

Federal Reserve Board Oral History Project

Interview with

Laurence H. Meyer

Former Member, Board of Governors of the Federal Reserve System

Date: October 6, 2010; October 18, 2010; and November 18, 2010

Location: Washington, D.C.

Interviewers: Winthrop P. Hambley and David H. Small

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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October 6, 2010 (First Day of Interview)

MR. HAMBLEY. Today is Wednesday, October 6, 2010. I'm Winthrop P. Hambley, senior adviser in the Federal Reserve Board's Office of Board Members. I'm accompanied by David H. Small, from the FOMC (Federal Open Market Committee) Secretariat in the Division of Monetary Affairs. We're at the Washington, D.C., office of Laurence H. Meyer, who was a member of the Board of Governors for five and a half years, from June 24, 1996, until January 31, 2002. We're conducting an interview with former Governor Meyer for the Board's Oral History Project.

Thank you for visiting with us, Mr. Meyer. It's a great pleasure to see you again.

MR. MEYER. I'm delighted to participate.

Educational and Professional Background

MR. HAMBLEY. Tell us about your early life and education.

MR. MEYER. I was born in the Bronx, but we moved to Queens when I was six months old. That's where I was raised. When I was going into the eighth grade, my parents sent me to a private school, mainly because they thought that I was too shy to prosper in a large high school. That turned out to be good choice for my personal and social development.

My interest in economics began with a half-semester course on economics in high school. Then when I went to Yale, I took freshman economics. That's when I fell in love with economics. I knew after my freshmen economics class that I was going to major in economics. As I proceeded in the major, I decided that I wanted a career in the study of economics and decided that I would go to graduate school. There was such a variety of opportunities in the economics field that you could either pursue one area or pursue them all sequentially. I could

teach, do research, work for a private financial institution, work in government, or be a consultant. I've basically done most of those already and found that diversity very satisfying.

MIT was a fantastic experience for me. I learned as much from my fellow students as I did from the faculty. The access to the faculty was just great. Franco Modigliani was great as a mentor. I idolized him. And I had the opportunity—and this was very formative in my career—to be his research assistant on the building of a large-scale macroeconomic model, one that was immediately recognized as state of the art, particularly with a focus on the channels of transmission of monetary policy. After that model was complete, it was housed at the Federal Reserve Board. It was the FRB MPS model at that time. So I came away with a love of model building. I always dreamed of being able to have access to a model and use it for policy analysis.

My career began at Washington University in St. Louis. I started as an assistant professor, ended up as a professor, and then chairman of the department. But I was not entirely happy and fulfilled. I quickly discovered that I was not a professor who was going to push out the frontiers of the science. I knew all the top people, but I wasn't one of them. I felt that the only people who read my papers were the referees, and that wasn't very fulfilling. So I knew I had to do something else.

I had this love of model building. Pretty soon I had this vision to start a firm that focused on forecasting and policy analysis. I got a lot of freedom from Washington University to remain a tenured faculty member and also participate extensively in the firm. That was the beginning of the next phase of my career.

My mind was on the firm at that point, as opposed to the university. I taught my classes, but my mind was focused on building the firm and doing what I loved most of all: model

building, policy analysis, and, ultimately, forecasting. I also, unexpectedly, enjoyed being entrepreneurial.

One of the beauties of coming from the academic side is that you realize that you're always a student. You're always learning. It's a dynamic process. And if you ever stop learning, not only isn't it fun anymore, but you become less and less relevant. That's particularly relevant today. As a forecaster, you're always making mistakes. And if you can't learn from your mistakes, then you're not going to have many clients left. So you have to be good at admitting and identifying and trying to do something about them.

In addition, I feel like I'm teaching my clients about monetary policy, about macroeconomics. They tend to be traders, strategists. They're not economists, but they're extremely smart. They talk like economists. So I'm teaching them about that, and they're teaching me about the sophisticated details of financial markets. We always say, "This is about sharing." That's what we want. We want to provide them with information and analysis; we want them to share their views with us. So I'm teaching and I'm learning. That's why it's so much fun.

MR. SMALL. Going back to your MIT years. During that era, there was the AM/FM (Ando–Modigliani and Friedman–Meiselman) macro debate known as "the battle of the airwaves." Then there was the Samuelson–Solow paper on the stable Phillips curve and the tradeoff between inflation and unemployment.

MR. MEYER. The Ando–Modigliani and Friedman–Meiselman papers were published before I started graduate school. They excited me, and, perhaps for that reason, I became most interested in macroeconomics. I had no doubt where my mind was in this debate. And, at MIT, I had no doubt that I was going to be on the side of what we call the neo-Keynesian approach. I

wrote papers on that debate. I wrote a paper later on what I call the “U City” model—I lived in University City, St. Louis—to contrast that with the Anderson–Jordan paper and other, more monetarist approaches.

That was important also because it provided a focal point for debate at the St. Louis Fed, where I visited often and later served as a visiting scholar. This gave me an opportunity to interact with folks in the Federal Reserve System doing research that was interesting to me. But it was also interesting if you just liked to debate. And I do. I had an interesting relationship with the economists at the St. Louis Fed: It was sometimes confrontational, but hopefully in a friendly way. That was a formative experience.

At MIT, what we were taught is interesting from a perspective of what we believe now. We were taught so many things that were just wrong. How professors could teach us that seems unbelievable today. They taught us this neo-Keynesian model that had no relevance to the long run at all. In that model, you have permanent effects; when you change the unemployment rate, it can stay at the new level permanently, as long as you are willing to accept the associated inflation rate. Today we know that can’t make any sense. If you’re going to have a model that’s neo-Keynesian in the short run, you’ve got to have a model that’s also classical in the long run. And you can’t have a classical model unless the model has a unique equilibrium unemployment rate, with inflation determined independently by monetary policy.

It’s amazing. These were brilliant people. These were people who were at the forefront. But they believed things that were embarrassingly bad, and they taught them. I left MIT just as Milton Friedman’s paper exposing this error was published. I taught a seminar at MIT in my last year on a challenging book by Edmund Phelps, *Microeconomic Foundations of Employment and Inflation Theory*, that had just come out. This work was absolutely eye opening. It

complemented and provided microeconomic foundations for the paper (“The Role of Monetary Policy,” 1968) Milton Friedman gave when he became president of the American Economic Association. It was the first paper to posit that there’s a natural rate of unemployment, a full-employment unemployment rate, to which the economy is always going to converge. That means that there is no long-run relationship between inflation and that unemployment rate. The inflation rate can be anything in equilibrium at full employment, and what it turns out to be is determined by the monetary authorities.

In the short run you get an acceleration or deceleration in inflation, depending upon whether you have excess demand because you’re below the natural rate or you have excess supply and the unemployment rate is above the natural rate. Previously we believed that monetary policy had a permanent effect on aggregate demand and the unemployment rate. These models of inflation were okay in explaining inflation in the short run, because it takes time to converge back to the natural rate. In a separate class we were taught about the long run, and in those models it was assumed the economy was always at full employment. So we had short-run and long-run models that were completely separate and not consistent.

Don Patinkin was at MIT for a semester. Unfortunately, I didn’t get to interact with him much, but his *Money, Interest, and Prices* became a foundation of my thinking at that time and remains so today. It focused on the relationship between inflation and money growth in the long run, and his model has a natural rate of unemployment. But the book was really about the process of moving from the short to long runs, finally connecting the Keynesian and classical models. All the time I was at Washington University, for 27 years, I would teach Patinkin.

MR. SMALL. When you said you gave your seminar during your last year at MIT, did you mean the paper was interesting or the debate was interesting?

MR. MEYER. It was on Phelps's book. It was very challenging for me, technically. And I was giving a seminar on it, chapter by chapter, reading each chapter just ahead of the class at which we would discuss it. I certainly understood the basic point. It was a revelation. I don't know if it was interesting to the students, but it was interesting to me, because it basically changed everything I thought. At the end, I said, "Wow, this all fits together now. Now I really understand it."

But the reality is that we didn't have large-scale models that incorporated Friedman's natural rate approach to the relationships between inflation and unemployment until the mid-1970s. It took a long time for people to feel comfortable empirically that this was the story. People were resistant to it, including some of the most famous macroeconomists, my teachers, and now Nobel Laureates, Paul Samuelson and Bob Solow. In my mind, I was moving in that direction, but slowly, probably in part because of what I was taught. I still didn't fully get there until the mid-1970s. And by the mid-1970s, I was teaching. Up until that point, I was, like my teachers, teaching what we now know was simply wrong. So I should have gone back to my students at that point and said, "Sorry guys, I screwed up. I'll update you now."

MR. HAMBLEY. When you come to a point where you realize that something doesn't fit, was the willingness to rethink prior fundamental beliefs an important attribute of being a successful Governor?

MR. MEYER. Well, that was the history of my tenure at the Fed. But there are two kinds of revelations. One is what I call the fundamental paradigm—in my case, short-run Keynesian, long-run classical, with the Phillips curve determining the pace of adjustment from the short run to the long run. I'm going to be incredibly resistant to changing that. You're going to have to beat me over a head with a 2x4 to get me to go away from this short-run paradigm.

But within that paradigm, there is so much to learn about, so much to make mistakes about and, hopefully, get to correct later. When I was at the Board, understanding the trend in productivity growth was the big story for me (and most of the FOMC). Fortunately, you're constantly learning, correcting mistakes, and putting into empirical form what you believe theoretically. It leaves a lot open and a lot to learn. It's interesting how long it took me, in this case.

MR. SMALL. You make it sound almost as if the Friedman–Phelps conversion that you underwent was a conceptual development, whereas for the NAIRU (non-accelerating inflation rate of unemployment), you had to wait until the evidence piled up in the 1990s.

MR. MEYER. Right. I think I was conflicted. Because Friedman and Phelps were so meaningful, you just couldn't reject that as theory. And yet the MPS model that I grew up with at MIT didn't have that, but the model still seemed to be doing well explaining macro relationships and outcomes. Modigliani and others were teaching models that were consistent with the MPS model, so I taught models consistent with the MPS model. That's why it took me until 1975 to fully incorporate the natural-rate model into my thinking.

There were important papers by that time. I think Bennett McCallum and others worked out some of the theoretical implications with forward-looking (rational) expectations. It was another "aha!" moment. But this direction went too far and abandoned the short-run Keynesian model and held that the classical model essentially explained the economy in the short run as well as the long run.

MR. SMALL. You were teaching right through Volcker and his 1979 new operating procedures. What were your initial impressions of his plan?

MR. MEYER. You would have thought that I was focused like a laser on whatever the Federal Reserve was doing, but I wasn't. It never crossed my mind that I would be nominated to

be a Governor on the Federal Reserve Board until I was nominated. Throughout my career, I always dreamed of being chairman of the CEA. If that ever happened, I thought that would be the high point of my career. The CEA provided the economic discipline for analyzing Administration economic policies, and you gave policy advice. But I never thought of the Federal Reserve.

With respect to Volcker, his policy direction brought up the question about monetarism again. Volcker is viewed as having made a fundamental change in the conduct of monetary policy in the direction of a monetarist approach, focusing more on money growth and less on a short-run interest rate (the federal funds rate) target. I don't know whether this is what I thought then, but, subsequently, I came to the view that, no, that wasn't right, that the focus on monetary aggregates was simply a good way to communicate your concern about inflation and commitment to getting to price stability. Most of all, it was a political device. When interest rates were going to go to double digits, you could say, "I didn't do that. I'm just having money growth at a rate that's consistent with price stability in the long run. Markets determine interest rates." But this apparent change in policy turned out to be only a brief interlude.

I will say that Paul Volcker is a great man. He is even a better ex-Chairman than he was a Chairman. And he was one of the most important Chairmen in the history of the Federal Reserve.

MR. HAMBLEY. Let's talk about your early connections with the Federal Reserve. You mentioned the FRB MPS model. You mentioned some work that you did in the Federal Reserve Bank of St. Louis. Were there other connections?

MR. MEYER. Yes, there were. I was a summer intern at the Federal Reserve Bank of New York after my first year in graduate school. That was unfulfilling, because they said,

“Write a paper.” So I wrote a paper. I had very little interaction with anything going on at the Bank and no interaction with anybody there. So I learned nothing other than about the topic of my paper, which I could have written in my dorm room.

When I was in the job market, I think I applied to the Board but never even got an interview. I always said that the only way I could get to the Board was by a presidential appointment. After learning more about the Fed, I can say that I would have loved to have been on the staff of the Fed. That would have been a great job. After learning more about the Fed as a Governor, I would have said that if I had the opportunity to be at the Fed versus Washington University, it would have been a close call. Maybe I would have picked Washington University, but maybe my interests were more suited to being at the Fed. I’ll come back to that in a minute.

In 1975 or 1976 I took a leave of absence from the university, and I went to the New York Fed. I spent a year there. They didn’t have a visitors scholar program, so I was just hired to be on the staff. The deal was that I’d stay for one or two years and during that time consider whether to stay longer. When I got there, I was told, “Do whatever you want. You can spend all your time doing research, or you can spend some proportion of your time doing what everybody else does in your division.” I decided to split my time 50–50. I wrote and I wrote. I got a lot of work done on my research. But I loved all the other work that I was doing. I had a variety of bosses—one that’s a client now. I met many people there that went on to be successful economists on Wall Street. So that was an incredibly valuable experience, very formative.

I got more excited about models, more excited about monetary policy, more excited about macroeconomics, and more excited about policy analysis during that time. One evening, after the kids had gone to bed, I was in the living room, walking around the table, brainstorming and thinking that what I was doing at the New York Fed was so much fun. I was thinking that I

would love to get back to building models and doing policy analysis and maybe having a consulting firm. This was the first germ of that idea. It took a long time for this to bloom, but that was the first time I thought about it.

