial Institution Examination Council) when the organization was starting. A goal of the FFIEC was to have a more standard approach, not just to supervision but also to the collection and processing of information. I did a lot of work with the Comptroller of the Currency and the Federal Deposit Insurance Corporation on FFIEC policies to accomplish that objective.

I first came to the Office of Staff Director for Management in 1983 as an assistant staff director when we were implementing personal computers and minicomputers in addition to the mainframe; it was called the Office Automation Program. Mark Greene, an economist from Research and Statistics, and I led the implementation of Office Automation. I also did some work at the Resolution Trust Corporation when we went through the Savings and Loan crisis. That was a start-up organization as well.

It was somewhat unique in those days for someone to have the knowledge of computer science, quantitative analysis, and economics that I had developed. That's one reason that I worked in all these areas, and was able to advance as I did. That's not unusual today, but at the time it was.

MR. SMALL. Who were your mentors and bosses during your career at the Board?

MR. MALPHRUS. I worked for a large number of people at the Board in various areas. My mentors and bosses included Governor Lyle Gramley; Ed Ettin; Peter Tinsley; and then Dave Frost, the Staff Director for Management; Bill McDonough, the president of the New York Federal Reserve Bank; and Roger Ferguson, the Board's Vice Chairman. The people in the divisions that I had worked for included: Chuck Hampton, director of IT, Clyde Farnsworth, director of Reserve Bank Operations and Payment Systems, and Bill Taylor who was the director of Banking Supervision and Regulation.. I also worked with Bill Wiles, director of the Office of Secretary.

I served as an officer under Chairmen Paul Volcker, Alan Greenspan, and Ben Bernanke. When I was nominated to become an officer, Volcker interviewed me.

MR. SMALL. Your IT background provided a broad base to get into other areas, and that further broadened you. It got you into bank supervision, et cetera.

MR. MALPHRUS. Yes. Later in my career, I realized that I was fortunate to have had the opportunities I had to work in five offices and divisions. Whether the Board should take a more formal approach to moving people around during their careers is an issue. Some of that is done now.

The Board Structure

MR. SMALL. People think of the Fed Chairman as the CEO. Is that analogy right?

MR. MALPHRUS. The Board structure differs from that of the Reserve Banks and private-sector businesses. At my level, the Board did not operate in a traditional business command and control structure. The Board generally operates through collaborative decisionmaking. To me, the structure that comes closest to how the Board operates is a university. Think of the Board divisions as departments in a university. Department chairmen have a lot of power. There is a president of the university, but in the case of most major universities, department chairmen have more independence than you would find in a traditional corporation. The Reserve Banks have a more traditional command and control structure. You have one chief executive officer and a board of directors that play a role. At the Board, there are seven Governors and there are committees that oversee each of the functional areas at the Board and those committees are chaired by Governors.

MR. SMALL. Was the chain of command confusing for you because there are seven Governors—that is, everyone’s in charge so no one is in charge?

MR. MALPHRUS. Usually I worked with the oversight Governor who chaired the committee that oversaw the activities I was engaged in. But I would get involved with Governors on one-on-one issues that were related to the strategic plan, high profile issues that would require coordination with the Reserve Banks or other agencies, issues that might result in congressional questions, and public affairs type issues. Many proposals had to be approved by the full Board. When Board meetings were held, I would brief Governors individually before the meeting. My job was very demanding in that regard. When I became the Staff Director for Management, a key challenge at the Board was to rationalize and harmonize the administrative and management functions. At the same time, we had to meet the laws and regulations that applied to us.

As I got more involved in management, one of the challenges was compensation and benefits. In Washington, D.C., the Board compared its pay and benefits structure to what the federal government and the Reserve Banks were doing on compensation and benefits. Some of the agencies that the Board competes with on the supervisory side, the OCC and the FDIC, were paying their employees more than the federal government was paying. The Board also competes for employees with the Reserve Banks. We went through a period when we lost people to Reserve Banks because their wages were higher and the benefits were better. Then, you also had competition with the private sector and major universities.

Another issue was whether the Board should continue to operate under an accounting system that parallels that of the federal government or should shift to private-sector accounting rules. The Board made that shift, so we had to modify our accounting systems and that was a big change for us to work through. The Reserve Banks follow accounting rules developed by the Board that are consistent with private sector accounting rules, except for transactions that are unique to a central bank. A major difference between the federal-government and private-sector accounting systems is that the government sector expenses all of its costs. They generally do not capitalize and depreciate multi-year assets such as buildings and investments in computer and telecommunications systems, et cetera.

Division of Information Resources Management (IRM)

MR. SMALL. How did you become the Information Resource Management (IRM) division director?

MR. MALPHRUS. In 1991, I became the director of Information Resource Management while I was working as an assistant director in the Staff Director for Management's office. When the director of the Information Resource Management division position came open, I was nominated and went through the interview process, and was selected by Chairman Greenspan. When I became the IT director, IT consisted of two divisions and an office. That structure was not operating well so I merged everything into one division, the Division of Information Resources Management (IRM). Later, I also merged additional Board offices when I became Staff Director.

The Expansion of Computing Power

MR. MALPHRUS. One of the initial problems that I had to address as IRM director was the division's budget. The budget was of concern to the Board members and it also had been raised by the Government Accountability Office in their review. The IRM budget was growing at rates that were two and three times that of the rest of the Board. Divisions did not have to justify what they were asking IRM to support investing in— computing had been successful, but it had become a "free good." I eliminated the "free good" problem by requiring divisions to budget for computing services provided by IRM. So the cost of computing would have to compete with other items requested by a division in their strategic plan and budget.

Divisions were also buying PCs, minicomputers, and the like. There were no standards for that, so we were starting to run into problems. At one point, we had minicomputers from four different vendors. The minicomputers couldn't communicate with each other and that was creating a lot of problems, so I led the effort to select a standard system. We also established standards for desktop computing. Everything would have to connect together—desktop to mini, mini to mainframe, and mainframe to telecommunications in order to connect to the Reserve

Banks. Also, part of that effort was to work with the Reserve Banks and the other federal agencies to standardize the regulatory reporting by financial institutions and to continue to eliminate the use of paper by implementing electronic systems.

So we moved from the "free good" system that we had in mainframe computing, standardized the computing environment, and came up with an architecture for desktop computing and for distributed computing. And, on the business side, we continued to eliminate paper and shorten the lag between the collection and availability of data. Those were my key focuses when I became division director of IRM.

MR. SMALL. People often have a perception of government having antiquated technology: old, dusty computers. Did the Board fund top-tier technology?

MR. MALPHRUS. The Board was very good about funding investments in computing, though it was important to keep them informed. I thought it was important that IRM have an oversight Governor and committee meetings the way other divisions had oversight Governors with a committee, and the Board agreed. The Board was good in funding "state of the art" computers and telecommunications systems.

MR. SMALL. What about the function of keeping the Chairman up-to-date on financial data and world developments. Was that a part of your mandate?

MR. MALPHRUS. Yes. The amount of data that we were collecting continued to grow as the financial system and economy expanded, both at the domestic level and, in certain cases, the international level as well. This was true not only in the research and monetary policy areas but in supervision and regulation as well when the Bank for International Settlements in Basel, Switzerland, started to establish standards for supervision, particularly for internationally active banks.

MR. SMALL. In contrasting the type of information you could put on the Chairman's desk through technology early in your career to later, was it really ticker-tapes when you came here and then real-time terminals?

MR. MALPHRUS. Yes, it was ticker-tape like systems with punch cards and then we moved to real-time computer systems.

MR. SMALL. What's the before-and-after of your experience at the Board?

MR. MALPHRUS. The before-and-after is simply the amount of data that was collected and then the real-time reporting and processing of data that changed significantly. The lag between the time the data was created, reported, and used in analysis improved significantly.

When I was the IRM Director, we had this large conversion in technology. This included the growth in electronic telecommunications and distributed processing with file servers and personal computers, in addition to the traditional mainframe. It was a real challenge, both at the Board and working with our colleagues at the other agencies and Reserve Banks. We had to have standards. One of the goals of the FFIEC was to come up with standard ways to collect and process data.

MR. SMALL. What were some of your experiences and difficulties managing across the Federal Reserve System because the Reserve Banks have private-sector characteristics and the Board is public sector, with the Banks being supervised by the Board?

MR. MALPHRUS. Today at the management and operational levels, standardization of business processes and information technology is generally handled for the Reserve Banks through the Conference of First Vice Presidents.[2] I became an adjunct member of the Conference of First Vice Presidents. I would participate in meetings and conference calls to

[2] The Conference of First Vice Presidents was established in 1969 and meets periodically to address operational and other matters at the Reserve Banks.

discuss planning and System-wide projects. How would you describe the Conference of First Vice Presidents? Each of the Reserve Banks is independent. They have to compete in their own markets, so their wages are different. New York has the most intense competition. At the level of the Conference of First Vice Presidents, we were doing things to harmonize and standardize operations, such as with the implementation of technology. For example, we went through a period where Reserve Banks and the Board had their own computing and telecommunications systems. Each would build its own version of software to collect data for a new economics and financial-statistics system, or would have its own version of software to develop information systems. That's all changed now. The Federal Reserve Information Technology (FRIT) organization was created in the 1980s.[3] That's where the mainframe computers utilized by the Reserve Banks are located. If you have an application, you'll build one version of the software that all of the Banks, and in many cases, the Board, will use.

Economies of scale became a focus in the Federal Reserve—optimizing our resources to minimize our costs. Congress knows that Federal Reserve earnings, after paying expenses and dividends and maintaining a surplus at a specified level, are remitted to Treasury and help offset the federal deficit. So we looked for ways within our structure of 13 entities to harmonize our work and to minimize costs. Doing that was a big focus during my tenure because those net savings would accrue to the federal government. That held us in good stead with our congressional oversight committees.

MR. SMALL. A reduction in the public's use of cash was also a way the System could consolidate resources. If less cash was used, there would be less cash processing by the Fed.

[3] FRIT supplies national infrastructure and business line technology services to the Federal Reserve System.

MR. MALPHRUS. That was more on the Reserve Bank operations side. But the movement to electronics, and the Automated Clearing House, was a very big change. There was a focus on using electronics to substitute for paper, including cash, wherever we could. Electronic Funds Transfer, EFT, was an early application. The Fed is a banker's bank. We looked for opportunities to apply automation in our role as a banker's bank. The Fed is also a component of the government's bank, and we also looked for opportunities wherever we could to use electronics in this role. In my career, there was tremendous emphasis on that, as technology evolved. It was both computing and telecommunications taken together. For example, when I came to the Board, every two weeks employees would receive a paper paycheck. We then implemented electronic "direct deposit" so employee pay was directly deposited to the employees' bank accounts. We also worked hard to get Treasury to move to direct deposit as well. There was an emphasis on this because it resulted in a reduction in cost. Also, it resulted in fewer errors than when checks or currency were used. There were fewer risks when using electronic funds transfer.

MR. SMALL. Did the Fed take the initiative in pushing the industry in this direction, or was it following the industry?

MR. MALPHRUS. The Fed encouraged industry to implement cost-effective payment systems and would set standards. You want to borrow from the Fed? Well, here's how it works electronically. This is what you're going to have to do. It's all online. If it had to do with Treasury functions the Fed performed, working with the Treasury we could require the banks to move those functions to electronics. Of course in our decisionmaking process, we would consider the costs to the banks to implement new systems.