Then when I came back, I was a visiting scholar at the St. Louis Fed. That was another important experience for me. It brought me into even more contact with Federal Reserve staff, with the kind of work they did, trying to participate and write papers for their review. I got a window into how the FOMC worked, what decisions had been taken, why they had been taken, and how to advise the Reserve Bank president before FOMC meetings about monetary policy options. It was a fantastic experience.

Then I went back to Washington University. It was about that time that I was asked to be chairman. Everybody takes their turn, and the chairman serves for three years. During this time I began thinking seriously about starting the firm. The minute I finished my term as chairman, I went to the dean and said, "This is what I want to do." I wanted to be able to remain in good standing at the university and do both these things at the same time. The person who ultimately was responsible for overseeing my then-complicated relationship with the university was John Biggs. He was later president of TIAA CREF. He was very receptive. All along, the administration seemed more receptive to my simultaneously doing consulting than the department, because the administration got the publicity from the work at the firm and the department just lost my focus on research.

The firm started small, and it took a while to build a client base. But at the start we had a niche of having the first commercial model on a laptop computer. That was a technological niche. The firm never would have survived any other way. Then we built up a reputation for

forecasting. Pretty soon, we were known as model builders and model-based forecasters. We were good at both and also good at policy analysis and began to grow in that direction.

MR. SMALL. You wrote a textbook when you were at Washington University. One motivation for writing a textbook is to sell it and make some money. But I presume there was also some intellectual goal. What was your purpose?

MR. MEYER. I had no thoughts about making money on that book. It was all an intellectual pursuit. The book forced me to put all my thinking together and develop my own take on what my paradigm was. Writing the book was another extremely influential period in my life. Dave, you're one of the only people who used it in class, you and a professor at Northwestern. I forget his name—Eisner?

But let's put it this way, it wasn't a page turner. It was kind of a "tweener." It was hard for undergraduates and not sophisticated enough to be a graduate text. But it was a fabulous learning experience.

It amazes me how little things can change your life. I had an offer from NYU. If I had gone to NYU, I wouldn't be here. I don't know where I would be. Maybe I would be on the staff somewhere in the Federal Reserve System. In any case, I went to Washington University where I had the freedom to start the firm and was able to get the model on a laptop, which had just been introduced. You look back on these fortuitous, accidental opportunities. Your life could have been totally different because of small things. The dean could have said, "No, you can't do that." I probably wouldn't have started the firm.

Nomination and Confirmation as a Governor

MR. HAMBLEY. How do you think you came to the attention of the Clinton Administration as a possible nominee to the Federal Reserve Board of Governors?

MR. MEYER. The firm did work for the Clinton Administration during the election and through the transition period. We were working with Larry Summers and Robert Solow at the time and doing policy simulations for them. We did a policy study of a marginal investment tax credit (an investment incentive that didn't cost as much as the traditional investment tax credit). The President talked about our study toward the end of his campaign and at the beginning of his first term. Because of our interaction with economists who became leading staff members in the Clinton Administration, I thought I might get some appointment there. I thought that I should have been offered a position, even a high-level economics appointment in the Administration.

I had a run-in with one of the important staff members, and maybe that was the reason I wasn't. But I may have come to their attention because Laurence H. Meyer and Associates had worked for every Administration, beginning with the Reagan Administration through the Clinton Administration. And when I worked with the Clinton Administration, they used to say, "You're the outsider who's most like an insider."

I was a Democrat, but working with Democratic or Republican Administrations didn't matter one way or the other. But the Clinton Administration was friendlier, more person-to-person, and provided more direct access. The economics team knew me well. I had won a second forecasting prize just before I was nominated. I don't know how important that was, but all these things begin to build into your public image from the standpoint of an Administration. I am sure that my nomination to the Board had nothing to do with my academic career. It had everything to do with my work as a model builder and a forecaster. And I was someone whose most important clients, from the very beginning, were government and the Federal Reserve.

We had earlier done a study of tax reform for the Reagan Administration. In many respects, that was our launching pad. During the Clinton Administration, I was at the White

House often. I was talking to Administration economists all the time. They were reading what we wrote. So, in retrospect, it's not surprising that I would have come to their mind, although the nomination still surprised me.

Earlier, I would get calls: "We have an opening on the Board. Who do you suggest?" Then I was in a meeting when I was handed a piece of paper with a message that Laura Tyson wanted to talk to me. She was the chairperson of the National Economic Council at the time. I figured she wanted to talk about an opening and whom I would recommend. She did, but also asked whether I might be interested. I thought she asked just to be courteous, but that was the beginning of the process, so it was not a surprise later that I was being seriously considered.

MR. HAMBLEY. You were hopeful about becoming a member of the CEA. Did that ever come up?

MR. MEYER. Never.

MR. HAMBLEY. When you were asked whether you would like to be on the Board, did you indicate that you wanted to be on the CEA?

MR. MEYER. Not at all. By that time, I better understood what it was like to be an economic adviser in the White House. It was a stressful 24/7 job and often with little influence on economic policy. So I was happy by that time that I wasn't in the Administration. Of course, if I had been asked to be a member of the CEA or chief economist at Treasury, I would have accepted. There were a lot of appointments I would not have taken.

When I got the call about being on a short list for the nomination to the Board, it still seemed out of the blue. It was a total surprise. I was told that I would be on the short list if I'd commit to accepting the nomination to the Board. I said that I couldn't make that commitment

immediately. I had to talk to my partners. We were at a formative stage. I didn't know whether I could walk away, whether the firm would survive.

MR. HAMBLEY. Who called you?

MR. MEYER. I was called by Joseph E. "Joe" Stiglitz, who was chairman of the CEA at that time (1995–97).¹

MR. HAMBLEY. In 2004 you wrote a book entitled *A Term at the Fed: An Insider's View*.² In that book you write that you had to overcome an earlier problem that you had with the White House staff. Ultimately, you were able to do that?

MR. MEYER. I think the economics team knew about that, but it didn't matter to them. When I went to interview with the economics team, this person was standing there, sort of guarding Laura Tyson's office. When I went into the office, Laura said, "I know there was some incident. I can't remember what it was, but he doesn't have a vote. Forget about him." So, yes, I worried that it would have some influence. But it clearly didn't influence their decision to put me on the short list or to nominate me for the Board.

MR. HAMBLEY. You ultimately met with President Clinton at the White House before your nomination. What happened at that meeting?

MR. MEYER. The President wasn't feeling well when the meeting was originally scheduled, so I had to come back the next day. You can't believe what it is like going into the White House and having the interview in the residence. Marines are standing there, and they salute you when you arrive. It was just amazing. I was placed in the Map Room. Clinton came in and said, "I want to tell you about this room." He took off his jacket, folded it, and placed it

¹ Joseph Stiglitz served as chairman of the CEA from 1995 to 1997, and won the Nobel Memorial Prize in Economic Sciences in 2001.

² Laurence H. Meyer (2004), *A Term at the Fed: An Insider's View* (New York: HarperBusiness).

on a chair. Then he told me why he loves the room and what the history was. I figured he appreciated that anybody who meets the President is going to be nervous, so he was trying to get to the main topic slowly. Then he sat down and started to talk. He told me what was important to him. If I hadn't asked him a question, I wouldn't have said a word.

MR. SMALL. What was important to him?

MR. MEYER. I think the expectation was that I shared his values and that he could trust me to be on the Federal Reserve Board because I would reflect the values that he had.

MR. SMALL. How proximate was that to monetary policy?

MR. MEYER. At the time of my nomination to the Board, the Congress was unhappy with Alan Greenspan. He was thought to be too hawkish. Members of the Congress thought the economy could grow faster and that Greenspan was preventing that. I was supposed to be a counterweight, the person who was more dovish, the person who would fight for easier monetary policy, lower unemployment rate. One of the ironies is that we switched places immediately after I got there.

MR. SMALL. Did President Clinton raise that issue with you?

MR. MEYER. No, he didn't, but it was obvious, because Felix Rohatyn had been under consideration as the nominee. That's who they really wanted, but they couldn't get him through the Congress because he was viewed as too political. I can't say exactly why I knew this, but it was clear. It was all over the papers that the Congress and maybe the White House was not happy with Greenspan and the thought that I was nominated to be a counterweight to the Chairman's views.

MR. HAMBLEY. As you were having this conversation with the President and you were getting the vibes without getting the direct message, were you inclined to hold your tongue or to say that wasn't a reasonable expectation?

MR. MEYER. I came to be more and more puzzled. I tried to keep my concentration. I kept eye contact, but I thought, "This isn't an interview. He's not learning anything about me. He wants me to learn about him." His knowledge of policy was unbelievable. He was very impressive. I came out of that room and I said to myself, "Well, I didn't embarrass myself." I say in the book that I was so nervous that I wasn't sure that I was going to be able to get a word out of my mouth, but no matter, I didn't have to.

After the meeting with the President, I returned to Laura Tyson's office. I was supposed to go home, and they would decide what to do about the nomination and call me about the decision. But Laura said, "I think you ought to stay. Let's see how this shakes out today. The First Lady is away. Why don't you sit in her office?" I sat in her office. They brought me two different lunches so I could have my choice.

I was sitting in this room alone and talking to my son on the phone. He said, "Congratulations. The press conference is going to be at 4:00 p.m. Alice Rivlin is going to be the Vice Chair." I said, "Nobody's told me." He said, "Okay, I'm going to give you some advice. When they come in to tell you, act surprised."

They came in once and said, "This is your last chance. Do you want to do it?" I said, "Yes, I absolutely do." Then they came back and said, "Okay, you're going to be the nominee. We're going to have a press conference. You have to write something for the President to say when he introduces you." So I did that.

Before the press conference, we were standing around outside the Oval Office. It was unbelievable. People were talking and telling jokes. It was very informal. Vice President Al Gore was telling one joke after the next. I was about to go into the Oval Office, and the White House general counsel came running to say, "You can't go in yet. We have a problem. You're going to have to sell your interest in your firm. Do you still want to do this?" I had thought that maybe I didn't have to sell my interest.

The President was grabbing my arm. The general counsel was saying, "Wait a second." I had basically two seconds to make up my mind, so I went with the President into the Oval Office. In situations like that, I am amazingly nervous. My legs were shaking. I thought I might faint. I had to move around. This is what I do so I won't faint. Then it passed. It was over. And I survived. But that was an experience you absolutely never forget.

MR. HAMBLEY. You had to make a quick decision about selling the firm. At that point, were you thinking, "What else is this going to involve for me?"

MR. MEYER. Right. This was principally a personal, family decision. You've got to move. You've got to sell your house. You've got to move away from friends. This is your network. You have no idea whether you will be able to build a new network. How are the children going to fare? How happy is my wife going to be? All of that goes through your head. But other than that, I didn't have any reservations. I just thought it was going to be an incredibly wonderful experience. I couldn't wait to start.

MR. HAMBLEY. What about the FBI background check?

MR. MEYER. The nomination process and the press conference announcing the nomination happened so fast that there wasn't a chance to vet me. In those days, the vetting

wasn't as demanding as it is today. Within a day or two, I received a call from the FBI. They wanted to talk to me. And they were going to talk to friends, colleagues, and neighbors.

When I met the FBI agent, the very first question he asked was, "Have you ever smoked marijuana?" The question came out of the blue. I never thought he would ask that question. I sat there and I paused for a second and thought, "What should I say?" I could say "no" and nobody would ever find out. I was at a party once or twice, and I had a puff. It wasn't important. But I said to myself, "No, you don't want to lie here." So I said, "Yes." I explained the context. Honestly, I had sleepless nights wondering whether that was going to be important. Then I dreamed that I honestly saw the headline in the paper: "President Clinton Withdraws Nomination from Pot-Smoking Professor." And then I said, "Clinton? Not a chance."

The Senate hold was another unexpected experience. Alan Blinder called me immediately after I got back to St. Louis to congratulate me and said, "Do you know about holds?" I said, "I don't know anything about it." He explained to me what it was, and that I should prepare myself that my nomination could be put on hold for a considerable period of time. That's just the way things worked. The hold happened, and it was very unpleasant. I felt that I was in limbo. It would be unwise during this period to talk about monetary policy. I thought that it isolated me. I thought that I virtually couldn't talk in public about anything. I didn't want to say anything that was controversial. I was very unhappy during that period. One reporter wrote that I was thinking of withdrawing my nomination because of the long period it was taking to confirm me. That was never true, but it was an unpleasant experience.

MR. HAMBLEY. This was after you went through the nomination, the preparations with Board staff for the confirmation hearing at the Board, and your confirmation hearing.

MR. MEYER. Exactly.

MR. HAMBLEY. What do you remember about your confirmation hearing before the Senate Banking Committee?

MR. MEYER. I wrote my statement. I'm sure Board staff looked it over. Writing the statement was easy. I had testified once or twice before the Congress. But testimony at a confirmation hearing was completely different, unique.

The White House called to say, "You have to be prepared. We want you to come over so we can do a mock hearing." Soon after I arrived, they started shooting questions at me. The first one was about the stock market. I started to answer. They cut me off immediately and said, "Stop right there. You never, ever answer a question like that." They started to explain to me how to deflect it, why I shouldn't answer it, what I should say. That was great. I felt much more prepared, because the questions were really pointed. They weren't personal questions. They were more about my views of how the economy works and the role of monetary policy.

The confirmation hearing itself was almost a nonevent. Of course, I was nervous about it, but I was part of three people awaiting confirmation: Alice Rivlin for Vice Chair of the Board, Greenspan for reappointment as the Chair, and me. Greenspan was going to be late. I think there was an FOMC meeting. Before he got there, the senators asked some questions but nothing that was problematic for me or them. Then Greenspan arrived, and the senators all bowed down and forgot about Rivlin and me. They were only talking to Greenspan, asking him questions.

There was no doubt that we'd get passed out of the committee. Then there was the hold, and then the Senate finally voted. I was approved 98-0. Rivlin and Greenspan both received a significant number of negative votes. Alice was a great woman at that point. Everybody respected her. But they were sending a message that they weren't happy with the Clinton

Administration, and she had been part of the Administration. With Greenspan, there was a division in the Congress. Some liked him, some revered him, and some thought the policy he was following was detrimental. So there were some dissents there.

MR. HAMBLEY. Greenspan's opponents—Senators Tom Harkin and Byron Dorgan and a few others—thought he was too tough on inflation.

MR. SMALL. Going back, you said you got a call from Alan Blinder. Just six months earlier, he had resigned from the Board as Vice Chairman. Did he give you any guidance? Did he explain any workings of the Board?

MR. MEYER. No, not to my knowledge. But there was an article written—in the *New Yorker* or something like that—about Blinder's experience at the Board. It was not a happy experience. He had less access to the Chairman than he wanted. He thought that the staff never supported him. It was a totally unhappy experience. It never made me reconsider, but I wondered. And that colored my view about what to expect from the staff and the Chairman and how comfortable the experience was going to be. I didn't hear that from Alan Blinder directly, but I read it in that article.

FOMC Meetings and Chairman Greenspan

MR. SMALL. By the time you came to the Board, Alan Greenspan had at least two great successes: the response to the stock market crash of 1987 and then the soft landing that he engineered in 1994 to '95. What were your early views of Chairman Greenspan? What did you envision your role on the Board to be?

MR. MEYER. I appreciated that he had been a good Chairman, that he had made some good decisions. But I had no idea, even with my previous learning experiences at the Fed, how

totally dominant Greenspan was going to be and how virtually irrelevant I was going to be on the FOMC. That was a revelation. It didn't take long to find that out.

I have always said that my first FOMC meeting was my favorite meeting—the best meeting I ever attended. Beginnings are always exciting. In the middle of the meeting, I raised my hand. Greenspan said, “Yes, Governor Meyer?” And I said, “I just have to tell you that this is even more fun than I expected it to be.” It was a two-day meeting, and there was a special topic on what price stability means to members of the Committee. Janet Yellen gave an awesome presentation that inflation can be too low as well as too high. That had never occurred to me before.

But it didn't take long to appreciate that the FOMC wasn't as much fun as I thought it was going to be. Being at the Board was plenty of fun because of being able to talk to the staff and interact with them. It was an incredible intellectual environment. But it became clear, with 100 percent surety, that Greenspan dictated FOMC decisions and that, traditionally, members of the Board don't dissent. I never thought of dissenting. In my five and a half years, there was only one dissent from a Governor. I don't want to say it soured me, but it colored my view. It told me that I had to find other things to do at the Board to feel I was having an influence.

MR. SMALL. In your book, you say that the meetings were “wired” or something. I don't know if you use that exact term.

MR. MEYER. I don't know if I used that term, but they were, in that the decision was made and communicated to Board members before the meeting.

MR. SMALL. But that still leaves room for debate in a meeting, so that you could influence future monetary policy? Did you feel you had influence in a dynamic, forward-looking sense?

MR. MEYER. You can never be sure of that. I tried as best I could. In the beginning I thought that I was talking to the other FOMC members, but I soon realized that the only person I had to talk to was Greenspan himself. So, at the meeting, it was my chance to give a statement and look at the Chairman. What I was saying was for the Chairman to hear.

MR. SMALL. The Chairman has a reputation of being very data oriented, knowing the data better than anyone else. Through your modeling, you also knew the data well. So it would have been a great learning experience, letting you two go at it, because you're both so data driven. How did you find working and arguing with him, either in the meetings or in the office outside the meeting?

MR. MEYER. First of all, there was no arguing with Greenspan. I virtually never saw him outside meetings. There was no real relationship inside the meeting. Greenspan was making all the decisions, but I never felt, inside or outside the meetings, that I could influence them.

Let's say that it was a Friday, the weekend, and then the meeting was Tuesday. I would always have my last meeting with Don Kohn. He would read over my statements. He'd never, of course, say what he would do, but he helped me discipline my thoughts and say, "No, no. You don't want to say that." And I always used to ask him, "Where's the Chairman?" Like that mattered. I'd sometimes say, "Okay, that's good. I'm good with that," or I'd say, "This is going to be a difficult weekend for me. I really don't agree." It didn't matter whether or not I agreed, but my statement at the FOMC was going to reflect my disagreement.

When I first got to the Board, the Chairman would come to your office and talk to you. This is what Alan Blinder talked about in his book. He would come in—not to say "What do you think?"; Blinder interpreted him instead as saying "This is what we're going to do." It was

couched a little bit: “Here’s my recommendation.” But he never asked, “What do you think?” He just said, “Here’s what I’m going to recommend and why.”

At some point, those one-on-one office visits morphed into a meeting of all the Board members at the same time, the Monday before the Tuesday of the FOMC meeting. That Monday meeting was different from FOMC meetings. It was unstructured.

MR. SMALL. This was the staff economic briefing?

MR. MEYER. No. This is only the Governors. Only the Governors were in the room at that time. It was after a staff briefing. It was unstructured. It was basically you talking to Greenspan and Greenspan answering you. Greenspan would say, “This is what I’m thinking of recommending.” And, of course, he’d made up his mind, and there was no chance of your influencing the decision. But at least you had the opportunity to go one-on-one and to give your views in a more direct way.

That was the kind of discussion you always hoped you would hear at FOMC meetings but never did. At FOMC meetings, members tended to read their presentations. Nobody asked others questions. Nobody tried to relate what they said to what anybody else had said. It was very mechanical. There was no discussion. It was a deliberation that didn’t matter. After a while, the meetings weren’t that much fun.

In those Monday morning meetings, as happened frequently, Greenspan would say, “Is that okay with you?” “Yes. Yes. Yes. Yes.” It would come to me, and I thought, “Why is it always me?” I’d say, “I don’t agree at all.” And once you do that and engage the Chairman, everybody wants to get into the act. You just have to break the ice. Those were great discussions. That was almost the only time I got to talk to Greenspan. But it wasn’t one-to-one.

I went to his office twice. Once, after I'd been at the Board only a few months, Janet Yellen and I went to his office. It was in September 1996. I'd joined the Board in June in time for the July 2–3 FOMC meeting. Our message was that we had a bias to tighten for some time. Greenspan would come into the meeting and say, "Oh, not this time, maybe next time. I'll prepare the markets." And then he never tightened. Janet and I were saying that he ought to pull the trigger. We said something that turned out to be silly, that we didn't know whether we could stay with him if he didn't tighten soon. But we never got close to dissenting. We both recognized that it's unseemly for a Governor to dissent. And if we both dissented, that would be an incredible story in the newspapers. Also, I didn't really understand at that time that there would never be more than two dissents. That's a story. I quickly got that. What was amusing is that we went in there with the expectation that we would be pushing the Chairman towards our views with an implicit threat that we might dissent. If we'd thought about it a little bit more, we would have realized that we never would have dissented. Clearly, Greenspan understood that, and therefore our visit had very little influence on him. Looking back, I was just trying to come to grips with the lack of influence that one could have.

Once he asked me to come to his office. He knew that I had a different view. He had papers and graphs. He said, "Let me explain. I want to make sure that you understand my position." He didn't ask me what my views are, but it was nice.

I went to see the Chairman before I was sworn in. I asked, "What are the rules on speeches? What's the etiquette?" He said, "I have two rules. One is, don't go. I don't like noise in the markets. And the second is, if you go, don't move markets."

So I gave my first speech. I think it was in Charlotte. The markets reacted strongly. The article in the electronic media was, "Meyer leads to big sell-off in the market, but he proved he's

no Greenspan.” The market recovered and closed unchanged for the day. When I returned to my office, my assistant said, “Uh-uh. You have to go and see the Chairman. He wants to see you immediately.” Of course I went, and he bawled me out. He said, “Didn’t you understand rule two?” I said, “I tried to be balanced. I tried not to affect markets.” After a while, you realized that it was very difficult to say something serious and not have any market impact. Markets didn’t know that I didn’t matter. If you took a point of view that was different and seemed to be challenging the Chairman, the markets were going to pay a lot of attention to it. They were going to think that you did matter. And they were going to think that there was a greater chance that the Fed, in this case, was going to tighten. So they didn’t get it.

MR. SMALL. If Chairman Greenspan was not open to your arguments and you couldn’t say anything new to the markets, what avenues were there for you to influence policy? Could you do it by influencing the Greenbook or influencing the staff?

MR. MEYER. No. There’s no way. I didn’t know that Governors generally didn’t go out and regularly talk about the outlook. Most Board members never talked about the outlook. But I’d made a decision, when I came in, that this is what I would do. I would talk regularly about the outlook. I’m a forecaster. I can educate the market. I have a role to play in transparency. So I said that I was going to give quarterly speeches on the outlook in monetary policy.

By the way, there was a fantastic discussion inside the Committee at one point, early on. Joe Coyne (head of the Board’s Public Affairs office) said, “Mr. Chairman, you know that FOMC members are now giving a lot of speeches. There’s a lot of noise in the markets. I think you believe also that that’s not appropriate or desirable. So what I want to propose is that I provide a list of topics that people can talk about.” I said, “Go ahead. Propose. I’m going to

ignore it.” One member said, “I try to be boring.” I said, “That’s interesting. I’m never intentionally boring.” And another one said, “I only talk about topics that we have no responsibility over.” I said, “That’s interesting. I only talk about issues we do have responsibility for.” So we had this sort of banter. Joe Coyne never made up a list.

Greenspan would never read my papers. He would never read anybody’s papers. Once I went in to [see] him before the one time I testified on monetary policy. I said to the Chairman, “One of the issues here is that they’re going to want to push a wedge between us. They’re going to want to emphasize our differences. We have differences. But with respect to policy, we’re pretty much on the same page. Would you like to read my testimony? Could I read your testimony? Could we make sure that we don’t give markets, media, the Congress anything to feed their views?” He said, “No. The only thing I’m going to say is: Just be responsible. I will do my thing, you do yours!”

Testifying before the Congress

Testifying about monetary policy before the Congress was one of my most interesting experiences. The Chairman is usually the only one who testifies on monetary policy. This was the only time, perhaps in the history of the FOMC, that the Congress wanted the Chairman to talk one day and then to have a panel of other FOMC witnesses the next day. They wanted to have Reserve Bank presidents. They wanted to have an FOMC member. Maybe it was Alice Rivlin, New York Fed president Bill McDonough, and me. I don’t remember. I think there was no doubt that they mainly wanted me, because the first time I heard of Barney Frank, the Fed’s congressional liaison came in and gave me a three-page single-spaced speech that Frank had given on the floor of the House all about me and my views on NAIRU. So I knew this could be interesting.

I wrote my opening remarks and sent them to the staff. The staff came back and said, “You can’t do this. This is in your first testimony. You won’t get halfway through before people will be down there pounding on the table. Soften the tone.” So I soften the tone. And then they sent the wrong version to Congress, the one with the tougher tone. So they had to run down and get it back and give them the softer one. Building up to that, I had some nervousness. It was one of the most memorable events in my life and in my career at the Fed.

MR. HAMBLEY. You had an interesting exchange with Representative Bernie Sanders from Vermont about income inequality and about what the Fed would do to address it.

MR. MEYER. He asked the first question. He started by presenting a lot of data to support his point: “There’s rising income inequality. What are you as a Governor going to do about it?” Unlike Greenspan, I’m very direct. I always say what I believe. But first I said nothing. After a little pause to let it sink in, I said, “Nothing!” Then I explained that there are limits to what monetary policy can do. “Income inequality is not one of our mandates. That’s not something we can do anything about. You, the Congress, told us to focus on price stability and full employment. That’s what we do. I don’t even think about income inequality. That’s for you. You’re a member of the Congress. You can actually do something about it. So do you want to talk about what you want to do about income inequality?” He took that very well. He said, “Okay, so let’s talk about the minimum wage.” And this goes on. I said that I prefer the income tax credit, and duh, duh, duh. And there was plenty of interesting discussion after that.

Another memorable moment was when somebody badgered me on fiscal policy: “What would you do with this? What would you do with that?” That’s when I said, “I get up every morning. I worry about monetary policy. I worry about the outlook. I worry about banks and bank supervision. I thought you guys were doing fiscal policy. I don’t have time.”

I always enjoyed testifying. I was always confrontational. Unlike Greenspan, when somebody asked me a stupid question, I gave my response, no holds barred. But Greenspan was a genius when he testified before the Congress. He was unbelievable.

By the way, Greenspan thought on his feet incredibly well. When he talked to a group of businessmen, chairman of boards, in the Board Room, they would fire questions at him. I would say, “How would I answer it?” He answered all the questions amazingly well. Greenspan’s style was—no matter what question, no matter how hostile, no matter how stupid—to make that person feel that he was brilliant. And that’s what he did, even with Ron Paul about the gold standard. Greenspan had more sympathy with him than I did. I once asked him, “Didn’t you ever want to go in there and testify more like I do?” He said, “Absolutely. But I’m Chairman. I can’t do that.”

MR. SMALL. Did he use those skills or approaches with Governors in FOMC meetings?

MR. MEYER. No, never. But he was incredibly calm. He appeared to listen, but he didn’t have to.

MR. HAMBLEY. By the time that you had come to the Board, Greenspan was already dominating.

MR. MEYER. Yes, and more than I appreciated when I came.

FOMC Dissents on Monetary Policy and the Statement

MR. HAMBLEY. Let’s discuss the propriety of a Board member dissenting on monetary policy. You mentioned earlier that, in September 1996, Janet Yellen and you went to his office to talk to Chairman Greenspan about a need to raise the funds rate, but the FOMC didn’t do it. Did you already know that it would be too big a deal for two Governors to dissent so that there

was literally no chance that you would even do it then, or did you learn this over time? How did you learn about the culture of everybody getting along and supporting an FOMC decision?