What we couldn't do is require banks to automate their own operations that weren't directly interacting with the Federal Reserve, unless failure to do so created a level of supervisory risk that would violate the safe and sound operations of the bank. One reason I was assigned to BS&R was to assist with the implementation of electronic banking through my knowledge of what we were doing in the Fed, and then how that would apply to commercial banks. Today, operations risk is a key risk along with the traditional credit, market, and liquidity risks.

Workplace Diversity

MR. SMALL. Could you talk about your efforts as IRM director to promote workplace diversity?

MR. MALPHRUS. I emphasized the importance of expanding the job applicant pools to be more inclusive. Traditionally, you would just interview people who had applied for a position, but the candidate pool needed to be expanded in nontraditional ways to look for well-qualified women and minorities. I placed an emphasis on that by talking with people and asking for references as well as going to professional recruiting organizations.

MR. SMALL. Were there any particular Governors who took initiative in this regard?

MR. MALPHRUS. There was a general commitment to diversity. Alice Rivlin, for example, placed an emphasis on this and that was when it really got the attention of division directors. And it became part of the measures that would be included in performance evaluations. Sheila Clark was available to assist in this, not just to make sure we were following laws and regulations related to diversity and equal employment. We made a real effort to reach out in summer internships as a way to make contact with traditionally black colleges and universities like Howard and Morgan State, and to get minorities interested in the Federal

Reserve. We did that both at the professional and intern levels. We incorporated EEO [Equa Employment Opportunity] into the mainstream of management.

MS. CLARK. Under Steve's leadership, the Leading and Managing People Task Force was developed. It emphasized grooming managers who would then become officers. Steve helped us set up that structure to take staff at all levels—male, female, and various minorities—and give them the skills and the leadership opportunities to grow within the division.

MR. MALPHRUS. Thank you.

Lessons Learned over the Years

MR. SMALL. More broadly, what are some lessons learned over the years?

Collaborative Management

MR. MALPHRUS. One of the key lessons learned involves collaborative management. Previously, I talked about the university-like model we employed at the Board. The Board utilizes collaborative management and peer reviews, rather than the more traditional command and control management model. There is no question who is in charge at JP Morgan Chase. Department A and Department B will do what Mr. Dimon tells them to do, period. In collaborative management, peer review is important in the same way that peer review is important in academia. It's important in our management systems.

Collaborative management is a key to success not only at the Board, but at the Federal Reserve System level and at the interagency level as well. I've always found it easy when I was assigned to run interagency committees. The OCC uses a command and control model, so my colleagues from there would have problems when they were assigned to interagency committees. They would call you together and say, this is the way it's going to be. That's not the way you're going to be successful across agencies. You have got to use collaborative management. One benefit of having the model that we have here is that it prepares you for interagency and international committee work.

Formalizing Management Processes

MR. MALPHRUS. In addition to modernizing the Performance Management Program (PMP) to support performance-based compensation, the Board's Management Policies and Procedures were formalized. The Policies and Procedures had evolved over a long time and needed to be rationalized and made current. I worked with a committee that I formed of division directors and senior staff to conduct the review and make recommendations to the Board. A number of agencies we work with, including the FDIC and the OCC, subsequently used what we developed as the basis to modernize their management policies and procedures as well. I also implemented a formal process for strategic planning to address emerging issues and to set priorities for funding our budget. The process involves the oversight Governors for each division as well as division directors and, where appropriate, the Reserve Banks and other agencies as well.

Communications: Outward and Inward

MR. MALPHRUS. Another lesson I learned over the years is the importance of maintaining good communications with the Fed's congressional oversight committees and the Government Accountability Office. A couple of times a year, I would arrange for us to brief the staff of our oversight committees instead of waiting for something to happen and for them to call a hearing. I would have briefings with them about what we were doing with key evolving issues. I would develop an agenda and then brief them on the status. Because we were there, they would raise other issues on their minds, and we were able to answer a lot of questions and resolve evolving issues. From my perspective, this saved time and was appreciated by congressional staff as well as Board staff. I would do the same thing in dealing with people at the Government Accountability Office in order to keep them informed about areas that we were working on that they might be interested in. I found that building these communication structures was helpful and saved us time.

Another lesson learned was the importance of good communications with our employees. We paid attention to employee-related issues. The issues were often focused on compensation and benefits and on work-life balance issues. Employees were also involved in strategic planning. It wasn't just management and members of the Board. I led the strategic planning efforts. For my last strategic planning cycle, I selected Dave Stockton to serve as co-chair. We would provide the division directors with questions, and then get their input. Strategic planning would drive the budget. In addition to obtaining input for strategic planning from Governors, division directors, and Federal Reserve Banks, we would also obtain input from our employees. Like many government agencies, the Board doesn't have an employees' union. Nonetheless, we do have an employees' committee. So I would have the employees' committee do a presentation on what they thought were emerging issues that the Board needed to address as part of strategic planning and the budget process as well.

Good communications beyond just the management and Governor structure at the Board—whether it's with our congressional oversight committees, the Government Accountability Office (GAO), our employees' committee, et cetera—was a lesson I had learned and it served us well.

Changes in the Staff Director Position after Retirement

MR. MALPHRUS. Traditionally, the role of the Staff Director had been that of a chief of staff and chief operating officer. When I was getting ready to retire, I recommended to

Governor Warsh that some of my job responsibilities be moved. The scope of the job had gotten too large. I was serving as the chief of staff. I was serving as the Staff Director for Management—think of it as chief operating officer. I was also handling much of the work with the Government Accountability Office and other organizations. It took an incredible amount of time. Because of the Year 2000 conversion project [President's Council on Year 2000 (Y2K) Conversion] and then 9/11, I was chairing a number of interagency committees that dealt with post-9/11 issues involving supervision and regulation and bank operations. For example, I chaired the interagency committee that developed the first vulnerability assessment of the financial system and I briefed the Secretary of the Treasury and the President.

The chief of staff job was created and separated from the Chief Operating Officer (COO) position. Dick Anderson was hired as the COO but left after a short time and Don Hammond was then appointed. The chief of staff functions generally were assigned to Michelle Smith [director of the Office of Board Members]. The amount of GAO work, particularly with the financial crisis, grew to be very large. The Legal Division took that over and one of their attorneys is working with the GAO. The BS&R work that I was responsible for was allocated to BS&R. Wayne Pacine, who worked for me, went to BS&R. A lot of that is post-9/11 work. My responsibilities at the interagency level generally went to BS&R, with some aspects allocated to Reserve Bank Operations and Payments Systems.

June 17, 2013 (Second Day of Interview)

MR. SMALL. We're continuing our interview with Steve Malphrus. I am David Small and again I'm joined by Tillena Clark.

Year 2000 (Y2K) Conversion

MR. SMALL. What was the Year 2000 (Y2K) problem?

MR. MALPHRUS. In virtually all of the information, payment, and telecommunication systems, computers were generally programmed to use two characters, not four, in the year field; thus, the two-character year field did not have two digits denoting the century. A lot of computing involves comparing data for one date to data from another date. So there was concern about the year field when we moved from 1999 to 2000. Of course, 99 was greater than 98 and 97 (for the years 1999, 1998, and 1997, respectively). But 00 (for the year 2000) was not greater than 99 (for the year 1999), so the year 2000 would not be greater than the years 1999, 1998, 1997 when compared.

There was concern that we were going to have many computer- and software-applications failures as a result of these two-digit comparisons of years. This was something that never had to be addressed before. There was concern about the potential impact in everything from the air traffic control system to the financial system. Most companies and government agencies had no idea how large this problem was.

The Board's Involvement in the Government-Wide Effort

MR. MALPHRUS. The President's Council on Year 2000 Conversion was created by the President Clinton. He subsequently appointed John Koskinen to chair the Council. I was appointed by Chairman Greenspan to represent the Federal Reserve on the Council. We were fortunate to have had John. He had worked on Wall Street and served in several senior federal government positions over the years as well. For example, he had run the Office of Management and Budget. President Clinton thought that John had the kind of public- and private-sector backgrounds that would be good to lead the Year 2000 conversion effort. John Koskinen declared this to be a private and public sector project. That was genius. This was something that typically hadn't been done before. This was not the public sector telling the private sector what to do because we supervised them, but this was the public and private sectors working together, sharing information to make the Year 2000 conversion successful. This was set up so that information could be shared by the public and private sectors. Of course we also addressed this as a supervisory matter with our FFIEC colleagues. John identified four critical sectors based on an analysis of the potential risks to our country: Banking and Finance, Telecommunications, Power, and Transportation. John appointed me to run the Banking and Finance Sector of the President's Council.

Michael Powell (the Federal Communications Commissioner and son of Colin Powell) is a Georgetown lawyer and had worked in telecommunications and was appointed to head the telecommunications sector; and I worked closely with Michael given the financial sector's reliance on telecommunications. I set up a committee that consisted of senior people from federal agencies including the Comptroller of the Currency, the FDIC, the Securities and Exchange Commission, the Commodity Futures Trading Commission, and the National Credit Union Administration. At the state level, I had representatives from state banking supervisory agencies and state insurance commissioners—for example, the New York State Banking Supervisor was a member of my committee.

In the financial system, we depend upon reliable telecommunications and it is, therefore, one of our greatest vulnerabilities. Whereas if power goes out, we generally have backup generators for critical operations, if you lose telecommunications, the financial system doesn't grind to a halt, it would snap to a halt. For example, if you lost Fedwire, the banking system couldn't settle many of its transactions. I was put on a Federal Communications Commission Advisory Council as a result of the high level of dependency the financial sector has on telecommunications.

As part of the Year 2000 project, we were asked by the President to support worldwide efforts. I'll never forget one of the most interesting times in my career: Kofi Annan, who was the Secretary-General of the United Nations, asked John to come and speak to a session of the United Nations, and he brought the four of us who were leading the critical sectors. That was a quite stunning experience to be sitting at the head table in the United Nations General Assembly with Kofi Annan and John Koskinen and briefing people and taking questions from representatives from all over the world.

As a result of that, I ended up traveling to some 35 countries to speak at meetings organized by central banks around the world. I was given a ten million dollar note in Zimbabwe dollars when I was at the Central Bank of Zimbabwe, which organized a meeting with many central banks in Africa. It was worth less than five U.S. dollars. You understand the value of the U.S. dollar as the reserve currency of the world when you have this happen.

One of the things I was able to do then in working with the other central banks and financial regulatory authorities was to provide them with a status of what we had learned in our own testing of mainframes, file servers, personal computers, telecommunications equipment, et cetera. I shared with them what we knew was compliant and ready for the Year 2000 and what was not yet prepared. The central banks provided us status reports on a scheduled basis on their Y2K preparation. Then on the night of Y2K we held around-the-world conference calls on the status of the financial system as the new century dawned. In establishing the relationships with central banks, we shared information on what we had learned about the readiness of technology. The United States got out ahead first in most cases and shared the information.

MR. SMALL. For Y2K, the key night was December 31, 1999, New Year's Eve. Could you lay that out for us?