MR. MEYER. I knew it by then. We knew that was an empty threat. But it was a way of putting an exclamation point down there, that if he did this, we were going to be very unhappy. I'm sure that he knew we wouldn't dissent. He never responded to us. We gave him our case, and he said, "Thank you very much," and we left. It was a typical conversation with Greenspan—or nonconversation with Greenspan.

MR. SMALL. Did Reserve Bank presidents have a little more power, in the sense they had more freedom to dissent?

MR. MEYER. They had more freedom to dissent, but, in a sense, they had less power, because when the Governors walked into the FOMC meeting, only they knew what the decision was. The Reserve Bank presidents didn't. I toned this point down in my book, but I thought at one point I would say in the book that this was an incredible moment, when Chairman was about to make his recommendation: This was the point at which the Reserve Bank presidents find out what they're voting for today. There were dissents, but it was a very personal thing. Do you believe in consensus voting? I think most of the presidents did. And the presidents had a lot of respect for Greenspan. They could disagree with him and then vote with him. But not everybody was like that.

I'm writing a paper on the propensity to dissent. This is what it's about. If you want to know if a given member is going to dissent, you don't just have to know whether they disagree with the Chairman intensely, you also have to know their propensity to dissent. Some people—the Governors and the president of the New York Fed—simply won't dissent. Others may have a very low propensity to dissent.

I knew I didn't have the freedom to dissent. Governors simply didn't dissent. The only thing I could do is maybe influence the next FOMC decision. But I couldn't even do that. I could, perhaps more likely, influence how other FOMC members were seeing the economy and thinking about policy. But that was doubtful, too. I could never affect the Chairman's views, to my knowledge. On productivity acceleration, it was later into 1998 when it became apparent to me that something was happening that I didn't understand. And the Chairman would say, "This is easy. Wages are rising. Inflation is falling. The stock market is booming. Investment is booming. The data doesn't show it, but the only thing that can explain this is that there's a productivity boom going on. There's been an acceleration in productivity."

The Chairman was on this, even in 1995, before I got there. This was a theme of his all the way through. But the data didn't catch up with the Chairman for some time, and that's why it was such a brilliant call. Nobody on the staff believed it. The data contradicted it. But Greenspan insisted he was right and the data was wrong. And that turned out to be true. Once that was clear and that the unemployment rate could be a lot lower without sparking inflation, I had to reconsider my views. I had a funny experience at the Board a couple of days ago. I met one of the staff that I used to talk to a lot. And he said, "In your book where you say that the Chairman was right? You shouldn't have said that. The Chairman wasn't right. You were right. If you had been able to tighten when you wanted to, the outcome would have been much better." I said, "In the second edition, I'll put that in!"

When I arrived at the Board we had a tightening bias. Every meeting we had a tightening bias. Every meeting the Chairman would come in and say, "I'd like to recommend a tightening, but the markets aren't prepared for it. Therefore, give me a chance during the intermeeting period to make a speech and to set up the markets." Then he'd come in the next meeting and

say, "I thought I was going to want to tighten today, but inflation is still low and falling. I don't think it's appropriate." So we have this tightening bias for nine months.

Then we have one of the most memorable meetings and interchanges. The staff is never supposed to recommend anything. They're supposed to be evenhanded. But this was the one case in which Don Kohn was less so. This is the famous "time to deliver" speech. Don said, "For nine months you've had a tightening bias. Is it time to deliver?" Then, when Greenspan was ready to talk and make his recommendation, he said, "Well, as Don said, it's time to deliver." That increase in the funds rate, in March 1997, was the single increase until way, way later.

MR. HAMBLEY. Do you think that Kohn and Greenspan collaborated on that?

MR. MEYER. I don't know, but surely Don Kohn and the Chairman talked a lot. I think Don Kohn drafted the statements, typically, and then the Chairman fine-tuned them. That was another revelation about the statement. Usually what Don preferred would never come out at the meetings. And he would never, ever tell me what he thought the Committee should do. I don't know whether he would ever tell the Chairman. But certainly, in this case, he knew the Chairman was ready to do something, and he said something that was out of character and made the Committee appreciate that this is what the recommendation was going to be. And nobody really had problems with that.

Right after the vote, the statement appeared almost immediately, and it was passed out. The Chairman always had the pen. You could change an adjective or something like that, but there was no way it was going to be rewritten. Pretty soon it became clear that this was written over the weekend by the Chairman. And since he knew the outcome, he could write it.

There was absolutely no attempt to fit the statement into the mood of the Committee or the tone of the Committee. When this was revealed to one of the Reserve Bank presidents—I think in 1995—that president went crazy over the process, but that was the way it was always done. Interestingly, after I left, late in the Greenspan term it changed. There was great Committee displeasure over the phrase “considerable period.” There had been no prior consultation on including this in the public statement. Everyone was surprised, even though the phrase had occurred in the Chairman’s earlier testimony on monetary policy. In any case, they never wanted to let that happen again.

MR. HAMBLEY. Is it possible that there was an alternative statement that was also drafted? I ask that because you were given an array of possible policy options.

MR. MEYER. I can’t say that’s not right. Of course, Don knew what the decision was going to be. He knew the Chairman’s thinking. I can’t say that never happened. But I think the statement came from Don without Greenspan having had a chance to look at it again.

MR. SMALL. But he didn’t have three statements in his pocket—an A, B, and C—and pull out the appropriate one?

MR. MEYER. No. That was the whole point. It was about Greenspan. It was his decision. It was his rationale. It was his statement. There was never a question about the decision. There was some question about whether or not you were going to lean towards additional tightening. I think Greenspan, most of the time, had a view on that, but not all the time. And he would sometimes say, “Let’s go around the table. We’ll tally up where people are.” So that’s a case where maybe there were two statements. But it was a sentence.

MR. HAMBLEY. This was in the directive to the Desk at the New York Fed?

MR. MEYER. When I got there, there was already an FOMC statement—sometimes. But quickly, it became all the time. You were voting on the directive. You didn't get to vote on the statement. But I couldn't believe the directive. It was so bizarre. It had absolutely nothing to do with what we talked about at the meeting. It was full of "might" and "may," and the difference between them was seen as important. It was ludicrous to me that that could be what was in the directive. It made absolutely no sense. Ultimately, it was changed, and the directive was aligned more with the way policy was described.

Discount Rate Requests

MR. SMALL. Is there anything to be said about the discount rate? The Board members controlled that as long as they had at least one submission from a Reserve Bank. Was that a different avenue for power? Could one group play off against the other?

MR. MEYER. I don't know whether it was my view initially, but by the time I left, I viewed discount rate requests as a way that Reserve Banks could communicate to the Chairman what their preferences were about the federal funds rate. If you were one Bank that requested an increase in the discount rate, you were telling the Chairman that you would prefer to see an increase in the funds rate at the next meeting. It didn't mean you would dissent. I think that, all the time, when the Chairman wanted to move, he already had at least one request for a discount rate move that was consistent with the new funds rate decision. If he didn't, he could just get one. I'm sure that was always lined up before the meeting.

I do remember at one point we were talking about the discount rate. I don't remember whether there was a slight change in regime. I said, "We know that the discount rate is always X percentage points above the funds rate. And when you change the funds rate, you change the discount rate. So why don't we get rid of the sham that Reserve Banks and Reserve Bank boards

of directors set the discount rate or recommend it? Let's just have a formula. We can change the formula if it's necessary, but, basically, let's just stick to this formula." Someone responded, "No, no. You can't do that. Why do you want to be confrontational like that? It doesn't really matter in the end. So let's not do it." Everybody basically laughed when I made that proposal. I didn't know whether or not I was being facetious. But that was kind of a humorous recommendation.

MR. HAMBLEY. Late in Greenspan's career, several people on Capitol Hill would accuse the Federal Reserve of "groupthink," in the sense that all the FOMC members would move in lockstep. In a way, you've described a situation where essentially one person is dominating everything that really matters in this area. It worked out pretty well most of the time. But could it be dangerous? If the Chairman himself is presented with a new situation and is not approachable and has his mind made up, is that always going to work out well?

MR. MEYER. I think the answer there is that Greenspan understood that he could make the decision, but he couldn't flout the majority view. He couldn't do for a long time something that the voting members were against. Most of the time, he pulled everybody together by the force of his authority and persuasion. You never knew whether he was, at the margin, adjusting his views to reflect that. I think we never got into a situation like that. People converged to the Chairman.

Now, on the groupthink, I can understand why people might think that. It certainly wasn't the case in meetings that FOMC members just agreed with the Chairman. My view was that, on the one hand, it was important that the Committee speak with one voice, even if it was going to be the Chairman's voice. You didn't go out there and say, "I don't agree. I would have voted differently," and make that the focus. It was important to either defend or not disagree. I

strongly believe that. Now, that raises the question about what I was doing. I was trying to give a different perspective on the outlook. But the story was that you never give the markets any information about where you might vote at the next meeting.

MR. SMALL. The FOMC seems to be in agreement for the credibility of the institution. What about the more technical reason of markets forming expectations about the Fed's long-run goals, and that being built into bond rates, and that moving the economy in a way consistent with what the monetary policy is—the Taylor rule or whatever? Is there a “harnessing long-run markets” dimension of that?

MR. MEYER. Well, if there were uniformity—groupthink—then that would reduce noise and presumably help the markets better understand what the Committee thought. My recollection is that there wasn't much focus on this notion that when you set the funds rate, the most important thing you're doing is setting expectations about the path of the future funds rate, because that's the way you affect financial conditions. I could be wrong, but that was something that came later. I think that, right from the beginning, Bernanke emphasized that. Maybe it was later in the Greenspan term, but I don't remember there being as much focus on that.

MR. SMALL. When you were at the Board, you worked a lot with Taylor rules. And part of the academic rationale for using rules is precisely so that markets know that you will consistently follow this rule.

MR. MEYER. I understood that well. The Taylor rules that I was looking at, and many of the Board staff were producing before each meeting, I think, at that time, were all backward looking. So I was making decisions based on where the Taylor rule would tell us to be, based on the data we had and the history of it as opposed to the forecast. I wasn't, in my own modeling,

paying as much attention as I should have to the role of future expectations. By 1998 or so, the Board staff materially revised its model, FRB/US, to make it much more forward looking.

But, at that point, the way we were modeling it in my former firm was that expectations were formed on the basis of past experience—that is, were backward looking. We did not model expectations as forward looking—that is, as explicitly based on forecasts of the future. At some point, I can't tell you when, it became well appreciated that expectations should be modeled as forward looking. That meant that the real power of monetary policy is not the rate set now, but the path of rates that markets expect in the future. And that requires a forward-looking policy rule. I guess that the Board staff developed a forward-looking policy rule during the time. I don't remember whether or not they reported it to us. But I was always thinking of this, incorrectly, as backward looking.

Fed's Dual Mandate

MR. SMALL. Let's talk more broadly about the Fed's mandate. For the longest time, various policymakers have been saying price stability is a key mandate, and it's the only thing the Fed can control in the long run. You were part of the debate about the "dual mandate"—that is, including the employment part of the mandate. Alan Blinder got into some problems at Jackson Hole with it.

MR. MEYER. I remember Blinder getting into that trouble. But I don't know whether he set the groundwork and made it easier for others to say the same thing. By the time I joined the Board, there wasn't an issue.

I think that the view on the FOMC was that central bankers should talk mainly about price stability. That is the major responsibility. And I probably said that at my confirmation hearing in my opening statement. When you walk through the door on C Street, you feel the

immense responsibility. You're going to be graded probably most on what happens to inflation. And you feel that burden. You don't want to get a black mark on your record there.

Having said that, I believe passionately in the dual mandate. I thought that those who refused to talk about it and only talked about price stability were making a mistake. They weren't being transparent, or they weren't prepared to follow the mandate in the Federal Reserve Act, which I thought was basically the right mandate. I was certainly concerned about inflation when I first came to the Board, but the unemployment rate was well below anything I thought was sustainable. It was well below the full-employment point. The issue was never about getting back to full employment. We knew we were coming back from a situation where demand was excessive.

When talking in public, I think a central banker always wants to speak the language of central banking. There are many countries that have hard targets for inflation, where their only responsibility is inflation, so there's a tendency to focus on that. If you ask me what's the most important Federal Reserve responsibility, it's inflation. It's the only thing that the Fed can control in the long run. You can have some impact on smoothing business cycles. There were some who would say that monetary policy can't have any effect smoothing the business cycle and shouldn't try (a view associated with Milton Friedman). If that were the case, you should only worry about what you can control in the medium term, in which case it's all about inflation. But you live in the short run, too, and if you think you can have some effect on employment in the shorter run, then you also need to make policy, keeping in mind your responsibility to promote full employment—squeezing inflation out if you need to, but then getting back to full employment.

MR. SMALL. For a central banker, talking in public about price stability and stable inflation is comfortable. But is it possible to say to the public “Enough output is enough once you hit potential” or “Now we have too many people working. That’s a danger”?

MR. MEYER. Impossible.

MR. SMALL. It’s just better to stick with inflation?

MR. MEYER. No, no. I wanted to explain the dual mandate. I did. That was the basis of my preferences for policy. But did it register with the public? No. Did it register with the Congress? No. So you might ask, why would I do it? I couldn’t do it any other way. You’re trying to let the people that do understand [know] what’s driving your preferences.

NAIRU (Non-accelerating Inflation Rate of Unemployment)

MR. SMALL. There’s a lot of debate about whether there is a NAIRU. Can we measure it? And, if so, with what accuracy? But even if you knew what it was with certainty, it’s hard to talk about it publicly. So a policymaker says, “It’s too hard to talk about it. I’m just not going to admit to it.”

MR. MEYER. I think that they get put together in the final decision about how you want to communicate and how you want to talk. My view is that there is no model of short-run inflation dynamics other than the Phillips curve. There is none. For example, when Bill Poole (St. Louis Reserve Bank president, 1998–2008) would talk about money growth, I would say, “Okay Bill, give me your model. What determines inflation in the short run? Remember chapter 13 in Patinkin, in particular—Patinkin is about comparative statics, one level of inflation in the long run and one rate of growth in the money supply. It is not a model of dynamics.” That was one of the only times I can remember that there was an exchange, member-to-member.

After that took place, everybody laughed and said, “That was fun. We ought to try that again some time.”

So you’re fighting against this, and you’re trying to communicate your paradigm. One of the best speeches I wrote was, “Start with a Paradigm, End with a Story.” This is about model building. There has to be a paradigm. And when you’re done with the forecast, it fits into that paradigm and it tells a story. So I didn’t worry about what I was communicating to the public. I was communicating what I believed. I didn’t think that much about whether or not the public would understand it. I believe that just as there’s no other model than the Phillips curve of short-run dynamics, classical theory tells us that there’s a long-run equilibrium at any time. One part of this is the NAIRU. There’s got to be a NAIRU. We may not know what it is. We may not be able to measure it. It might change over time. All those things I agree with. But you can’t tell me there’s not a NAIRU.

MR. SMALL. How far did you feel you got with Greenspan on that? Did he believe there was one, but he didn’t want to talk about it because of political pressures? He didn’t know if there was one? There was one, but it was uncertain and moving?

MR. MEYER. I’m a model-based forecaster. I have to have a judgment about this. It has to be in my model. Greenspan never wrote down, never articulated a paradigm or a model. So he never really confronted this concept of NAIRU. Greenspan’s paradigm was intuitive. But it was intuitive in a way that I would say is perfectly consistent with the Phillips curve. Whether or not he said he believes in a NAIRU, he understands that aggregate demand could be greater than the economy’s capacity. Who doesn’t understand that? You’d have to be incredibly thick not to understand that. Now, you might not want to call that the NAIRU. That’s fine.

We would have this debate with the hawks on the FOMC. Basically, they would say that the mechanism is that faster money growth makes the markets nervous about inflation. Inflation expectations go up, and it drives inflation higher. So it's not really a model of short-run inflation dynamics. And they don't really care about short-run inflation dynamics anyway. They only care about the medium term. So they basically will say they don't believe in the Phillips curve. They act as if they don't believe in the full-employment mandate. But what drives their policy preferences is their view that monetary policy cannot affect the economy over the short run in terms of aggregate demand. So there's only one thing you can do, and that's medium-term inflation. This is perfectly legitimate. Reasonable people can have different views about that.

MR. HAMBLEY. You were a model builder. You were an empiricist. You came to the Federal Reserve with an estimate of the NAIRU based on historical data. And through much of the time that you were here, the unemployment rate was below, and continued to be below, even downwardly revised estimates of the NAIRU. Did you ever have a moment when you thought, "Gee, this concept of NAIRU isn't helping me to do my job"?

MR. MEYER. Sure. I always came back to the story that there is no other model. So the NAIRU can be different than my estimate. I don't "know" where it is. We can only make an estimate, have some empirical estimate of it. So, for me, it was about estimating the level of the NAIRU. You have to learn from your mistakes, and sometimes you make incredible mistakes. What's going on doesn't fit with your estimate of the NAIRU. How can you explain it? Should you throw away the model? Or is there something in that paradigm that you can save? I thought the explanation had to do with the productivity acceleration. A productivity acceleration is disinflationary for a long time, because it lowers unit labor costs and therefore it lowers inflation during this adjustment period even though higher productivity can drive wages somewhat higher.

I once brought to an FOMC meeting a set of equations and graphs. I gave a “lecture” about this “productivity adjusted” Phillips curve. And I solved for the NAIRU that was consistent with price stability. The NAIRU had a term for its long-run equilibrium value and a term that captured the effect on inflation of a productivity acceleration. It was like being a professor. I don’t know whether anybody was listening, but Greenspan went by me at the end and said, “That was interesting.” I was very frustrated that the other FOMC members didn’t seem to have a framework to understand what was going on. There was absolutely no one on the Committee, except for Janet Yellen when she was there, who would admit they believed in the Phillips curve. Absolutely no one. Today, while not everybody shares this kind of paradigm, many—indeed, most—admit they believe in the NAIRU. That’s progress!

So I felt totally alone when I was on the Committee. I felt sure I was right. I felt I had to explain why the Phillips curve wasn’t working well and why it had to be adjusted. I couldn’t understand how anybody on the Committee could not believe that excess demand causes inflation. It’s like excess demand for apples drives up the price of apples. This isn’t rocket science.

MR. SMALL. But I have heard the criticism that the estimate of the NAIRU is just a residual from estimating Phillips curves and the intercept, so it’s always going to be the residual that makes your equation fit. And you’re always going to have some number that you can adjust up and down so the equation fits. But since you have no structural model of the NAIRU, the whole thing is just overfitting.

MR. MEYER. I take a different point of view there. If you believe in the story of the importance of the NAIRU, there’s some level of the unemployment rate that’s consistent with stable inflation. And that’s what you’re solving for. It has nothing to do with residuals. True, it

is related to the constant in a regression. Bob Gordon was very helpful—I don't remember when—during my tenure at the Board, when he began to use a time-varying NAIRU and provided estimates of how the NAIRU changed over time. That seemed to help a great deal. You could look at the errors and see if they were systematic—that is, was inflation higher or lower than you would have expected based on the equation—and adjust NAIRU accordingly. And that's what the staff ultimately did.

Now, the only reason that I didn't bang my head on the wall all the time is, the staff completely agreed with me. So that reinforced my stubbornness that I was right, because the staff couldn't be wrong! I didn't understand why the staff was not more forceful with the Committee. They should have said, "I know that members of this Committee have a lot of skepticism about the Phillips curve and the NAIRU. Let me explain why we use it in our models, why we have confidence in it, what the issues are in terms of measurement, in estimation, et cetera, but why it's such a central focus and important focus for our models of inflation, et cetera." So I was a little peeved that the staff didn't help me, didn't support me. They always did in other things, but this was the one case in which a little support would have gone a long way. It would have perhaps prevented everybody else on the Committee saying, in effect, "You're an idiot. Why are you the only one who believes it?"

In the Congress, it's a different story. The unemployment rate can never be too low. Do you really want to go in and tell them, "We have to throw two million people out of work and increase the unemployment rate or we are going to have a higher inflation"? You couldn't do that. You had to be careful how you express it. Much better to express it as "Demand is too high relative to potential." And we have to bring demand down and not talk about what it means for employment and the unemployment rate. I always liked to tell it like it is. It's about the

unemployment rate. That's what you're really talking about. But, yes, that was the one thing that made me frustrated, and why I missed Janet Yellen so much when she left.

Culture of the Board

MR. MEYER. Janet was a very big influence on me and, more than anybody, helped me discipline my thinking. We'd go upstairs and have lunch and sometimes have a hot dog together. When there was a tablecloth, she'd be writing all over the tablecloth. She'd be drawing me all these pictures of relationships of which I had no idea. She was the best economist I have ever worked with. She wasn't there for too long. When she left, there was a void.

Part of the culture here is that Governors don't talk to other Governors, at least not about monetary policy. Board members don't talk to the Chairman. There's this notion that you don't want to be meeting behind the Chairman's back and be seen as colluding to be an alternative power base. You certainly didn't want to do that. But that was part of what I've called isolation. As a Governor, you don't talk to Governors. And, in any case, you didn't have much opportunity to talk to the Chairman. There was nobody I really wanted to talk to about monetary policy on the Board except for Janet. When she was gone, well, there were no doors to knock on. It was only the staff to talk to. And, on a normal day, if you don't formally ask, you'll never see a staff member. You'll be in your office all day alone. The only thing that breaks that up is your committee meetings to address your other responsibilities besides monetary policy. I was, for a time, the head of the committee on bank supervision and regulation. That meant I had to meet every week or so with the director of Supervision and Regulation and with the deputy director of research, Ed Ettin, who was, other than Don Kohn, the greatest influence on me when I was there.

I love human interaction. I tried to fill my office as much as possible and as frequently as possible with staff. It was fun. It was educational. It was great to have somebody to talk to.

MR. SMALL. Do you think the staff was leery of being seen as colluding with a Governor behind the Chairman's back or were too focused on the Chairman?

MR. MEYER. Well, I think there was that notion. Alan Blinder believed very strongly that the staff didn't support him, that it was all about supporting the Chairman. And he was on his own. I never believed that. I thought that I took more opportunities to talk to the staff than perhaps Greenspan did—or at least to a wider range of staff. And the staff was offering me help. They were saying, "Here's our forecast. You can ask questions." When I had meetings with the staff, we always talked about monetary policy strategy. What should the Committee do if there's an increase in oil prices or commodity prices? Oh, that was great fun.

Inflation Target

MR. HAMBLEY. At your first FOMC meeting, there was a discussion about the meaning of price stability. There was a general convergence on the notion that there was some measure that most of the people in the room felt comfortable in associating with price stability.

MR. MEYER. Yes, it was amazing.

MR. HAMBLEY. But not Chairman Greenspan. He ended up saying, "Everybody's agreed on this." Is that right?

MR. MEYER. Yes, it is. I didn't know whether that meant him, too.

MR. HAMBLEY. But then, having had that discussion, the public did not hear from the Greenspan Fed that there was a general agreement within the FOMC that this would be an appropriate measure of price stability. Was that a mistake?

MR. MEYER. There was a paragraph in the minutes indicating that there was a general discussion about inflation in the long run, but the minutes did not go into the detail of a target of 2 percent and how measurement issues would be handled. And that was not settled by the FOMC at that meeting. Until you have an agreed-upon inflation objective, you can't go out there and say, "This is what the Committee believes." Each member is free. Not everybody agreed with that. As I recall, the Chairman wanted zero, correctly measured. And I used to say, "How about 2 percent, incorrectly measured?"

MR. HAMBLEY. So the question is whether this should be in the public domain?

MR. MEYER. I think that the only way to get that in the public domain is for individual members of the Committee in their speeches to say, "My own preference would be that inflation be as close to 2 percent as possible. And when I say 'price stability,' I don't mean zero inflation. I really mean 2 percent inflation." Now, if people ask me, "Is that the Committee's view?" "No, no," I would say, "the Committee does not have an inflation objective." Why did we stop short of talking about inflation objectives for the Fed at that meeting? The Chairman didn't want it. He would have cut off any discussion. This was about what price stability meant to individual members. We weren't talking about inflation targets.

MR. HAMBLEY. Why was he so concerned about approaching that topic? Did he think that the Fed might be unable to meet a target, or that maybe the Fed couldn't agree on one and the public would be nervous about that, or was it some other reason? Was he concerned that it would limit the Fed's flexibility?

MR. MEYER. Maybe it was mostly the lack of flexibility. But for other members of the Committee who didn't want to emphasize full employment as much, wanted to emphasize inflation, this would have been a great way. There really wasn't a lot of discussion about this, I

don't think. It was cut off whenever we got close. But it wasn't going to come up around the table in a normal discussion.

So I came to the point where I felt this was a topic that we should air in public. And I gave a speech supporting inflation objectives. I said, "Inflation targeting: No. An Inflation Objective: Yes." The notion was that I did not support "inflation targeting," a regime I associated with focusing only on inflation. I believe in the dual mandate. But how can you carry out monetary policy without having an inflation objective? And why does it make sense for everybody to have their own inflation objective and for everybody to vote differently because they're trying to get to a different place? That makes no sense at all. You can't really get the public to understand why inflation expectations should be stable at a particular level if you don't tell them what you're aiming for.

October 18, 2010 (Second Day of Interview)**Consumer Affairs, Banking Supervision, and the Payment System**

MR. HAMBLEY. When you came to the Board, the Federal Reserve had, and it still has, a broad range of responsibilities. Were you surprised in learning about some of them?

MR. MEYER. There were some that I didn't have a clue about, and that brings up one of my favorite stories. When Joe Stiglitz called and said that I was going to be on the short list, he said, "Look, I don't want to lobby for anything in particular, but we really, really like CRA." I had no idea what "CRA" was. So I had to make this decision. Do I tell him I'm ignorant, do I tell him I support it, or do I just say nothing? I did the latter, and about two minutes after we hang up I heard the "ding" of the fax machine. And over it came a 40-page paper from Joe Stiglitz on the history of CRA (the Community Reinvestment Act).

Initially, when I got to the Board, the Chairman put me on all the committees. While painful to some extent, it was a great introduction to the broad range of responsibilities of the Board. My first opportunity to be a chair of one of the committees was for the Committee on Consumer and Community Affairs. It took maybe a year from the point that I knew nothing about CRA to when I was in charge of oversight of the division responsible for overseeing consumer and community affairs.

MR. HAMBLEY. Did you get a sense of the historical importance of CRA at the Board? Recently, the Board has been criticized for not giving utmost importance to CRA and consumer protection laws, generally.

MR. MEYER. I don't know that I would say that. Certainly, the division that oversaw it took it very seriously. Having said that, I always felt that the consumer protection mission was not an appropriate one for a central bank. It didn't belong at the Fed. It was a distraction that

Board members shouldn't have to think about and vote on. It was also inherently political, unlike most of the other responsibilities that the Fed had. It was one of the only places where you could see the political and ideological differences of the Board members. I really felt that consumer protection didn't belong there. I supported the current Administration's proposal on shifting this responsibility to an independent agency. I felt it was good to get consumer protection out of the responsibilities of the Federal Reserve.

MR. HAMBLEY. As you were preparing to become a Board member, you were briefed by Board staff. Was seriously learning about the payment system or banking supervision for the first time an eye-opening experience?