MR. MALPHRUS. As I mentioned, we had worked through the United Nations and with other entities including central banks around the world. We also worked with SWIFT (Society for Worldwide Interbank Financial Telecommunications) which operates a payments, clearing, and settlement system with financial institutions throughout the world. We're talking about payments, not just at the Fedwire domestic level, but worldwide with SWIFT. We had a series of meetings in Brussels with SWIFT at its corporate headquarters.

We had created a worldwide system of status reports that would be transmitted as the first day of 2000 began. We had reports coming into our command and control center from around the world. We were monitoring worldwide what was happening, where there were problems, and what caused any particular problem as best could be determined at the time. As the new day dawned in the Pacific first, communicating what was happening around the world in the financial system became very important.

We had worked closely in the United States with the American Bankers Association and the Independent Community Bankers Association. We also had worked closely with the Bank for International Settlements in Basel in Switzerland as well as with other central banks—for example, the Bank of England. We communicated with all of the central banks in Europe and with the Hong Kong Monetary Authority, Saudi Arabian Monetary Authority, Bank of South Africa, Bank of Brazil, The Peoples Bank of China, et cetera.

MR. SMALL. Did it work smoothly?

MR. MALPHRUS. There were problems in some countries, but overall, the work that had gone into preparing for Y2K paid off. There were some problems in a few banks in the United States as well but, as a result of the work that had been done, we didn't have the kind of regional, domestic, or global failures that could have happened. A lot of the international work was led by the United States. For example, Michael Powell of the Federal Communications Commission worked with his colleagues around the world to make sure that all the undersea cables and satellite communications had been prepared and tested. Koskinen had done a fabulous job bringing the critical sectors together. For us as I noted, telecommunications was the most critical sector we depended on.

Because John Koskinen declared this a private and public sector project, the public and private sectors worked together sharing information at both the domestic and international levels. We did a lot of work with the Federal Reserve Bank of New York, but also with the Independent Community Bankers Association of America, the American Bankers Association, and other financial sector associations. I spoke at many conferences of the American Bankers Association, the Securities Industry Financial Markets Association, et cetera.

MR. SMALL. Did that relationship between the private and public sector work well?

MR. MALPHRUS. Yes. Information about status as well as information when problems became apparent was openly shared in a way that normally an institution might not want to share with its supervisory authority. But an environment of sharing was created to address the issues and emerging problems. It was a unique system—I've never seen anything like it—and an incredible model. I recall that John, when asked about it, would refer to what had happened after

Pearl Harbor at the start of WWII as an example of when the public and private sectors came together saying, "While this is unusual, the public and private sectors must share information."

There was sharing of information about what banks had learned about Vendor A, and B, and C, and D, et cetera, and about what the federal agencies had learned. Sharing that information was important. That meant sharing information about preparations to make systems Y2K compliant for backup and contingency plans, and for identifying what the risks were and how you would deal with a risk should that occur. There was this open sharing of information that transcended the public-private sector supervisory bridges and also transcended the competitive bridge—that was the environment that was created. John would say, "This is so important that we've got to have this open sharing of information," which was excellent and very important.

Ex Ante Risk Assessment

MR. MALPHRUS. The first goal was to do a risk assessment. You had this broad application of computing technology starting with IBM in the mid-1960s, and an organization-wide operations risk assessment had never been done before in the vast majority of financial sector insitutions. And of course, computing and telecommunications had grown at a rapid pace. We had gone from mainframes and were now in the world of minicomputers, file servers, and personal computers, as well as traditional mainframes and other forms of computing.

MR. SMALL. You said you did risk assessments. One could think of that being very general—you sit around a room and think about what could go wrong—or one could think of that as being very practical—you go to some company, pull out a plug, and see what stops.

MR. MALPHRUS. It was a combination of the two. In addition to the banks and other financial institutions, in the period before the Year 2000 conversion effort you had growth in companies that provided services to financial institutions. For example, there were companies that provided computer services that enabled a bank to outsource its computing for demand deposit accounting, commercial loans, et cetera. So, not only did we have to work with the investment banks, commercial banks, credit unions, et cetera, we also worked with the various stock markets, payments and clearing companies, and telecommunications firms as well as the companies that provide software and computing services, and we brought all of that together to do the assessment. This was the first time many classes of financial institutions and their key service providers were brought together to address “operations risk.”

The first thing we did was identify where information technology had been applied in the financial services industry. Nobody had ever done that before. One of our first goals was to create maps of what computing and telecommunications services were used by a commercial bank. We analyzed first-, second-, and third-order automation in a commercial bank, an investment bank, the New York Stock Exchange, the key payment clearing and settlement systems, et cetera. This was the first step in performing the Year 2000 risk assessment. The second step was to determine if actions had been taken to mitigate the risks we identified. In other words, in their databases had they expanded the number of digits for representing a year from two to four digits to resolve the problem of moving from 1999 to 2000?

MR. SMALL. How much ahead of the fact did this start?

MR. MALPHRUS. The Year 2000 conversion project went on for two years in advance of the century date change.

MR. SMALL. At the time, there were stories about how IT spending in the aggregate was boosted because firms would decide to accelerate the next step forward in IT investment in order to solve the problem and to get it done before the century-date change.

MR. MALPHRUS. Yes, exactly. There was a tremendous investment that was made and, not surprising of course, this became a competitive issue as well. For example, there were financial service bureaus that got out ahead of others and were able to make their systems Y2K compliant and then have an independent assessor come in and verify that compliance. They would then go out and use this fact to gain customers. In the financial services industry, a lot of community banks and even regional banks will rely on service bureaus to perform much of their computing work. So, there was a large investment that was made by Financial Service Bureaus to become compliant and then to confirm compliance by an outside review.

The rule that we have, for example in banking, is that banks must operate in a safe and sound manner. This became a safety and soundness issue. Of course the Federal Financial Institution Examination Council agencies (Federal Reserve, Comptroller of the Currency, FDIC, Office of Thrift Supervision, and the National Credit Union Administration, as well as the state banking supervisors) required institutions to become Y2K compliant. It became a safety and soundness requirement.

In any case, there was a tremendous investment that was made in making sure that systems were compliant. If an institution was going to keep information systems that they developed, then they had to modify it themselves, and that occurred in the Federal Reserve as well. For example, we had to make sure that Fedwire and the Automated Clearing House systems were compliant. We also had to make sure that the systems that collect supervisory data—for example, on banks and holding companies, not to mention all of the economic and financial statistics systems that we use in [the divisions of] Research and Statistics, Monetary Affairs, and International Finance—were compliant. So there was a tremendous investment that was made to achieve compliance and then to confirm that with an independent assessment in many cases.

Sharing Information on Compliance

Again, one of the things that in retrospect was very important and that John Koskinen required was that the public and private sectors work together in a partnership, so there was a lot of sharing of information. Often times the question would come up: Well, what about this software from company X? And somebody in the room would raise their hand saying they had tested it and had verified that it was compliant. So financial institutions, which would normally be competing with one another and might see this as some form of competitive advantage, came together because it was clear to everybody that this was a risk to the industry as a whole and not just to bank A, bank B, or bank C. So there was a sharing of information unlike any that I had ever seen before on the issues of operations risk and how to achieve compliance.

Official Briefings

John would have us brief the President in the Oval Office. The Secretary of Treasury was there, and other key cabinet level people would participate in the discussion as well. There was a lot of information sharing at the executive level. There were a number of things that John did that I thought were very good including briefing the President's cabinet and our congressional oversight committees. There was a strong feeling in many countries that the United States was in a leadership position so we ought to be sharing information with other countries and we did that. In the financial system, we did a lot of sharing with other countries by working through the Bank for International Settlements and central banks. And I'll never forget that experience at the United Nations that John asked me to participate in.

MR. SMALL. So this assignment got you to the UN and into the Oval Office.

MR. MALPHRUS. Yes. I'm not sure how many people have had the experience of sitting at the head table in the UN General Assembly Building, but that was quite an experience.

MR. SMALL. What was it like being in the Oval Office?

MR. MALPHRUS. I was in both the Oval Office and the Situation Room for the work that I did in the post-9/11 environment after I was appointed by Secretary of Treasury Paulson to lead the interagency project to write the first assessment of the vulnerabilities of the U.S. financial system.

We've all had a chance to see pictures of the Oval Office in movies. The first time I saw it was in a movie about John Kennedy. The White House is fascinating. The rooms are small, even the Situation Room is small and intimate. The President said, "If you'd like, you can sit in my chair." So we each got to sit in the President's chair at his desk in the Oval Office. No pictures could be taken, of course.

I was at the White House a number of times for Y2K, and then again a number of times for post-9/11 work. My colleagues and I were quite interested to see in how much detail the President wanted to understand things and the questions that were asked. It was not just a courtesy briefing. In all of those cases, with both President Clinton and President George W. Bush, they were quite attentive and clearly were thinking about things and asked some very good questions. My colleagues and I were impressed.

The Situation Room has a longer table than the Oval Office. In both cases, there were cabinet Secretaries to ask questions as well. In the case of the financial system, the Secretary of Treasury was there and our Chairman would attend in many cases as well. I always briefed our Chairman before going to the White House so that he was informed and could ask questions and make recommendations.

Updating Contingency Plans

MR. MALPHRUS. Once it became clear that the Year 2000 conversion problem was going to be resolved, John insisted that, as a form of insurance, the federal government and those in the private sector that we supervised spend time updating their contingency plans. During the Cold War, there had been a tremendous focus on contingency planning. At the end of the Cold War, contingency plans for a national catastrophic event were generally not maintained. John insisted that we all update and modernize our business contingency plans to address continuity of critical operations. That included more than just dealing with various scenarios that might happen in Y2K. I'll give you an example. Being able to communicate in a crisis is critical, and the Federal Communications Commission has a special program with phone numbers that you can dial to hold emergency calls when the rest of the telecommunications systems are down. You carry these special GETS (Government Emergency Telecommunications Service) cards with phone numbers on them and, in preparation for the Year 2000 conversion project, we had two simulations—general walkthroughs—with various failure scenarios and then we'd discuss how we would deal with those various contingency scenarios. The cards that give you a priority to place calls were widely shared with our private-sector colleagues.

In a crisis, if somebody important needs to be transported but the air traffic control system is down, what do you do? You use the U.S. military. There's a way that you can arrange to use the U.S. military to transport people in times of crisis when the air traffic control system is down. So, we spent a lot of time making sure that we could communicate. We had backup for electrical services, and we went through several simulations that involved both the private and public sectors.

John created this excellent public and private sector partnership and, for the Year 2000 conversion, there were very few problems in the United States. Indeed, we were successful.

Terrorist Attack on the United States on September 11, 2001 (9/11)

MR. MALPHRUS. I've been interviewed a number of times recently for a book about 9/11. I make the point that had we known that 9/11 was going to take place, we couldn't have done a much better job of contingency planning than what we did for Y2K. As an example of the Y2K preparation, we needed to be able to move cash should the need arise. If we couldn't put the cash on a civilian aircraft, we needed the military to help us with that—we needed to be able to move people as well. Well, 9/11 occurs, where's Alan Greenspan? Alan is over in Basel, Switzerland, and we have an Air Force base in Italy, a NATO base. I called the Assistant Secretary of the Air Force who I had worked with during Y2K and he arranged for an Air Force plane to leave Italy, go pick Alan up in Basel, and bring him back to Andrews Air Force Base. As another example, we were able to immediately hold conference calls and I was able to connect with the New York Fed. Even though that part of New York City had lost power and telecommunications, we were able to communicate with the New York Fed because of special priorities that we had worked out with telecommunications for Y2K. We went to the front of the line for calls on the financial system, and the financial system was a priority for restoration of telecommunications services in New York City. There were several important banks in New York City involved in the clearing and settlement of payments, and they were a priority. For example, Bank of New York plays a critical role in the financial system, and it went to the front of the line for restoration of telecommunication circuits as a result of what we had planned for. We had the ability to do this because Michael Powell, who was a member of the Federal Communications Commission, worked with us and was able to get for us those GETS cards that were created for use should war break out. These cards allowed us to go to the front of the telecommunications line if all of a sudden the phone system was overwhelmed—if there had been a loss of telecommunications capacity.