MR. MEYER. That was a great process. You got to meet the senior staff in every division. You got to ask questions, and you had a fabulous briefing book as well to prepare you for the committee confirmation hearings. I really enjoyed that.

There were some areas that I didn't know much about. And I have to admit, painfully, that the payment system is one of the most complicated areas of Board oversight. I never felt comfortable despite sitting on the Fed Systemwide committee on the payments system. That was the one area where I felt I never had the handle that I would like to, as I felt I did with all the other responsibilities.

MR. HAMBLEY. How did you approach learning that area?

MR. MEYER. Well, I would get briefings before every meeting of that committee. Also, it helped to have briefings in more general terms by the Division of Reserve Bank Operations and Payment Systems that oversaw that area. But I wouldn't say it put me over the edge, where I felt comfortable with issues that came before that committee.

MR. HAMBLEY. We “tortured” you many times in briefings on interest on reserves and interest on demand deposits in advance of your testifying before a congressional committee. If the staff had any fact that was relevant to the subject, you were going to find it, and you tortured the staff. You probed and probed with questions. You had a very good grasp of the subject when you appeared on the Hill.

MR. MEYER. Testifying before the Congress was one of the few very stressful activities for me while at the Board. You had the responsibility of testifying on behalf of the Board, having the perspective and defending what the Board wanted even if you had some reservations. The folks in the Congress love to catch you in a mistake. It was kind of a game. I only had the opportunity to testify once on monetary policy. In areas of bank supervision, on the other hand, there was always going to be a limit to my knowledge—a limit to my being able to recall every statute, every piece of legislative history. To call it by the wrong name would evoke sharp responses.

I had a pretty aggressive style of testimony. I wouldn’t sit there and let committee members scream at me and show no respect. On the other hand, I had to be very calm, not scream back at them, and I also wanted to show them the same respect they showed me. So I definitely had that combative style. And to this day, that is my style when getting into debates, so I try not to get into debates.

MR. SMALL. You mentioned your aggressive style of testimony before the Congress. Win, with some humor, said that you tortured the staff on follow-up questions. You were like that as a teacher. You had a penalty box, right?

MR. MEYER. It was not a crime, not a problem, to get any question wrong on an exam. But if I asked you that same question on the next exam and you got it wrong, then you had a

double penalty. Not only did you get zero, but, whatever it was worth on the earlier exam, you got minus points. So you could get half the questions right and half of those questions wrong and end up with a zero. I thought this was an extraordinary good device for motivating students to learn.

My exams were difficult and long. I recall one exam where I said at the end of three hours, "Time is up." And the students said, "Time is up when *we* say it's up. This is an outrageously long exam." I remember going by a particular student who was sitting in his car not doing anything, and I said, "Are you all right?" He said, "I can't drive. I'm recovering. It'll take me a while."

Also, I never graded exams on the basis of 100. They were always on something like 150 or 125 so that students would never get a 60. They might get a 90, and so they wouldn't be demoralized, because students have this grade illusion. As long as the grade is near 100, that's good.

MR. HAMBLEY. Even if the scale is 150?

MR. MEYER. Well, sometimes they didn't figure that out until they saw the letter grade at the end of the semester.

Senate Confirmation Hearing

MR. HAMBLEY. You had that memorable Senate Banking confirmation hearing where Alan Greenspan arrived late, and the Senators stopped asking Alice Rivlin and you questions and they bowed down to the Chairman. You were approved unanimously by the committee, but your nomination sat in limbo for almost three months, along with Greenspan's to be renominated as Chairman and Alice Rivlin's to be Vice Chair. Do you remember what was going on? And as this was happening, did you have any feeling that maybe you just weren't going to make it?

MR. MEYER. I never had that feeling, but it was very frustrating. Alan Blinder called me immediately when I got back from being nominated and said, "Do you know about a hold?" I had no idea what that was. What's amusing was that it was a package deal to help me get through, figuring that Greenspan would surely get through, and Rivlin, very well known, would surely get through. The irony was that I was held up because they were unhappy with Greenspan. So I was very frustrated. And there was an article that said that I was thinking of withdrawing my nomination. It never got to that point, but I was very frustrated by the experience.

MR. HAMBLEY. At that point, had you already divested your firm? You were not working at that point?

MR. MEYER. I hadn't divested in the firm because I didn't know for sure that I was finally going to be approved, but I was in a limbo because I certainly didn't want to say anything that could provide ammunition for one of the other parties to oppose me. So I didn't say anything on monetary policy. I was very guarded on what I said about the outlook, and I felt that I was not carrying my own. I felt that I was distracted. I wasn't getting work done. I was just sitting around waiting. That aspect made it a difficult period for me.

MR. HAMBLEY. The hold against Greenspan and you was by several Democratic senators, but Tom Harkin of Iowa was the main one. He was a liberal Democrat who was very critical of Alan Greenspan, along with his cohorts, believing that Greenspan was too much of an inflation hawk, was too prone to raise interest rates, and was going to suppress what the economy could otherwise do if there was just a reasonable policy. What was it he wanted, in particular? Ultimately, they did allow a vote.

MR. MEYER. He wanted two days of debate or discussion on the floor about monetary policy. That seemed like a very long time. He didn't have a lot of support from others in the Congress, and there was negotiation with—I presume it was the Administration, to find some kind of a compromise. The compromise was, he got half a day. That satisfied him, and then the vote went through.

MR. HAMBLEY. That was one of the first cases where people really tried to make a political issue about the conduct of monetary policy in the Senate for a prolonged period of time. Anyway, the hold was lifted, they had their debate, and your Board nomination was approved 98–0. Alan Greenspan received some negative votes, and Alice Rivlin had this other problem with a message to the Administration about budget policy. The political maneuvers were not aimed at you, but they frustrated your nomination.

MR. MEYER. Absolutely. Coming in from the outside, you have this view of the independence of the Fed, and you don't like to see the Senate and the Congress generally, in some sense, trying to assert their influence over the Fed as seemed to be the case here.

MR. HAMBLEY. Considering the debate that occurred at the Fed itself later on, was it wrong to raise this issue that perhaps policy would be too tight and would not allow the economy to do what it might otherwise be able to do?

MR. MEYER. I thought that was a very legitimate issue for the Congress. It was a question of how they treated it. Congressional oversight of monetary policy was certainly appropriate, but not a hold. That, I thought, was irresponsible.

First Impressions of the Federal Reserve Board

MR. HAMBLEY. So when you were finally confirmed, you arrived at the Board as a Governor. What are your first impressions when you come to the Board?

MR. MEYER. First of all, there was that thrill of walking in, getting into your office, and being a part of the Board. Figuring out what that meant was part of the challenge at that point. You were trying to understand the culture of the organization, and there were some decisions that had to be made immediately. One of them was whether or not to have your own assistant. Some former Board members said that you really needed to do that. To be an independent Board member, you really had to have your own dedicated staff. The staff lobbied very hard against that, saying having an assistant would cut you off from the senior staff. You ought to have your direct relationships with senior staff, with the staff directors in each of the divisions. And being your assistant was not really a good position for a staff member, because it would require that person to be a generalist, whereas his promotion depended upon his specialization. In the end, I said I would try initially going without an assistant, try it for several months, and see how it works out. And I never regretted that. That was the best decision that I could have made.

FOMC Meetings

When I came to the Board, there was an FOMC meeting coming up very shortly. So the most important thing on my mind, putting everything else on the side, was to prepare for that. Attending the first meeting was very challenging, because you didn't know the process. I didn't know completely how to prepare for it, how to engage the staff in a way that was going to prepare me for it, but my first recollection of that meeting was that it was the single best meeting that I ever attended at the Board. If I ended up staying at the Board, I intended to write a paper on great meetings of the Board, the most memorable ones. That first meeting would be included, because we focused at a very high level of discussion on what price stability meant to the FOMC. As I mentioned earlier, at that meeting I said, "This is more fun than I thought it was going to be."

That fun didn't last too long, because the meetings were not really meetings at which you deliberated about some policy outcome. They were very mechanical. People read their statements, and I got into that habit immediately as well. Nobody questioned each other. You could question the staff, but those were the only questions that took place. There were no discussions. It was mechanical, and the decision had been made before you walked into the room. So, after a while, I didn't look forward to the meetings as much. It was more fun sitting in my office, talking to staff, thinking about the broad issues of policy strategy. On the Monday before FOMC meetings, I did look forward to meeting with the Chairman and the Board members alone, no staff, where we did have a robust discussion. You would hope to have that kind of discussion at the FOMC, but that never took place.

MR. HAMBLEY. How did you go about figuring out what to do and not look like a complete novice at the first FOMC meeting? Did you ask other Board members or the Chairman?

MR. MEYER. Well, I don't remember asking the Chairman. I might have talked to other Board members, but I don't recall. I suppose I read some previous meeting transcripts to find out what went on and what the flow of the meeting was. I quickly understood what that flow was—who went first, staff presentations, go-rounds, votes. That didn't come as a surprise when I walked in.

I didn't think I needed the sequence of meetings with staff that I ultimately decided to have before every FOMC meeting. I'm sure I met with Mike Prell and Don Kohn for some discussions, both about the nature of the meeting and about thinking through the forecast and thinking through what the policy options were going to be at the meeting. In a way, I felt better prepared as I went along the process and developed a set of procedures on how to prepare

myself. On the other hand, when I went in the first time, I thought that I was going to matter. When you entered the meeting, the energy that flowed that you were going to maybe have some impact quickly disappeared as a possibility. Yet I was prepared better and better for deliberating and making a decision, and that sort of tension was there for the remainder of the time I was at the Board.

MR. HAMBLEY. Did you try to do your own forecasts?

MR. MEYER. I did, but I didn't do it like I did when I was at Laurence H. Meyer and Associates. (After I went to the Board, it was renamed Macroeconomic Advisers (MA)). I didn't take the Macro Advisers' model in-house to use myself. I looked at outside forecasts. And, of course, I looked at the staff's forecast reported in the Greenbook. Then I put together a forecast informed by all that, as well as my own judgment. Having come in as a forecaster, I was doing less forecasting than I might have anticipated. I was doing it, but in a looser sense. I was mainly positioning myself relative to the Greenbook, which is how most members do it. You look at the Greenbook forecast, and you say whether or not you think inflation will be a little higher or growth will be a little bit lower. Those were the main issues guiding my forecast.

MR. SMALL. I presume that your framework for viewing the economy was not that much different from the framework underlying the Greenbook. Did you get your challenges from the Reserve Banks, with their specialties like a monetarist Reserve Bank or a real-business-cycle Reserve Bank? Was that where the interaction and the sparks flew?

MR. MEYER. Well, there were rarely sparks. There were rarely challenges, because that was the nature of meetings. They were very mechanical.

MR. SMALL. What about the January and June meetings where you had two-day meetings back then, and there were sometimes special topics?

MR. MEYER. Those were clearly the most interesting meetings. The staff presentation the Monday before the meeting was also interesting, because there was a little dance going on there where, by the questions you asked the staff, you could give a taste of your views of what was critical in the outlook for the policy decision and which way you wanted it to go. Greenspan would ask questions to push the staff in one direction. I was asking other questions to get the support of the staff in the other direction. That was actually a lot of fun.

MR. SMALL. Some of the Reserve Banks have different schools of thoughts. Is that a static setup where they just have their different views, or do they add energy and dynamics to the thought process of the System as a whole because they challenge you, you challenge them, and you adjust?

MR. MEYER. There were Reserve Banks that had different views, and you always knew what those fundamental views were. It could be more hawkish. It was typically supported by a very different way of looking at the world. On the other hand, some Bank presidents had visions that you just couldn't figure out where they were coming from, and that was frustrating too. The one that was most clearly separated was St. Louis. St. Louis always had a different perspective, more focus on the monetary aggregates, a different way of thinking of the world than the other FOMC members of the committee. But I wouldn't say, otherwise, that it was split on visions of how the economy worked at that time.

The splits came from people who had different views about whether or not there was productivity acceleration, how much faith to have in the Phillips curve. As I mentioned earlier, when I was there and after Janet Yellen left (she originally resigned from the Board on February 17, 1997), I was the only person on the Committee who would admit to believing in the Phillips curve. We'd have this go-round where people would just put it down, clearly talking

about me. It was kind of a personal slight. Everybody was voting principally based on the Greenbook forecast. Nobody was getting very far away from it. So I had the last laugh, because people were voting based on a forecast that embedded the Phillips curve even though they said they didn't believe it.

I think there was some pressure on the Committee members to say they didn't believe it even if their own forecast was predicated on it. So, in that sense, I felt alone but very secure in my views. I never had any doubts that, indeed, that model was the only sensible model of inflation dynamics. I had trouble understanding how anybody else on the Committee couldn't realize that.

MR. HAMBLEY. You've referred to the model as the Phillips curve. When I was in graduate school, we called it the expectations-augmented Phillips curve, which I think is what you mean in this context—

MR. MEYER. Absolutely.

MR. HAMBLEY. —so, a Phillips curve that depends on the state of inflation or inflation expectations. I wonder if there might have been a problem, because the simple Phillips curve had been thoroughly discredited. And I wonder if this was a generational issue: People had learned something, they realized it was wrong, they didn't glom onto the new thing—or was it just that they were not inclined to have models of the economy?

MR. MEYER. Well, that's a great question. I haven't thought about it in exactly that way, but I think your point is well taken. The Phillips curve, as people had learned it, was discredited. And it was not well understood that the most serious problems with the formulation of the Phillips curve were removed when you incorporated inflation expectations—or, [as] we called it, inflation-expectations-augmented Phillips curve. So that might have been part of it.