What happened on 9/11 is that we all had GETS cards. I was able to immediately initiate a conference call with the major banks in New York, all of the Federal Reserve First Vice Presidents, and key people from the other agencies. Had it not been for the Y2K preparation, we couldn't have immediately communicated on 9/11. There were lots of people that day who couldn't communicate. The Chairman was trying to talk to people but he couldn't get a hold of some people because of telecommunications failures. The plane that hit the World Trade Center damaged a major telecommunications switch in New York City on Wall Street.

There are a number of examples of how the investments that we had made and contingency planning we did for Y2K, not only for ourselves but for the financial system more generally, assisted us on 9/11. When a crisis occurs, the most important thing is the people who are involved in managing the crisis be able to communicate. We were able to do that because of the planning that had been done for the Year 2000 conversion.

MR. SMALL. Would you reflect on how your responsibilities or the organization's management objectives changed as a result of Y2K or 9/11?

MR. MALPHRUS. Yes. What happened is that traditionally the role of the Staff Director had been a combination of the chief of staff and the chief operating officer—a key role of chief of staff traditionally was to represent employees before the Board. The role of chief operating officer is to oversee the administrative functions including strategic planning, finance, information technology, human resources, accounting, security, administrative risk management, et cetera.[4] In addition, as the Fed became subject to more GAO reviews, I was the person responsible for working with GAO, and I would meet with them on the status of our various projects. And during my tenure at the Board, both at the agency level and in the financial system, operations risk was growing. And it became critical during the Year 2000 conversion and then 9/11.

After 9/11, we had to implement a much higher level of security in the Board buildings. Also we spent a lot of time investing in the Chairman's security detail. Before 9/11, the people involved in his detail were not federal law enforcement officers; they were not armed. We changed all that. His detail today, in most cases, were trained by the Secret Service. Also the security for the Board buildings was significantly improved. Today of course we also have the growing role of operations risk that the Board is addressing.

Promotions at the Board and the Role of Management Skills

MR. MALPHRUS. The Board strongly supports investments in human capital. One change that occurred during my time at the Board regards promotions. Subject-matter expertise is what got most people, including myself, promoted—the focus was not on being able to manage, it was subject matter expertise. During my tenure, the Board recognized a need to focus on management skills in addition to subject-matter expertise. In the past, whenever I was making a policy change in the Board's Management Policies and Procedures, I would call a meeting with division directors to let them know what was happening, what the impacts would be, and to get their feedback. I thought that we needed to formalize that. So the Executive Committee of the Board was formed. Today, the division directors and the Board oversight

[4] The Government Performance and Results Act requires that federal agencies, in consultation with Congress and outside stakeholders, prepare a strategic plan covering a multiyear period and submit an annual performance report and performance plan. Although the Federal Reserve is not covered by the Act, the Board of Governors voluntarily complies with the intention of the Act.

Governor for the Executive Committee meet on a regular basis. That is a recognition of the important role that management plays. Also, because the excellent quality of the Board staff is recognized, we are often called upon at the interagency level, more so than other agencies, to lead various activities and that is because we have very good staff and executives who know how to manage.

We had some issues in working with the Government Accountability Office and our congressional oversight committees. I set up meetings where we would go to the Hill and meet with the majority and ranking minority congressional staff. Before those meetings I would meet with Board division directors and we would talk about emerging issues and then after the meetings on the Hill I would have feedback from the congressional staff about issues. In many cases, that helped to avoid more formal congressional hearings on matters. I found that it was worth the time and the effort to brief the congressional staff. I would put together an agenda based on what my colleagues and I thought they would be interested in, but then they would raise questions about emerging issues that were developing and we were able to answer a lot of their questions and resolve emerging issues. Or, if it was something they wanted more information about, I would arrange for a briefing with Board staff.

Relationship with Treasury and the Congress

MR. SMALL. Is our relationship with the Congress different from our relationship with Treasury in that for Congress the approach is “Here’s what we’re doing, we know we’re accountable to you,” whereas with Treasury, it is “Here are some joint projects, let’s get them done.”

MR. MALPHRUS. I think that is exactly right. Our relationship with the Treasury goes back quite a ways. I have talked about the President’s Council on Year 2000 Conversion and then the post-9/11 President's Council [President George W. Bush established the National Commission on Terrorist Attacks Upon the United States on November 27, 2002] and the effort I led to write the first version of an assessment of the vulnerabilities of the U.S. financial system, which for obvious reasons is classified. There is the President's Working Group on Financial Markets, which has been around for a while, and the Chairman of the Federal Reserve participates in those meetings. So the Secretary of the Treasury would not only have individual discussions with, for example, the Chairman and the heads of the OCC, FDIC, et cetera, but would use the President's Working Group on Financial Markets for interagency projects. That was the precursor to the Financial Stability Oversight Council.

The Secretary of the Treasury could ask the Chairman of the Fed if the Federal Reserve had somebody who could lead a project and often times we would get called on because there was a recognition that we were more balanced because we are the country's monetary authority and thus concerned about the economy, at the same time that we are a supervisory authority. In other words, the Fed has a broad scope within which it conducts supervision and in which it deals with threats to the financial system, given the many roles that the Fed plays as a central bank. From my perspective, people who come through the ranks here have a vision that is generally much broader than those of staff from other agencies who have generally worked with a narrower range of responsibilities.

MR. SMALL. Did turf issues with Treasury come up? Did you need to know where to draw the lines?

Mr. Malphrus: Yes. At my level, when a turf issue would come up, I would say I need to go back and talk to the Chairman. And I would also talk to our general counsel. I spent a lot of time with our general counsel, Virgil Mattingly at the time, on these issues as they developed, particularly following 9/11. Following Virgil's retirement in 2004, I would meet with Scott Alvarez, who replaced Virgil.

MR. SMALL. Is reporting to the Congress implicitly reporting to your boss in some general sense?

MR. MALPHRUS. From my perspective, yes. I found that taking the time to think through emerging issues that Congress would have an interest in and briefing congressional staff was effective. Yes, there was a cost to doing that in terms of time but, based on my experience, putting an agenda together and going up and spending the time with them paid off in terms of time savings. The good thing about that is that you had people who were now working more closely together, on the Fed side and the congressional side. So, when something would come up, a member of the Congressman's staff would say, "Well let me call the Fed and see if I can get some information before we decide if we need to hold a hearing." So I think there was a real payoff in the process. From my perspective, oftentimes congressional hearings are held not to resolve a matter but, because it's something that's important to the public, Congress wants to demonstrate to the public that it is addressing the matter, as for example with the "I Love You" computer virus.

"I Love You" Virus and Firewalls after 9/11

MR. SMALL. What was the "I Love You" virus?

MR. MALPHRUS. After 9/11, people throughout the country knew a lot more about how dependent on computing and telecommunications we were. And the world of cyber hacking in computing was growing. Some hackers created a virus called the "I Love You" virus. It would arrive on your desktop as an email titled, "I Love You." Many people might be interested in an email that said "I Love You" and would open it. If you opened the email, you would compromise yourself to the people who were trying to get into your computer system.

Our House oversight committee, chaired by Barney Frank, decided to hold a hearing. The Treasury, the Federal Reserve, and the Securities and Exchange Commission were called to testify. I testified on behalf of the Federal Reserve, along with Wayne Abernathy from Treasury, and Bob Colby from the Securities and Exchange Commission. Wayne Abernathy testified first and told the Congress that this was not a problem, that Treasury was on top of it and the American people weren't going to fall prey to emails that said, "I Love You." Bob Colby went next and assured them that they didn't have to worry about their emails that said "I Love You," that it was not going to compromise securities trading. I had worked enough with Congress to appreciate that the reason the hearing was being held was that the virus was a concern of the American people, and members of Congress wanted to demonstrate to the American public that this was a serious matter and, therefore, that's how they reacted to them. These hearings were filmed and shown on a large numbers of evening news programs around the United States. So, when it came to me, I opened by saying, "Mr. Chairman and ranking minority member, as you know, over the last year, the Federal Reserve has been raising interest rates. Therefore, any email that said 'I Love You', from the Chairman on down to the lowest members of our staff, was immediately suspect and none of the emails were opened."

The Board was getting a lot of press about the negative impact that it was having on the economy because the federal funds rate was being raised. I didn't denigrate the virus. I introduced some humor into the whole thing, which they enjoyed. Then I assured the Committee that we were prepared for hacking attempts. We had alerted our people in the Fed to this emerging issue in computing, and we have educated people in the Federal Reserve to be watchful for this kind of thing.

Information Security Management

MR. SMALL. Did that start a big effort on firewalls?

MR. MALPHRUS. Yes, absolutely, it did. This presented another type of operations risk that had to be dealt with.

Congress then passed something called the Federal Information Security Management Act (FISMA) that applied to federal agencies. It required federal agencies to deal with this kind of risk. GAO would come in and look at federal agencies and how they were dealing with this evolving risk. FISMA also put pressure on agencies that regulate the financial system to start looking at this as a form of operations risk and to address this in our safety and soundness examination procedures.

MR. SMALL. This brings up the issue of information security in general and congressional oversight of it in particular.

MR. MALPHRUS. For example, something like FISMA applies to the Board of Governors but not to the Reserve Banks, although Congress can ask the GAO to audit information security at the Reserve Banks. Now, what have the Reserve Banks done to come to the same level of information-security accountability as the Board? In information security, the Reserve Banks have done a very good job because of their role in the payments system: Billions of dollars are flowing through our funds transfer systems every day. Bank A pays bank B through an account at the Federal Reserve Bank and, at the retail level, automated clearing house transactions are flowing through the Fed as well.

So, information security in the Federal Reserve Banks has been a high priority, much higher than it would generally be for other supervisory agencies, in my experience, because of our role in the payments system. But there would be differences between the Board, as an entity with an Inspector General and federal law that directly applies, versus the Reserve Banks; yet we're all one institution. There's the Conference of Presidents and the Conference of First Vice Presidents, and I was an adjunct member of the Conference of First Vice Presidents because we would work together on matters such as information security.

For example, following 9/11, the Federal Reserve System implemented a duty officer program to deal with 9/11-like incidents, and the duty officers for the Federal Reserve were myself and Sally Green. The First Vice President who was chair of the Conference of First Vice Presidents at the time was Sally from the Federal Reserve Bank of Boston and then she went to Richmond as the First Vice President, and she was the co-duty officer. We had formal duty-officer procedures in the Fed and ways that we would inform and communicate with the head of the Conference of First Vice Presidents. I would get a call from somebody in the White House or Treasury and then we would follow our procedures. Though again, the issues would be that while the Board and Reserve Banks are different in some ways, we're all part of the same institution. We would work together even though there would be different laws in some cases that would apply.

Compensation and Benefits

MR. MALPHRUS. One other thing I wanted to mention that was very important was a key management challenge that I had. As I said, the Board is an entity in the Federal Reserve System, so we work with the Reserve Banks. Often times, when it comes to things like compensation and benefits, Board staff would compare themselves with the Reserve Banks. As a federal agency, we are comparing ourselves with other federal agencies or with at least those federal agencies that we deal with every day, like the OCC and the FDIC; plus, now we were dealing more with the SEC and the Commodities Futures Trading Commission. And so managing within that construct of being an entity in the Federal Reserve System, being a federal agency and being a member of the group of federal agencies that supervise the financial system, with the comparisons that were often going on in much of what we did, is a challenge that has to be carefully managed.

One of the things that we did, starting in 2006, is we decided—and I was able to get a commitment from the Board as Staff Director—that every 10 years we should conduct a comprehensive review of compensation and benefits. And so we started that in late 2006. Fay Peters, Todd Glissman from the Management Division, and I led the review.

We were experiencing an increasingly challenging market. I was able to get a commitment from the Board to go ahead with a review, and we retained Mercer Consultants to come in and work with us and, of course, we took a look at the other agencies that we compete with in Washington, as well as the Reserve Banks and the private-sector regarding compensation and benefits. This resulted in what today is called the Total Rewards Program that we have.

One of the things that we did was we changed the compensation caps, and they were raised significantly. Needless to say, we had to have excellent staff work supporting those recommendations. We did a very careful analysis of what was happening in the Reserve Banks, particularly those Reserve Banks that the Board had lost people to the prior 10 years, as well as with other federal agencies that we compete with.

So, there were significant increases then in the pay caps at both the base pay level and the total compensation with variable pay. There was a lot of support to move—and indeed that is what we did—towards more variable pay, based on employee performance. This tied back to the annual employee performance evaluations (PMPs) and, as I have mentioned earlier, what was really important was the growing understanding of the need to have good management systems in place. We could only implement a variable pay performance management system on which to evaluate people for compensation if we had good systems to set objectives and evaluate employee performance.

In addition, we implemented a number of other benefits. We included a couple of holidays and increased the amount of leave that employees would be provided. In the thrift plan, we added the automatic one percent contribution by the Board. In addition, we added another one percent matching contribution, so we increased thrift plan contributions by two percent. We increased the variable pay for job families under market pressure, with an agreement that we would look at and determine which job families were under market pressure on a more frequent basis. At the time, job families under market pressure were economists, attorneys, and officers. We also added, because medical costs had been increasing, access to the Federal Employee Health Benefit Plan.

We had data on employee turnover and what the market was paying that showed the need to do this kind of review. We brought in outside expertise and the Board agreed, and the Board was very much in favor of continuing to move towards variable pay based on an individual's contribution; that is, based on job performance.

MR. SMALL. Is this something that the staff goes up to the Hill and gets a hearing on, you give a warning to the Hill: We are doing this?

MR. MALPHRUS. Yes. I did. I set up, with our Congressional Liaison people, a discussion with Hill staff. I told them we would get back and share the information with them as to what we did and what data were used to justify what we did. Yes, and this was, I think, very, very important.

MR. SMALL. So none of this should have come as a surprise to Congress?

MR. MALPHRUS. Yes, the Congressional staff I worked with thought the process of briefing them was very helpful.

Executive Committee of the Board and Strategic Planning

MR. MALPHRUS. A couple of other things. I think the focus of the Executive Committee of the Board on strategic planning, where we had a more formal strategic planning process, is something that became very important. I recommended that the Executive Committee be formed. It was important to have a strategic planning process and to bring in the Committee on Board Affairs, and then the full Board, on what the plan was going to lead to in terms of additional workload and costs. We had to make the business case to support our budgets, and a formal strategic planning process was put in place to do that. The Executive Committee of the Board was created as a standing committee because of the need to take more of an organized approach to addressing management issues.

I also thought it was important that we focus on our Equal Employment Opportunity program. I arranged for Sheila Clark to give reports to the Executive Committee of the Board on our EEO programs and why we're doing what we're doing and what we needed to emphasize. This became an Executive Committee of the Board process and the work in Sheila's area also became part of our strategic plan.

Work/life balance was an issue that we discussed with the Executive Committee of the Board as well. Work/life balance policies were brought to our attention by the employees' committee; it was one of their key issues. The employees' committee was also very supportive of the review of compensation and benefits. Seeking employee input into our thinking and strategic planning was, I thought, a very important addition that we made as well.

Use of Outside Consultants

MR. SMALL. To what extent does the Board pull in private-sector people or private-sector best practices?

MR. MALPHRUS. We use consultants in a number of areas as I previously mentioned. We used Mercer Consultants when we did our compensation and benefits reviews. I thought it was important that we get a firm that was fully aware of what was going on in the private sector to advise us. McKinsey was also brought in to assist our strategic planning work. There was some concern at the Board level about spending too much money on outside consultants.

The idea of best practice, understanding what that was and asking how we compared to best practice, was something that we started to do in the Federal Reserve System. That is, Reserve Banks and the Board would look at who had best practice in the Fed in a particular area. So, working inside the Federal Reserve System to share information was very important. I learned a lot from my colleagues in the Reserve Banks, the First Vice Presidents, in a number of areas. But the idea of being more open to understanding what the Federal Reserve, the federal government, and the private sector were doing to address similar issues became an important part of our management process as well.

Transparency and Communications

MR. SMALL. Could you discuss transparency?

MR. MALPHRUS. During my tenure there was greater movement towards transparency about what the Fed is doing. When I first came to the Fed, the only thing that markets knew about an FOMC meeting that had just occurred is that the FOMC had met. Nothing more was immediately published at that time. The Federal Reserve has become more transparent over the years and under Chairman Bernanke we've become even more open as well. On Wednesday, the second day of the FOMC meeting, Chairman Bernanke will be holding one of his quarterly press conferences and minutes of each FOMC meeting are released three weeks after the meeting. Also, the FOMC releases transcripts of their meetings with a five year lag.

The Federal Reserve complies with the law in areas like publishing our budget. You've also seen some voluntary changes over the years, and under Chairman Bernanke you've seen some real opening in terms of transparency that sets a new level for not only the Fed but for many central banks around the world.

On the operations side, we're very open with our own situations; GAO reports become public, our financial statements and the outside audit are also made public. We're more open along all of our lines of business than when I first joined the Fed.

MS. CLARK. During your Board tenure, you have dealt with many constituencies. Externally, they have included the congressional oversight committees, the Executive Branch, the FFIEC agencies, and GAO. Internally, you had the Chairman and other Governors, Reserve Banks, division directors and other Board officers, and you have the Board employees. When you look back on all those constituencies, was there one that took up the majority of your time or that was difficult?

MR. MALPHRUS. Occasionally some were difficult, but I found that it helped to reach out and communicate, whether it was having the employees' committee chair discuss issues with the Board's strategic planning committee and talk about employees' concerns and issues, or going to the Hill and meeting with staff to let them know about what we were doing. There was not one particular group that dominated my time. It was somewhat difficult to explain to non-

Fed constituencies our processes since we are different from the standard federal agencies that use appropriated funds.

Mission Creep and the Congress

MR. SMALL. Do you think the Fed has been subject to mission creep over the years? With each crisis it seems to get involved in one more thing. Has it gotten involved in too many things?

MR. MALPHRUS. There's a formal and an informal part of mission creep. A formal part of mission creep is when the Fed is given new statutory responsibilities, for example. In the past, that has occurred in the area of consumer affairs and bank supervision and associated safety and soundness issues. The latest involves the role that the Fed plays in financial stability under the Dodd-Frank Act. While members of the Congress may sometimes disagree with the Fed, we are nonetheless respected on the Hill. So oftentimes Congress will give the Fed additional responsibilities because it knows that the Fed will handle the responsibilities well. This, I believe, is a key reason why we were given the additional responsibilities for financial stability under the Dodd-Frank Act.

On the informal front, because the Fed is respected, it is oftentimes asked to participate or head interagency initiatives. I have mentioned the Year 2000 conversion and post-9/11 initiatives like the assessment of the vulnerabilities of the financial system. That didn't just happen to me. Many senior people in the Fed will be asked to lead an interagency effort because we are respected by our peers, respected by the Hill, and respected by the financial services industry.

As I mentioned, because of the Fed's extensive responsibilities as the central bank, our employees have a broader background and context within which we analyze particular issues.

In my opinion, the lack of a broader background is what has caused some of the challenges at the Securities and Exchange Commission and the Commodities Futures Trading Commission over the years. Their roles are basically to evaluate compliance with laws and regulations. The Fed has safety and soundness responsibilities in addition to compliance with laws and regulations, and then in addition, we are the central bank and we've got this broader monetary-policy context and area of responsibility. As a result of that, people who come through the ranks at the Fed typically have a broad context within which to think about and research issues.

The Fed also has a reputation of being able to get things done. It doesn't have the same kind of limitations some of our colleagues in other agencies have relative to budgets. We can get projects done faster. Nonetheless, we do impose on ourselves good controls. We should have good controls because we're held accountable by Congress to operate in an effective and efficient manner. Nonetheless, my experience is that we can move more quickly to address issues compared to most other governmental entities.

MR. SMALL. As you get larger and larger, people will want to pay closer attention to you and maybe put you under more restrictions.

MR. MALPHRUS. There's certainly a legitimate concern for that. The Financial Stability Oversight Council is chaired by the Secretary of Treasury, with the chair of the Federal Reserve serving as a voting member, and the Consumer Financial Protection Bureau (CFPB) receives funding through the Federal Reserve. In particular with the CFPB, there are certain responsibilities that Congress wanted to get greater focus on that were taken from us in our consumer and community affairs area and assigned to the CFPB. Congress created a separate federal entity funded through us, nonetheless a separate federal entity with its own reporting relationship to Congress. The CFPB is also a member of the Federal Financial Institutions Examination Council.

Importance of Financial Literacy

MR. SMALL. Are there myths or misunderstandings about the Federal Reserve that you would like to quash once and for all?

MR. MALPHRUS. One misunderstanding is that because we do not use appropriated funds we are not accountable to Congress. This is simply not the case as we have discussed the many ways we are accountable. The President nominates the Governors and, from the Governors, nominates the Chair and the two Vice Chairs—with all the appointments requiring confirmation by the Senate.

Also, the Federal Reserve is now doing more outreach and education in the area of financial literacy. That's particularly important in this day and age when the country generally has moved to defined-contribution pension plans and away from the traditional pension plans. Under traditional pension plans, there is a chief investment officer employed by the plan to manage the investments. When you move to a defined-contribution plan, you have shifted much of the chief investment officer's responsibility on deciding the allocation of bonds and stock investments et cetera in their retirement fund to the employee. Thus, you have shifted many decisions on investment risk to employees. Therefore, the public needs a good degree of financial literacy. The Fed is stepping up to do that. In addition to the other responsibilities, the effort and emphasis being put into financial literacy by the Federal Reserve is important. One way to help is to develop financial literacy information and to be an important player in financial literacy efforts. From my perspective, it's important that the Federal Reserve continue to do that.