But the biggest problem was that people had trouble with the view that slack in the economy pushed inflation lower. They had trouble—and this was more understandable—in measuring and knowing what the NAIRU was. Some of it was understandable, but other aspects were not, and, as I said, it made it difficult for me to understand what framework other FOMC members had when they were talking about inflation. That went for the Chairman as well. The Chairman would never, ever admit that he believed in the Phillips curve, and I trust that perhaps he didn't. But if he didn't, I have no idea at all where his views of inflation were coming from. That was the difficulty sometimes in interacting with the Chairman. I had no idea what his intellectual framework was. He was very intuitive, and his intuition was great, but I never could understand the intellectual framework that drove his forecast.

MR. HAMBLEY. He was also the spokesman for monetary policy to the outside world, and I think he encountered a few times being roughed up when he seemed to be talking about a NAIRU in a way that wasn't quite politically acceptable. I think he learned over time that he had to have a different way of describing things—it's "other things." He would never, never say "NAIRU."

MR. MEYER. Yes.

MR. HAMBLEY. He did seem to believe in limits to the economy. He certainly believed that if demand was excessive compared to supply, you would get inflation. So there was a framework there, but, I think, as you said, he didn't articulate it, and maybe there was a reason why he didn't.

MR. MEYER. Well, again, that's a great point. I don't think any Chairman wants to be in the position where he goes to the Congress and says, "Inflation is high, but don't worry. I'll produce a lot of unemployment, and that will drive it down." I had to say that because that's

what I believe, but I think a Chairman should probably be more ambivalent about it and not get himself into that position, mainly because he was dealing with a Congress that fundamentally didn't understand any economics.

Supply Shocks and the NAIRU

MR. SMALL. Could you review your intellectual development, from leaving MIT to arriving at the Board? What were some of the key events? Where did you learn about supply shocks? How did your model of the economy change between those two points?

MR. MEYER. The key was my education at MIT and, specifically, being involved in the development of the large-scale model that then found a home at the Board before I got there. It was clear that the model, as I knew it, had a number of elements that turned out not to be correct. It certainly taught me from the beginning that there's a certain dynamic element of economics, and particularly macroeconomics, where we're learning, we're changing our views of some things that could be really fundamental. But by the time I got to the Board, I felt that we had resolved most of those internal inconsistencies, and there were some parts where I thought I understood the dynamics, and supply shocks was one of them. I really didn't feel comfortable with understanding how to think about the monetary policy response to supply shocks. One of the meetings I had each FOMC cycle was with you in Monetary Affairs—not to talk about the next meeting, just to pick a topic that was interesting and that would help me take a step further in my understanding of the link between the outlook and monetary policy.

The very first topic we talked about was supply shocks, where I was struggling to come up with my view about whether monetary policy should tighten to lean against inflation or loosen to deal with the rise in unemployment. I'm not sure I ever felt as comfortable with that as I do today. The real advance in my thinking was a speech by then-Governor Bernanke, after I

left the Board, where he laid out what I think is the modern thinking about the response of monetary policy to a supply shock. The old-school thinking was always to respond immediately by tightening to anchor inflation expectations and then clean up the mess on the real side later. What Bernanke said, and I felt much more comfortable with, is that your response depends. It depends on the initial conditions. It depends how well anchored inflation expectations were. You could make a case for either easing or tightening depending on those conditions. That's what I believe today, and that's an example of how my thinking evolved.

But, by the time I got to the Board, my view of macroeconomics had become pretty firmly entrenched, and I thought I had a good understanding of the framework. One of the papers I wrote that I enjoyed the most was called "Start with a Paradigm, End with a Story." It was about the value of beginning with a paradigm, with a story about how the economy worked. In my case, that paradigm was embedded in a large model. It didn't have to be. The advantage was, not only did a model help you link together all of the forces that were driving the economy, but, at the end of the day, it provided you with a coherent story about how the economy was evolving.

MR. SMALL. What about the criticism of the Phillips curve that when the NAIRU becomes time varying, it is just a slack variable that you can raise and lower to make the model fit?

MR. MEYER. Well, the proof was in the pudding. As I went along and during the time I was at the Board, there was a lot of work going on estimating the time-varying NAIRU. That work was done initially by Bob Gordon at Northwestern, and it was quickly adopted at the Board. Maybe it was the reverse, but that's the way the timing seemed to me. But, as I said, the proof is in the pudding. How do you do in predicting inflation? If you take the view that it's

worthless because NAIRU is bouncing around all over the place, then you should make poor predictions, and then you've really got a problem because you have no model of inflation. And if you have no model of inflation, you have no way of linking the appropriate monetary policy to control inflation, so that is not good. Now, if you're a monetarist, you always know that you control the money supply, but if you come from the different school that I did, that wasn't the way you carried out monetary policy, and particularly in the short run. Anybody else who couldn't rely on and believe there was enough stability in the NAIRU to use it effectively essentially had no model and had no way of using monetary policy to control inflation.

The Great Inflation from 1965 to the Early 1980s

MR. SMALL. From 1965 to the early 1980s, the United States experienced its greatest sustained increase in inflation. Let me ask your views on macroeconomics through two episodes. The first one is, what caused the Great Inflation?

MR. MEYER. The Great Inflation wasn't well understood at the time it was occurring. In retrospect, the oil price shocks are often treated as the most important sources of it. That was one reason, but perhaps not the most important one. I think you have to come back to the beginning of it. We had very serious misconceptions of inflation dynamics—we thought there was a permanent tradeoff still—and estimates of where full employment was, where potential output was. The notion was that we could “choose” a 4 percent unemployment rate, hit it, and have an acceptable inflation rate. Later we found out that 4 percent was well below the full-employment unemployment rate, and that there was no permanent tradeoff. That was a total misunderstanding of inflation dynamics, a misunderstanding of where the balance was, where inflation would rise.

MR. HAMBLEY. Are you saying that, because of those errors, monetary policy was too loose?

MR. MEYER. Yes, at that time, because I don't think monetary policymakers always understood and took the responsibility they should have taken for inflation, so there are a lot of things going on.

A second thing was that we had the ramp-up in spending for the Vietnam War that wasn't paid for, and we had a situation where inflation was rising in the late 1960s as a result. That was a prelude, so it had already increased very significantly by the time the oil shocks occurred. The key for the oil shocks was the fact that inflation expectations weren't anchored. So when inflation moved up, inflation expectations moved up, and then inflation became embedded at a high level and was very difficult to squeeze out.

There was one more factor that is often not appreciated. At the same time, there was a fundamental and large deceleration in underlying productivity growth. We didn't understand at that point how important that was for short-run inflation dynamics. But if productivity declines, the cost of producing goes up, given that wages are slow to adjust. Ultimately, wages will become aligned with productivity growth and grow at a slower rate, but initially they don't, so as costs go up, prices go up, and inflation dynamics are set in motion.

So you had a lot of forces at work. It's inappropriate to pick out one, but certainly the fact that monetary policy wasn't tight enough as the excessive spending was taking place, government spending was driving the economy to excess demand. So you have to look back at that as one of the major policy errors, and it's always raised questions about the politicization of the Fed at that point. Was it part of the strategy to reelect Richard Nixon at the time? All of these things came into play. A failure of monetary policy, a question of the true independence of

monetary policy, and all these complicated factors were going along at the same time that we didn't have a model that was well suited to deal with it.

Also in our models at the time, we didn't distinguish real from nominal interest rates. That's just another example of how macroeconomics has evolved over time. You make mistakes, and you have to respond to those mistakes. Some of those mistakes have to do with the fundamental structure of the economy. By the time I got to the Board, all those egregious mistakes or misconceptions were, in my mind, fixed. I felt that the framework that I came with was very comfortable for me, and it was hard for me to interpret the world in any other way.

Monetary Policy and Asset Bubbles

MR. SMALL. Do you think there's a broader responsibility for policymakers to help to construct a robust financial system in which policy can be aggressive? I'm particularly thinking of Regulation Q interest rate ceilings and some of these other regulations where, if the Fed pushed interest rates up, the housing sector gets hit particularly hard. But eliminate that regulation and you make the system more flexible, and then you can more aggressively use monetary policy. Are there design elements to monetary policy?

MR. MEYER. There certainly are, and that's a very good example of it. When I got to the Board and I think of my years there, it's hard for me to think of another example like that. And, in addition, today we'd be very attuned to the challenges to monetary policy in the presence of asset bubbles. That really wasn't a prominent issue when I got here. Greenspan certainly talked about speculative excess soon after I got here. At the time, I thought that was misplaced and that there wasn't really any strong case that equity markets were overvalued. At that time, and I think if we look back now, I think we'd say that that's the case. There was a gradual push towards a bubble, but a lot of it didn't take place until 1998 and 1999.

We were beginning to think harder about the role of monetary policy with respect to equity bubbles. But the fact of the matter is that the Committee as a whole never came to grips effectively, at that point, with certainty or assuredness that there was a bubble and a really robust discussion of what the appropriate role of monetary policy was. I think that evolved after that experience with the bust of the equity bubble and what transpired after that. That gave rise to the view of which Bernanke was basically the author. He gave a paper at Jackson Hole before he became a Governor, and that became the basic framework that Greenspan became comfortable with. I don't think it was fundamentally challenged by myself or other members of the FOMC.

MR. HAMBLEY. Was that the framework that equity bubbles matter to monetary policy to the degree they influence demand relative to supply?

MR. MEYER. Exactly.

MR. HAMBLEY. So the view is, we don't care per se about bubbles, but they can influence spending, and they can influence the balance of spending relative to what the economy can produce. Therefore, we have to pay attention to it, and if we are not quite capable of identifying a bubble in advance, we can at least see that the relative movements of asset prices may be having this effect on spending where we have to pay attention to it. And if we don't nip it in the bud and something bad happens, we can clean up after the fact.

MR. MEYER. Absolutely. I call that the "indirect" approach. You always, as a forecaster, have to take into account the movement in equity prices that has recently occurred and any forecast of change in equity prices. We understood the power of the wealth effect on consumer spending and how important equity prices were in determining aggregate demand. The beauty of that approach was that you never had to make a decision about whether or not there was a bubble. You responded to equity prices whether they were occurring for reasons that

were consistent with fairly priced equities or if they raised suspicion that there was a bubble, but you never had a direct response to bubbles itself. And that was a key to the way monetary policy dealt with a suspicion of an emerging bubble, as you said. There was certainly an alertness when the stock market went as high as it did.

While there was debate, even at that time, about whether or not it was a bubble, whether there was a new economy, for example, that justified such high equity prices, I think everybody appreciated the fact that there was danger building and that monetary policy would have to deal with the aftermath of a correction of the bubble. And that was the view that really was maintained through the period I was here and through the period well into the housing bubble. After that time, after I left, this approach was being questioned by the BIS (Bank for International Settlements) and others.

Now, central banks around the world tend to view the monetary authorities as having direct responsibility for dealing with bubbles, and that monetary policies should definitely be part of the response. The FOMC never came to that judgment and only recently has become more open minded about it. If we were confronted with the bubble again, there would be a debate on the Committee. I don't want to say the Committee is stubborn, but this traditional view is still pretty ingrained in Fed thinking.

So that is one of the most important topics. I think that Alan Greenspan said in his last Jackson Hole talk—he was much more flexible about the response of monetary policy than he had ever been—that this should be a topic on the agenda of every central bank, that one of the top issues every central bank should be thinking about is the role of monetary policy in response to emerging asset bubbles.

MR. HAMBLEY. You said that a part of this indirect approach would also be to make a judgment for forecasting and policy purposes. I believe the staff forecasts towards the end of your tenure actually made assumptions that the stock market would correct. Because you were using the forecast to help you make forward-looking policy, you could take the consequences into account and offset them, in some sense.

MR. MEYER. Yes, that prospect may have encouraged us to be more relaxed. If equity prices were going to correct without a monetary policy response, the forecast would be that the economy would be more muted because of the assumed decline in equity prices. The assumed decline in equity prices was 10 percent at the most, maybe 20 percent, I don't recall. But in retrospect, it was significant. I think the staff, and Mike Prell in particular, had concerns that turned out to be right, but perhaps those concerns were not communicated to the Committee as strongly as they might have been.

The period was unique in that, at the time that the bubble was occurring, one of the sources of the bubble was an acceleration of productivity that put inflation at a very low and even declining rate, even with a low unemployment rate. This took away the incentive for monetary policymakers to respond as they otherwise might have to an emerging bubble.

That was a unique period in many other ways. The Asian financial crisis came just as, I think, the Committee perhaps was getting ready to tighten. The Fed eased by 75 basis points at that time, but you could say, just as an example, that the funds rate might have been increased by 75 basis points. All of a sudden rates were 150 basis points lower than they would otherwise have been. The Asian financial crisis never slowed down the economy a beat. So I've always argued that the Asian financial crisis was the major source causing the bubble! That might seem like a counterintuitive view, but I actually believe it.

MR. SMALL. There was some precedent in the 1987 stock market crash. The economy bounced back quickly. So there was a sense that we were in a new era: Things are more flexible, technology, globalization—we won the Cold War, this is the new paradigm, and part of it was, everything is much more flexible. Look how we bounced back from two big shocks: the stock market in 1987 and the Asian crisis. These markets will take care of themselves.

MR. MEYER. That was an example of what we used to refer to as the remarkable resilience of the U.S. economy, the flexibility of the U.S. economy. No question, that experience increased a sense of that. The economy shrugged off the collapse of the equity bubble. It was followed by the shallowest and shortest recession of the postwar period. So, yes, you can argue about whether monetary policy should have been tighter, but no damage was done! There really wasn't that much cleanup to do. Sure, there was something like \$7 trillion or more in wealth that was destroyed during the period, but the economy was incredibly resilient to bursting of equity bubbles.

But with respect to the housing bubble, I think maybe we forgot the lessons of history. As prices were rising in the housing market, if we had realized that a housing bubble could destroy an economy, could bring the financial sector to its knees, could push the economy to the edge of the abyss, then we would have been much more focused on identifying bubbles and emerging bubbles than we were.