MR. SMALL. Thank you.

July 16, 2015 (Third Day of Interview)

MR. SMALL. Today is July 16th, 2015. I am David Small of the FOMC Secretariat at the Board of Governors of the Federal Reserve. I'm here with Steve Malphrus and we are continuing his interview as part of the Board's Oral History Project.

Audits of the Federal Reserve

MR. SMALL. Steve I'd like to begin by discussing the issue of whether the Federal Reserve gets audited.

MR. MALPHRUS. When you talk about "audit," that is a broad term: There are financial accounting audits and there are audits that are reviews of programs and whether you are accomplishing what you were established to do—that is, are you accomplishing the goals set by Congress in a cost effective fashion without waste, fraud, and abuse? So the term "audit" as used here is a very broad term and let me address each of those aspects.

Financial Audits

The Board's financial statements and compliance with laws and regulations affecting those statements are audited by an outside auditor retained by the Board's Office of Inspector General (OIG). The Federal Reserve Act requires the Board of Governors to conduct an examination of each Reserve Bank at least once a year. So, the selection of the Reserve Banks' auditor is made by the Board, led by the Board's Division of Reserve Bank Operations and Payments Systems (RBOPS) in consultation with the Reserve Banks. The results of the Reserve Banks' audits go to RBOPS and the Board of Governors, and they also are sent to our Congressional oversight committees. And the result of the Board's audit also goes to our oversight committees.[5] Additionally, Sarbanes-Oxley requires public companies to receive an audit of their systems of internal controls; while not required under Sarbanes-Oxley, both the Board and the Reserve Banks voluntarily comply and contract for such an audit.

Another related question is: Where do we get our money from and what do we do with it? The bottom line is that the Fed is the country's central bank. In conducting monetary policy and addressing risk in the financial system we go into the market and buy and sell government securities as well as U.S. agency mortgage-backed securities—of course, those securities pay interest and principal and those payments are a source of cash flow to us. Similarly, when we make loans at the discount window, they generate revenue from the interest we charge banks on those loans. We also charge banks for the services we provide such as the transfer of funds by Fedwire, the provision of currency, et cetera.

From these revenues, the Federal Reserve [System]—the Board and the Reserve Banks—pays expenses and retains some excess funds as a capital surplus. It's a good financial principle to retain some earnings as a surplus. In addition, the Federal Reserve pays a dividend to member banks that hold stock in the Federal Reserve, and the amount of the dividend is set by law. Under the Dodd-Frank Act, the Federal Reserve also funds the Consumer Financial Protection Bureau. After these payments, the remaining revenue is paid to the U.S. Treasury. Indeed, you would expect that, given that we are the central bank and as such we are part of the federal government.

MR. SMALL. So in the federal budget that Congress passes every year—

[5] For more information on Federal Reserve audits, see the public website of the Board of Governors of the Federal Reserve System and the annual reports of the Board of Governors of the Federal Reserve System.

MR. MALPHRUS. There is not a line item for the appropriation of money to the Federal Reserve the way there is a line item for the appropriation of money to the Department of Treasury, the Department of Defense, and other federal agencies.

MR. SMALL. So there's a line item that says, to simplify, Defense gets so much, EPA gets so much, Treasury gets so much; but there's no line that says how much the Federal Reserve gets because we have our own independent source of money?

MR. MALPHRUS. Yes, as I understand the federal budget process. And the federal government, in addition to tax revenue, has other forms of revenue. For example, in legal cases there are fines that are imposed by the judicial and regulatory systems, and those monies are similar to the money that we turn over to the Treasury and they are used to help fund the federal government. We are not given an objective by Treasury for the amount of money for us to earn and turn over to them. But we're held accountable for operating in an efficient and effective manner, and then the surplus that we have is turned over to Treasury. And that can help fund federal operations and the deficit.

A number of years ago, the Board operated with an informal Inspector General—it was informal because there was not a law requiring an inspector general. That was changed and the Board now has an Office of Inspector General under law and the OIG reviews Board programs and operations as well as Board functions that we have delegated to the Reserve Banks.[6] The Inspector General generally does not have oversight of the Reserve Banks. But where the Board of Governors has delegated a function to the Reserve Banks, the Inspector General can review that function for efficiency and effectiveness the same way that it reviews Board functions.

[6] The Board's Inspector General operates in accordance with the Inspector General Act [of 1978].

The Reserve Banks get audited by an outside accounting firm as well. All 12 Reserve Banks get audited by the same auditor. The results of those audits go to their boards—as well as to the members of the Board of Governors and to Congress. The Reserve Banks have boards and there are three classes of directors on the Reserve Bank boards. Some of the directors are from [the] banks in their District that hold stock in the Federal Reserve Bank.

Indeed, a single auditor for the Reserve Banks makes even more sense today because we have centralized many activities in the System. For example, today there is an IT service provider for the Federal Reserve Banks, the Federal Reserve Information Technology organization, which is run out of the Richmond [Federal] Reserve Bank. So that function is audited at the Federal Reserve Bank of Richmond.

The Board's Inspector General

MR. SMALL. Maybe you could explain a little bit about how the OIG is set up. Is the Inspector General an in-house person?

MR. MALPHRUS. The IG is appointed by the Chairman of the Board. The OIG has a budget that the Board approves. When I was Staff Director, the other divisions worked with me on strategic planning, et cetera. The OIG was not part of that process. They're independent. They work with us, but they have their own strategic plan and budget. The OIG is set up by law to be independent and report to the Chairman. The Inspector General can also be called to testify before Congress.

The Inspector General also selects their own staff. Now, as a member of the Board staff, the OIG has to adhere to the Board's policies, procedures, and standards that are stated in the Management Book. But they are independent. They did not report in the budget process through me. They have a budget that goes to the Board through the Chairman. The OIG has a set of laws that it operates under and it has its own attorneys as well.

The OIG does coordinate with the Executive Committee of the Board, which is the organization I set up consisting of division directors working with the Governor who provides the oversight for the Board. I would invite the Inspector General to our meetings and he would attend and listen to the discussions of the Executive Committee of the Board. So the IG was brought into our management system. He was made aware early on about what we were doing. While the IG is independent, it's still important to have a working relationship with him—the value is that there are things that the Inspector General would learn in the meetings that would then help him decide whether or not he needed to go in and look at a particular area. So we made it more efficient for everybody. If you think of an Inspector General as a government version of internal auditors, it's important that the internal auditors be aware of what's going on so that they can perform their jobs and accomplish their objectives and do it in a way that isn't overly burdensome to management. You want to try to optimize that to the extent that you can. So I encouraged the Inspector General to participate in discussions and in meetings.

If we were addressing a report the OIG had produced, then the Inspector General wouldn't get involved in those discussions because we had to write a formal response to the report. So at that point it would be the division director working with me and with the oversight Governor who writes the response to the Inspector General. But having the Inspector General broadly aware of what the Board is doing makes it a more effective and efficient process in terms of management and a more effective and efficient internal review process as well.

MR. SMALL. So if the Board passes its financial audit successfully, that in essence says, "We've traced where the money's going—it all seems fine, it's accounted for. What's supposed to be in which accounts is there."

MR. MALPHRUS. Yes, plus the money was spent for the purposes that it was allocated. But as I mentioned, in addition to conducting financial audits, the OIG also reviews and audits Board programs and operations as well as those Board functions that have been delegated to the Reserve Banks.

The Role of the Government Accountability Office

MR. SMALL. Are there are a lot outside financial audits? Are there parts of the Fed that the Government Accountability Office would come in and ask about? What is the GAO's role?

MR. MALPHRUS. The Government Accountability Office, when it was created initially, was called the General Accounting Office. When it became the Government Accountability Office it went beyond just looking at budgets and expenses, it also started assessing whether agencies were operating in an efficient and effective manner, et cetera. The GAO conducts periodic reviews of Federal Reserve activities.[7] They conduct some of the reviews at the request of our Congressional oversight committees.

The GAO would often come in and look at things that we were doing at the interagency level. They would see that we were working with the OCC, the FDIC, Office of Thrift Supervision, National Association of Insurance Commissioners, et cetera, on something and ask "How are you doing?" Where there's a law that applies to a number of supervisory organizations, they'll come in and evaluate how we are doing individually and collectively and

[7] Under the Federal Banking Agency Audit Act, most Federal Reserve System operations are under the purview of the GAO, and the Office conducts a number of reviews of the Federal Reserve System every year.

see how we are doing relative to other agencies such as the FDIC and the OCC. There would be cases where the Board would get higher marks than the other agencies, or once in a while the other agencies would be given higher marks than the Board.

And then you may have the congressional request where they ask GAO to come and review something. But these are all intended to oversee the agencies. If the IGs are doing good jobs and focused on the waste, fraud, and abuse, then GAO tends to look at the broader questions of whether the agency is accomplishing what Congress intended in an effective and efficient manner.

MR. SMALL. Do they have their own standing to independently say, for example, "Gee, you guys are renovating your building—we're going to come in and see if you really need to do that." Can they, on their own, investigate that?

MR. MALPHRUS. Yes, they can do that. What they would do is ask, are you efficient and effective in renovating the building? They would come in and look at what it cost to do the renovation and how that cost compares to what other public and private sector costs are on a per square foot basis to do a similar renovation. So the GAO may look at that. But the Inspector General may do that as well.

MR. SMALL. Will GAO come in and look at our information security?

MR. MALPHRUS. Yes. They certainly can do that and they have in the past. They will look at issues that have serious consequences or impacts on operations of government agencies. Clearly, information (cyber) security is on the list.

MR. SMALL. So they can do this either on their own initiative or because they are asked by Congress?

MR. MALPHRUS. Yes. They can do it on their own initiative. Congress has given them that authority. Gene Dodaro, who runs GAO, has been empowered by Congress to initiate reviews where he thinks they need to be initiated. Of course they also do reviews requested by Congress.

I think having a good relationship with the Inspector General, the Government Accountability Office, and our congressional oversight committees is important. That doesn't mean that they're going to agree with us on all issues. But I think what's important is that you have the kind of working relationship where if there is a question you could pick up the phone and talk to them. And indeed, there may be a request by a member of Congress for GAO to come in and perform a review.

You want to make reviews as efficient as possible for all parties involved to minimize the burden on the Board, divisions, and staff in the area in which a review is going to occur and to make it effective for the GAO, the IG, and Congress. Now, in the end you may disagree with what the results are, but what's important is that you try to facilitate a process that is effective and efficient so as to accomplish what needs to be done, and to do that in a way that isn't overly burdensome.

The Monetary Policy Exemption

MR. SMALL. Let me focus a little bit on monetary policy and the audit. Essentially, everything outside of monetary policy is covered by the financial audit?

MR. MALPHRUS. I believe so.

MR. SMALL. And with a discount window loan? Once a discount window loan is made, how did the money flows actually happen? What securities were held for collateral and under what conditions? Those money flows and collateral holdings are accounted for in detail by the financial audit?

MR. MALPHRUS. I believe so. In the GAO reviews of the Federal Reserve, Congress created a monetary policy carve out. The GAO (whose head is the Comptroller General of the United States), under the law, cannot come in and evaluate the Fed on the monetary policy decisions it makes.[8] Congress generally has precluded itself from coming in and making such judgments as well. Individual members of Congress, of course, can comment. But the GAO cannot come in and review why the Fed raised interest rates, increased payments on reserves, or used the tools that it has to achieve a policy objective such as quantitative easing.

I can remember when I first came to the Fed, the only thing that was publicly known immediately after an FOMC meeting was that the FOMC had held a meeting. There was no statement about the Committee's objectives and the decisions that were made. In the days following an FOMC meeting the people in the market would carefully watch what open-market actions the Fed was taking, such as whether the Fed was buying or selling securities, et cetera. There was no timely publicity about the FOMC decisions. That's changed dramatically. We have become fairly transparent.

MR. SMALL. So let me ask about making a regular discount-window loan. We don't, at the time the loan is made, announce publicly "We made a loan to bank X." We do that with a two-year lag?

MR. MALPHRUS. Yes, I believe so.

MR. SMALL. Because we think there's a reputational risk or stigma that if we say a particular bank came to us for a loan?

[8] Federal Banking Agency Audit Act, as amended, 31 U.S.C. § 714(b).

MR. MALPHRUS. Yes. When I participated in examinations of banks, we would review borrowing by the bank. Now when the bank produces its financial statements, it will include loans from the Federal Reserve on the liability side of its balance sheet. Thus, if the bank has discount window loans at the end of the quarter then those will be included in its financial statements.

MR. SMALL. And the Fed reveals within a week the aggregate amount of discount window lending it has done?

MR. MALPHRUS. Yes, exactly.

MR. SMALL. But at the level of the individual banks, discount window lending is not revealed immediately by the Fed?

MR. MALPHRUS. Yes, I believe so. And banks, for obvious reasons, are sensitive to borrowing from the Fed. As long as the bank is honestly reporting what its situation is, then in a run-up to an end of quarter, banks, like private sector corporations, will want to position their financial statement to convey, where they have discretion under accounting rules, a positive message. So you'll have cases where banks have discount window loans and then they will pay those off before the end of the quarter when they have to report their financial statements. Their cash on hand will go down, but they won't then have a liability to the Federal Reserve on their balance sheet. Some banks do that because they think that there will be a negative view in the market if they have borrowed from the Federal Reserve.

MR. SMALL. So regarding that monetary policy exemption, other than that is it fair to say we are fully audited?

MR. MALPHRUS. When you say "fully audited," I think you've got to talk about the financial side of the audit, not the effectiveness and efficiency kind of audits. But yes, the Fed is subject to audit and review by outside accountants, by the Inspector General, and the GAO—within the limits that I mentioned. The Inspector General can look at functions the Board has delegated to the Reserve Banks, but it can't look at something that is just done within the Reserve Bank, although the Government Accountability Office can do that if requested by Congress.

Transparency

Now you've got to remember that we are pretty transparent on the financial side. Each week the Fed publishes its balance sheets in the H.4.1, which is called "Factors Affecting Reserve Balances of Depository Institutions and Condition Statement of Federal Reserve Banks." We're not just publishing our financial statements at the end of the quarter, we are publishing them weekly. So we're pretty transparent in that regard. Also, completed and active GAO reviews and completed OIG audits, reviews, and assessments are listed in the Board's Annual Report, which is public. In addition, the Federal Reserve Banks are subject to an annual examination by the Board. The Board's financial statements and the combined financial statements for the Reserve Banks are also published in the Board's Annual Report.

MR. SMALL. So just to structure it a little differently, if we were to get a Freedom of Information request that was to say, "We want to know the discussions of the Federal Reserve Open Market Committee," the Fed has some protection there. The Fed does release FOMC transcripts with a lag, but there is protection there against an earlier release.

MR. MALPHRUS. The rule is that the transcripts of FOMC meetings are made public with a five-year lag, right?

MR. SMALL. Yes. And they release minutes of an FOMC meeting three weeks after the meeting.

Banking Supervision and Regulation

MR. SMALL. There's confidential supervisory information in the banking supervision and regulation area.

MR. MALPHRUS. Yes, and confidential supervisory information is very carefully handled. In my career I worked for Bill Taylor, who you will recall was the Director of [the] Division of Banking Supervision and Regulation, and I participated in examinations of banks and bank holding companies; and that information is very confidential. Once a formal supervisory action is taken against an institution, then that becomes public, but the information that we obtain in the exams and then the recommendations that we make in the exams are very confidential.

MR. SMALL. And that's explicitly protected under the Freedom of Information Act?

MR. MALPHRUS. Yes, as I understand it.

MR. SMALL. So that's something we can point to and say, "Under this provision of the Freedom of Information Act—"

MR. MALPHRUS. Right. Oftentimes during examinations, if we found that a bank's capital was seriously short then we would initiate a formal action. But the vast majority of the time what we would see is that the capital had declined but it was not a significant shortage. In that case we'd handle it as an "informal supervision" matter. In other words, we would work to find a way for them to address the problem and then we would analyze the situation on a periodic basis to see if they had improved their capital. That was kind of an informal supervisory action. Now again, if they crossed the line in a serious fashion—liquidity, capital, et cetera—then we'd take a formal action. When you take a formal action, that becomes public.

My observation is that a vast majority of time what happens in a bank or a holding company is just like what happens in most organizations: Area X, Y, or Z is the priority and that's the focus for the efforts going forward and then all of a sudden, in focusing on that, the bank is now failing to address some other area. Then, as a bank examiner, you find that you plan the exam based on what you know about the institution from prior exams and current information; nonetheless, you will take a look at all key areas of risk. Now you find some other area in the bank where problems are developing because they have been focused on area X, and now area Y has problems. Well now you've got to address Y, but it's not that Y currently presents a situation where the bank may fail. If it was that serious then it would be a formal supervisory matter.

MR. SMALL. The name Bill Taylor springs to mind when I hear you talk about an exam that way. You worked for him. What I've learned through these interviews is how he was a proactive, rigorous bank-exam guy. Has the bank exam process changed over time? Are banks getting too complex?

MR. MALPHRUS. I believe the bank examination process has become more formal. First of all, it's important to understand that we generally categorize banks as follows: community banks, regional banks, national banks, and international banks. Of course, some foreign banks operate in the United States and are regulated as well. Because the lines of business across those types of banks will generally be different, the risks are different.

Community banks generally focus on home mortgages, loans to small and moderate-size-businesses, auto loans, and that kind of thing. The large national and international banks are involved in commercial and industrial loans, investment banking type of activities—mergers and acquisitions and that kind of thing. The kinds of loans they are making are not loans to John Doe, who is borrowing for a mortgage or to fund his small business, but you're making loans to Boeing Corporation. The risks there are much different. Risk management is more complex in the largest banks, and the Dodd-Frank Act requires a more rigorous supervisory process for systemically important financial institutions and systemically important financial market utilities including scenario-driven stress tests, living wills to address failures, additional capital, liquidity, et cetera.

My experience is that in the Federal Reserve, career examiners tend to end up focusing in one of those three areas—community banks, regional banks, or national/international banks. Not surprising, part of that's determined by location. The largest banks generally are operating out of New York, Chicago, and San Francisco. They're not operating out of the Kansas City Federal Reserve District. There you have regional banks and you've got banks focused on agricultural lending, so you've got to have people who understand the agriculture business and lending. But that's very different from lending to General Motors and to major companies like that. So there's specialization that occurs in the supervisory ranks. As one progresses through his or her career, they will often focus in a particular line of business or size of institution.

This is part of the microprudential approach to supervision and regulation of financial institutions. The microprudential approach is focused on the safety and soundness of individual institutions and includes examinations and inspections of the compliance, operations, and structure of individual institutions regulated and supervised by the Federal Reserve.

The macroprudential approach was mandated by the Dodd-Frank Act and focuses on the safety and soundness of the financial system as a whole. It focuses on how the actions of one financial institution or a group of financial institutions can impact not only other institutions but our country's economic and financial system overall.

These two approaches complement one another. To fully understand developments in the financial system it is important to understand developments in key financial institutions and markets overall.

Payments, Clearing and Settlement

MR. SMALL. Has the Fed's reach or mandate expanded with the increase in banking concentration or in globalization? Is the Fed now much more aggressive in payment systems, in IT structures, the financial plumbing—is this something of much greater concern now than in the past?

MR. MALPHRUS. Yes, I would say that the Fed has done a good job. Payment, clearing, and settlement is an important aspect of the infrastructure supporting the financial system and represents a key component of operations risk. Dodd-Frank recognizes this by requiring that systemically important financial market utilities be identified and supervised. The Fed plays a key role in this area.

MR. SMALL. Do we get more involved?

MR. MALPHRUS. Yes. This actually helps us in supervision, but the Fed has done a good job in addressing operations risk. That's a risk that has become very significant over the last 30 years. What was operations risk before? For example, if an armored car would get held up. Today, it has expanded greatly with the broad implementation of computer and telecommunications technology by banks and financial market utilities. As we've seen—the implementation of payment systems, both at retail and wholesale levels—as things have become automated, this whole area of banking and finance has new risks. Not only do you have the bad guys trying to steal money, but you've got nation states involved in cyber theft as well. Look at what happened at the Office of Personnel Management earlier this year. You've got nation-state involvement in the operations risk area.

The Fed has done a good job in addressing risk in our operations. I think one thing that has helped us in the Federal Reserve on the supervisory side is that, unlike the FDIC, the Comptroller of the Currency, and the Office of Thrift Supervision for example, we are a bank and we transfer money on behalf of other banks and lend money to banks. So this is not just some theoretical risk that if we were at the FDIC we would have to learn about. This is a risk that actually is before us in the Federal Reserve System that we have had to address. And we handle cash, we move cash around. And the bad guys are going to try to steal cash. We've got paper checks that have to be moved around, although that's gotten much easier with the Check 21 law because the majority of checks are transmitted electronically now. The point is that, on the operations-risk side as a "banker's bank," we are faced with many of the operations risks that large financial institutions are faced with and I think that helps make us a better supervisory authority.

MR. SMALL. Has the fact that so much of the financial activity has moved outside the banking system been problematic for the Fed in its stability and risk management roles?

MR. MALPHRUS. Yes, that, of course, is discussed at length. The Dodd-Frank Act focuses on financial stability. And we learn in our own operations from addressing risks, and we build what we learn into our supervisory work. And of course, today it's become even more complicated where, for example, we now have systemically important insurance companies that are being supervised by the Fed—that is because if an entity, irrespective of its business, is in the financial system and is deemed systemically important, then the Federal Reserve gets involved.

So, for example, now the Fed is having to learn more about and deal with financial stability risks in systemically important insurance companies.

Financial Stability

MR. SMALL. So that might in part be an answer to a question I was going to ask: Reflecting back to Y2K and the task forces that were set up in the four critical areas with one of them being financial stability which you were put in charge of—

MR. MALPHRUS. I was appointed as chairman of the Financial Sector Group of the President's Council on Y2K. Our goal was to address the financial stability risks associated with the year 2000 conversion.

MR. SMALL. So if they were to come back to you and say, "Gee, Steve, it's been a while since Y2K when we had such a broad mandate covering the financial sector as a whole. Help us game plan for the next 20 years." What would you point to as concerns or new developments?

MR. MALPHRUS. Well, I was interviewed about that at length as the Dodd-Frank Act was being developed. How do we think about the evolving operations risk and what we learned during Y2K? I think the important thing is, and this was included in Dodd-Frank, we need to think about a world where you've got systemically important payment clearing and settlement systems (systemically important financial market utilities). You can't just deal with the financial institutions themselves. You've got to deal with the infrastructure that supports them, payment clearing and settlement, et cetera. Fedwire is an example of that. So is the ACH. Operations risk is a key risk in the financial system today and must be addressed at the same level as other key risks such as credit risk.

The Dodd-Frank Act was created with the concept that if you are systemically important you're going to be subject to additional supervision because you can have an effect, should you fail, that is much greater than simply a loss to your shareholders. Potentially, you're going to be subject to additional capital requirements, liquidity requirements, stress tests, living wills, and that kind of thing. And this is because, should you fail, you're going to affect not only your customers, your employees, and your shareholders; you're going to have a broader effect on the financial system and potentially on the economy and require the expenditure of taxpayer funds to prevent a broader negative impact.

In preparing for Y2K, John Koskinen had us do extensive contingency planning in which we would run a number of simulations to try to identify where there were risks that perhaps we hadn't addressed in the financial system. Based on what we learned, we developed contingency plans and indeed, when asked, I told Congress that we were fortunate that the timing of 9/11 was after the century date change because there were many things that we had done in preparation for the century date change that helped us on 9/11. I'll give you a couple of examples. I had worked with federal and state agencies who supervise the financial system to organize all of us who were part of the Y2K effort. And then at the public level we organized a committee because Koskinen had emphasized a public/private partnership. For example, my key private sector colleagues included Jim Devlin from Citicorp. I had key people from large financial institutions who were part of the team that I put together at the interagency and public sector levels. I also included regional and community bankers in all of our committees and our work. I told you earlier about how the preparations for Y2K contingencies helped us on 9/11.

So Y2K caused us to focus more on operations risk, and that has held us in good stead. And addressing operations risk still is very much built into our supervision of the financial system today. It is an important risk in addition to the standard kinds of risks in the financial system. I believe today you've generally built supervision of operations risk into the system and it's addressed in a fashion that's similar to things like credit risk, et cetera.

Value of Managing at the Federal Reserve

MR. SMALL. Working with other organizations and the difficulties of cooperative management both inside and outside the Federal Reserve seems to be one theme in your experience here.

MR. MALPHRUS. Yes. I chaired a number of interagency committees and taskforces during my career, including one where I reported to the President when I chaired the interagency committee that developed the first comprehensive vulnerability assessment of the financial system. There are several things that make managing in the Fed more challenging. Once you accomplish managing in the Fed, you are very good then at managing interagency-level activities. And as I mentioned before, the Federal Reserve is a banker's bank and the country's central bank. We are part of the financial system and that gives us insight into how the financial system (and the supporting infrastructure such as payment, clearing, and settlement systems) operates. That is extraordinarily valuable and that's why people from the Fed are often selected to head interagency committees, because they've got a broad perspective on the banking and financial system.

The second thing is we have 13 entities in the Federal Reserve System. The 12 Reserve Banks are not just field offices the way you've got field offices for the FDIC and the OCC, et cetera. The Board of Governors influences and oversees the Reserve Banks, but who selects the Reserve Bank Presidents? It isn't the Chairman of the Fed, it's the board of directors of the Reserve Banks, although the Board of Governors approves the choice. The Board of Governors can veto the proposal for a Bank president. But the Board of Governors or the Chairman doesn't select the president of the Reserve Banks the way the head of the FDIC would select the head of a field office. Because the Reserve Banks are not just field offices, Reserve Bank presidents and officers head System-wide projects—so these presidents and officers also develop skills in collaborative management that is valuable.

MR. SMALL. Sometimes the suggestion is made that the monetary policy function of the Fed could be separated from its supervisory function—the latter could be put into a different and independent agency. Do you agree with that?

MR. MALPHRUS. I think there is a net benefit to having them within the same organization. The "hands on" experiences that we receive in the Fed, given our multiple roles and responsibilities is very good. Given our new role in financial stability, it is even more important to have the monetary policy, supervision, and financial services roles together with financial stability.

By the way, what's interesting to me is that you've seen attempts to copy our model over the years since the Fed was created. For example, at the federal level we used to have a Department of the Army, Department of the Navy, and we did not have the Air Force in those days right before World War II. Now we've got the Chairman of the Joint Chiefs of Staff to which these all report and where they work together. The Joint Chiefs of Staff looks a little bit like the Federal Reserve Board. Of course, when the Fed was created, economies were regional in many cases. And I think the Fed has adapted to that change in structure in the economic system as the financial system has adapted to that change. While working at the Fed is more demanding because we have 13 entities plus the Federal Open Market Committee and operating in the financial system adds complexity; as I have noted, once you learn how to manage within the Federal Reserve you're much better equipped to take on these kinds of responsibilities to lead interagency and international initiatives.

Financial Stability, Supervision, and Monetary Policy

MR. SMALL. Do you think the tie between the money policy function and the supervision function is tighter with respect to discount window provisions than it is with respect to open market operations?

MR. MALPHRUS. That's a good question. What's interesting to me is that the Dodd-Frank Act recognized that the role of financial stability needed to become more formalized. You've got discount-window credit (including the lender of last resort), you've got monetary policy, you've got supervision, you've got our role as a banker's bank, and our work to support some specific Treasury activities as the government's bank, and you have consumer affairs—although that role has been reduced with the Dodd-Frank Act creation of the Consumer Financial Protection Bureau. Well, all of a sudden there's an expansion of our financial stability role, which brings much of this even more closely together. Having knowledge in all of those areas, including monetary policy and what tools you have when crises occur is important—that cuts across most of these areas.

I believe the Fed was given key roles to play under Dodd-Frank because of these other responsibilities that we have and because of our broad knowledge and central bank responsibilities. That's why a systemically important entity is, once an institution is so identified, now supervised by their primary regulator and also by the Fed because the Fed has the broader knowledge because of our other responsibilities and because it plays an important role as the "lender of last resort."

I think what Chris Dodd and Barney Frank realized was that even though they may disagree with us on some things, we were much better prepared for the reasons that we've been discussing, than other federal entities to do what we have been assigned under the Dodd Frank Act. They realized that we have the expertise and tools that the other agencies don't have.

MR. SMALL. Do you have any particular views on the Volcker Rule?

MR. MALPHRUS. Well, this goes back to FDIC deposit insurance and the full faith and credit of the government standing behind the deposit insurance program. Of course, an investment bank does not have access to FDIC deposit insurance. I believe the key point that Volcker continues to make is that if you've got the full faith and credit of the U.S. government standing behind a bank, then what the bank is allowed to do and the risks it's allowed to take should be carefully regulated. There is a loss of market discipline with such protection and the entity can become too big to fail, and government funds may be needed at some point to stabilize it. There have to be some constraints when you have the full faith and credit of the United States, which is the taxpayers' money, standing behind it. Volcker's point is, and I remember discussions in the Board Room about this, if you've got the government standing behind something then the risks to the government must be managed. In other words, you don't want to create risk by losing market discipline because you have the government standing behind that risk. All you're going to do is create a situation that is going to encourage greater risk taking. And that's what a key concern of his is. Of course, when the government insures institutions there can be a loss of discipline if supervision is inadequate.

The problem in part is the movement towards shadow banking, where you've got almost no controls at all. A key issue is what kind of a risk do you create, particularly if you are too big to fail—that is if you've got the full faith and credit guarantees inherent in that. Should an institution be allowed to get large enough so that it knows, and those that lend to it know, that should it fail, the government will step in and save it because, if the government doesn't, the failure is going to impact the financial system?

Structure and Independence of the Federal Reserve

MR. SMALL. As staff director and through your other positions, you've seen so much of the Fed's internal structure: the various divisions and offices and how they operate. From the outside, there's a lot of public concern about this invisible institution—it can seem almost impenetrable. As an insider, do you think it deserves the confidence that it seeks? That it upholds its end of the independence argument?

MR. MALPHRUS. I think that overall the Fed is very well run and deserves the confidence it seeks and its independence. The Fed has had to evolve and make changes over time. There's usually a delay or a lag in that, for the obvious reason that a clear and detailed analysis must be done. But the changes, when needed, are made. If you look at what we've done at the Board in terms of financial stability where you need to create a new organization to deal with those responsibilities, that was done. That's one of the benefits of being independent and not having to rely on Congress for funding—if we need to do something or invest in an area, whether it is human capital, data, et cetera, we've got the flexibility to do it. And traditionally we have done that in a very responsible way. When I first came to the Fed we didn't have the Division of Monetary Affairs. It became obvious that in addition to Research and Statistics, where we collect and analyze data on the economy, given our role in monetary policy we needed to have people who specialized in that. And so the Division of Monetary Affairs was created. Likewise, a new organization—Office of Financial Policy and Research—was created to address our expanded role in financial stability.

MR. SMALL. Do you think the Fed and the country has it about right on Fed independence and auditing the Fed and the carve-out for monetary policy? Or do you see an argument for more or less independence or auditing?

MR. MALPHRUS. The structure and the oversight of the Federal Reserve has evolved over time. When I first came to the Board we didn't have an Inspector General and the Government Accountability Office (at the time it was the General Accounting Office) wasn't evaluating agencies' efficiency and effectiveness. It was looking at how government funds were spent and it seemed to be focused on what the IG now addresses: waste, fraud, and abuse. The point is that the structure that reviews the Board has evolved. As I discussed, we now have an outside audit of the Board's financial statements. The results of the audit are sent by the IG to our congressional oversight committees. So the oversight, if you will, by the government of the Federal Reserve has evolved and it's more stringent today than it's been in the past. Also, as we have discussed, the Federal Reserve is far more transparent about its policymaking by providing more information to the public including press conferences held by the Chair.

There are many management issues that can be challenging. The Reserve Banks, of course, have to compete with the private sector in hiring staff, but during my career the Board has done a good job in addressing key issues and continuing to provide excellent support to the Governors and the FOMC. For example, we clearly testify on the Hill more often than in the past. Indeed, as I have noted, I have testified on the Hill a number of times.

I think the Fed itself has demonstrated that it is very responsible. As the 13 entities in the Federal Reserve System became more standardized, the Fed said, "Well, let's have a single office perform a given function, let's not do it 13 times. Let's do it one time and have one Reserve Bank or the Board provide the service to the others." I think the Fed's done a very good job of that and taking advantage of the economies of scale such as in information technology. If you look at what's been done in our key areas, it's resulted in more effective and efficient analysis and operations.

In many cases the Fed has to compete with the private sector and universities as well as with other supervisory agencies such as the FDIC. For example in some areas, the Fed also has to compete with other payment, clearing, and settlement systems. And in those cases we have to operate under the rule that we will identify all of our costs and we will build those costs into our pricing for services. We did the same thing with check clearing. With check clearing and then Check 21, we were competing with commercial banks and therefore we had that rule and so we had outside auditors come in to make sure that we were accounting for all of our direct and indirect costs. Those costs were then built into the prices that we charge. So where we compete with the private sector, we're required to compete on an equal basis. In summary, my view is we've done a very good job in achieving our goals and objectives in an efficient and effective manner.

MR. SMALL. Okay. Well, maybe we can end there.

MR. MALPHRUS. Thank you.