MR. SMALL. What about the critic who would say, this is just not that difficult? No-documentation loans are simply not a good thing. How could the Federal Reserve, a group of three or four hundred Ph.D. economists, not understand that no-doc home mortgage loans are bad?

MR. MEYER. Well, that's absolutely true. It's the benefits of hindsight, but it's a major failure of supervisors more than monetary policymakers. It reflected one of the major sources, historically, of financial crises, and that is financial innovation.

MR. SMALL. I'll be facetious here and push you a little bit. Shouldn't a student and colleague of Hyman Minsky have understood?³

MR. MEYER. Absolutely.

MR. SMALL. Could you explain his view? People are talking about it now, bringing it back.

MR. MEYER. Absolutely. Minsky is much more famous today than when he was alive! I was a colleague of Minsky's for probably 20 years at Washington University. We didn't have much of a relationship at that time because I felt he wasn't willing to be a mentor for me. He had his own views, and he only wanted to talk about his own views. I felt he wasn't really prepared to help me advance. I don't know whether that was the case. I had a very traditional view of macroeconomics, and he was challenging that view. A lot of it wasn't really model based. It wasn't easy to integrate into my macro framework.

MR. SMALL. Could you explain his framework?

MR. MEYER. His framework was a fascinating one. He argued that a period of stability would cause participants in financial markets to feel that the economy was much safer than it had been before. Therefore, people thought they didn't need to have as much liquidity—precautionary cash—on hand as otherwise. They could have more leverage, more debt relative to income. So the financial sector became what Minsky called tauter and tauter, more subject to a shock having a very big response. The story was: In more normal times, if a shock occurred,

³ Hyman Minsky was a professor of economics at Washington University in St. Louis from 1965 to 1990.

the economy would adapt easily to that shock because it wasn't in this taut financial condition. Once it had gotten to that situation, a shock could now have a very sharp response, a very big impact on financial markets, and therefore drive the economy into a severe downturn.

Minsky would have just loved the experience of the housing bubble! He would have been talking about it way before most people thought it was a bubble. He would have been predicting the catastrophe that followed the collapse in the housing bubble, and he would have actually have forced people to think more about whether it was a bubble and what the consequences of a bursting of the bubble would be.

But the basic view of Minsky was relevant to what we call the Great Moderation, the long period where the economy was so stable and the unemployment rate was so close to what we thought was full employment. And inflation was stable. That stability, in Minsky's views, became destabilizing. Stability caused market participants to take too much risk and ultimately put themselves into a position where a financial crisis was more likely.

That was certainly a view, and I remember saying around the Board table once that it's interesting for me that I seem to be sounding like Minsky. That was a surprise, but I became much more respectful of Minsky's views as we went along. Having said that, I think you're right. That makes it more embarrassing for me to have missed the dangers. I came away with the view that it wasn't a big deal to have had an equity bubble and a collapse. But perhaps because the classic book by Rogoff and Reinhart had not been written yet, I didn't appreciate the history.⁴ I didn't appreciate the well-established historical regularity that property bubbles would kill you and be very difficult to recover from.

⁴ Carmen M. Reinhart and Kenneth S. Rogoff (2009), *This Time Is Different: Eight Centuries of Financial Folly* (Princeton, N.J.: Princeton University Press).

Basel Capital Standards for Banks

MR. SMALL. What was your first look at Basel?

MR. MEYER. Basel was not a prominent issue during my first couple of years at the Board. And it wasn't Greenspan who brought it to the floor at all. Basel II was driven by the staff. Greenspan was very ambivalent about the staff work. He seemed to want to stay out of it. He had absolutely no confidence in that approach. On matters of supervisory policy, he would often just stay in the background. Now, that wasn't true with Gramm-Leach-Bliley that, in a sense, was a potential threat to the Federal Reserve System. Then he took over. In 1998, I was chairman of the Board's Oversight Committee for Bank Supervision and Regulation. I had a relatively free hand up until that point, but when this legislation was being discussed and negotiated, Greenspan asserted his leadership as he should have.

MR. SMALL. Could you explain how he saw that as a threat?

MR. MEYER. There were issues there of what powers the Fed was going to have at the end of the day. Like most agencies, the Federal Reserve wants to retain as much power as it can, expand its powers where possible, and have limited restrictions to those powers. On the other hand, Greenspan was very suspicious of some of the expansion in powers (really, the expansion of powers of financial institutions). He had great concerns about some of the investment banking powers that were given to banks. He used to say that what we really needed soon was a financial crisis from excessive risk-taking, because that will help to solve these problems from the start.

So Greenspan was very involved in that, but otherwise he wasn't. With respect to Basel, it was his staff. His staff became enamored with complex models, and certainly it made sense that Basel at the time—call it Basel I—didn't really work very well. The banks that had very different risks had the same capital requirements, so it was clear that capital was not being set

relative to the risks of particular banks and parts of any bank, for example, relative to their loan portfolio, et cetera.

Basel II started out as something that seemed obvious, making capital requirements more risk sensitive. In the end, that meant that banks had to have internal models. The Fed took the leadership in developing a lot of those internal models, because while it thought all these models were already being developed in the banks, lo and behold, outside of the loan portfolio, banks had almost no models of internal risk. I was out there giving speeches. I don't know whether I ever testified on it. The Congress was not much involved at that point. I went to Basel, and I had visits from the Germans, who were a particular problem—the problem child of Basel—reaching an agreement with them. They were very skeptical. They didn't want to move in that direction. They thought that they had little scope to move in that direction. They were skeptical in part because it had to be approved by their legislature. And it might have been in the United States, too, in the final analysis. So the irony of Basel II is that, whereas the Europeans seemed much more cautious, in the end, they went ahead with it relatively aggressively. We dragged our feet. And, as a result, we could have said we were in better shape, but obviously we found out we didn't even know how to measure those risks with internal models.

This is an example of developments that I look back at and have some regret about—having too much confidence in internal models and being swept along by the staff enthusiasm and by all the technical work. I had high regards for the people in the banking area. So, yes, I think that there was way too much reliance on internal models that perhaps proved to be the case when the subprime crisis was under way.

MR. HAMBLEY. But the existing framework had clear deficiencies, and it was being gamed. And as you said, you could have two institutions with the same capital ratio but that

didn't tell you anything about their relative risk in this. There were things that were not captured at all. Basel I was basically about credit risk.

MR. MEYER. Absolutely.

MR. HAMBLEY. And there are other kinds of risk, so you needed to do something about operational risk. There were problems that had developed about securitization. I think you even said we needed to do something. And things were done. There were things about the trading book. The banking system was evolving very quickly.

MR. MEYER. So that was the attraction, that recognition that Basel I was deficient, particularly for the large complex banking organizations (LCBOs). That's what we called them at the time, LCBOs, as opposed to "systemically important financial institutions" as we do now. But it was basically the same framework. Increasingly, over time, the story was that those were the only banks we needed to worry about. That's where our efforts should be concentrated. That's where we needed the most effective supervisors. It was very different in Europe, where there was a different kind of banking system and most European countries thought that it had to apply to all of their banks.

So, yes, you're absolutely right. And that was one of the things that certainly pushed me into enthusiasm with respect to Basel. All those things were important. The only question was the confidence we should have had in internal models. We didn't recognize how all the correlations could go to 1 in crisis situations. We always thought that you could measure risk in a portfolio without worrying that much about how different loans would be correlated in terms of risk.

It's now well known that these correlations basically go to 1 as they did in the subprime crisis. One loan becomes riskier at the same time all the loans in the portfolio become riskier,

and the internal models just didn't capture that. They didn't quickly adapt enough to it. So this probably was imposing a lot of costs on the banking system. The view began to emerge late in the process that Basel II was an extremely important development, because it forced banks to put more resources into internal risk management. In a sense, Basel II became less important because its major task had already been accomplished. And even if Basel II was not put into place, the banking system was going to be in a very different place than it had been before. Having said that, Basel II didn't deliver, in the end, the way we hoped it would.

Too Big to Fail

MR. SMALL. That's close to the notion of "too big to fail." What are your views of the role of the Fed enabling too-big-to-fail?

MR. HAMBLEY. Let me ask that in a slightly different historical context. While you were on the Board, there was a major liberalization of the banking laws to allow interstate banking and branching. There was a huge effort to consolidate banks, and some of the biggest mergers of all time were approved by the Fed. What did you think at the time? And, in retrospect, do you think the Fed should have been more concerned about that development?

MR. MEYER. Absolutely. I'm certainly uneasy about it, and I might have been wrong at the time, but we certainly acted as if we had no ability to interfere with a merger just because it was a merger of two very large banks. The only thing we really focused on was competition, and then only on competition in local markets. And even if there were problems in local markets, it was easily remedied by the banks. The other concern was always consumer affairs and whether the banks were discriminating or anything like that. Those were the two drivers of the evaluations by the staff about whether or not the merger should be allowed.

In retrospect, I think all those large bank mergers were mistakes. The banks were going to be big enough to compete internationally without having them be even larger. It's not just so large that they were too big to fail, it was so large that they couldn't be managed effectively, and they couldn't be supervised effectively.

This is another area in which I have some regret. When I gave a speech, I had to reflect the Board view, but I could have been more aggressive inside the Board, and I certainly wasn't. I accepted the view—Ed Ettin was my principal adviser, and he was very much in the Greenspan spirit—that no bank was too big to fail. Some banks were too big to unwind quickly. Now, that fundamentally changed, as the bank itself became a smaller part of bank holding companies, because while there was, in principle, a mechanism for winding down a bank, there was no mechanism for winding down bank holding companies. That was number one.

Number two, there was just too much confidence in the ability to wind down a bank itself. So that was talk. There was nothing backing it up in terms of really sound thinking. I don't think we paid enough attention to what we might have called "case studies" of how we would disentangle a bank if it came to the point of becoming insolvent. In particular, I don't think there was enough recognition that the threat to solvency of a large bank is never going to happen on its own, typically. It's only going to happen as part of a broader banking crisis, in which case, if you were to wind down banks, you'd be winding down the entire large complex banking organizations, and that was overtaxing.

Once you have banks as big as we have now, it's just pretense to believe that you can solve the too-big-to-fail problem. My view today is that your main hope is to put into place regulatory procedures and supervision that make it less likely that a big bank will fail, as opposed to dealing with it when it fails.

MR. SMALL. Would you explain the concept of a bank holding company? Do you think that's a concept whose time has come and gone?

MR. MEYER. The Fed was the consolidated supervisor of all bank holding companies. For smaller banks, there was no bank holding company separate from the bank. For the large banks, increasingly, they had investment banking functions where they dealt with mergers or, ultimately, with trading operations that were outside the bank and that were subject to considerable risk.

MR. SMALL. The thought was that you have these firewalls so one part of the holding company won't bring down other parts?

MR. MEYER. It was, but it was completely wrong. Banks are too interconnected. The banking legislation tried to deal with that, and Federal Reserve regulations tried to deal with that, but ineffectively. It made them much more difficult to supervise, because we had this complicated system where, within the holding company, we had these silos, each one of which was supervised by a different agency. It might be the SEC for one, the OCC, which was the regulator of most of the large banks, and another bank regulator. Then the Fed was the supervisor of the consolidated company. But if the Fed didn't know what was going on in the individual silos, there was no way it could really carry out that responsibility effectively.

The Fed had some ability to oversee the other regulators, but in Gramm-Leach-Bliley, in particular, where there tended to be many more of these subsidiaries inside the holding company, the Fed was restricted considerably from being involved unless there was a sense of financial crisis. So the whole supervisory framework became totally inadequate. There was too much tension among the different regulators, too much sense of competition, et cetera. I think that was certainly one of the problems.

MR. SMALL. And it was made worse, because some assets were off their balance sheets?

MR. MEYER. But some lines of business, such as the mergers and acquisitions business, don't require a lot of capital. This is advice. This is fee-for-service. Those are the kinds of things that are desirable and stabilize revenue to a degree. There's nothing wrong with that.

MR. SMALL. Mortgage processing?

MR. MEYER. Processing, absolutely. Servicing, those kinds of things. So, fee-for-service businesses grew. But, also, very risky elements were moved outside of the bank into the holding company, although, it could be argued, that was not the source of the problem. In retrospect, the problem was more that supervisors saw those assets as triple-A rated. And if those were inside the banks, they would have been treated as very low-capital-using assets. So the regulators, the rating companies, and the banks all got it wrong.

MR. SMALL. What about too-big-to-fail and underwriting? I've heard the argument that when you have a huge dam or nuclear power plant or some large-scale project, to underwrite it you need a big financial firm which might be too big to fail. But if you don't have very large financial firms, you don't get those large industrial projects funded.

MR. MEYER. I think the story there is that banks did—and maybe they do it less now—organize a consortium, where that risk is spread across banks, reducing the risk of an individual bank and allowing each of the banks to do its own underwriting. That would be very valuable. The problem we got into with banks was underwriting, as we had more securitization and complex securitization. As loans came onto the portfolio and were sold into the markets almost immediately, who was responsible for the underwriting? The banks will tell you they were responsible and did their job. But we should have significant doubt about that. Were the

originators of the securitization doing the underwriting, or were they saying some investor is going to buy these things and that's where it should take place? The reality is that effective underwriting didn't take place anywhere, so there was totally a breakdown of underwriting discipline.

MR. SMALL. If I understand it correctly, that's where Alan Greenspan himself has said he perhaps put too much faith in markets—they had the incentive to do the underwriting and to understand the risks.

MR. MEYER. His faith was mostly outside of the narrow banking system itself. You could make the case that because banks were subject to the safety net, they would take too much risk, and that had to be offset by bank regulation and supervision. I don't think that Greenspan ever was enamored with the effectiveness of that argument and, even there, expected the market forces would be important in controlling risk-taking. But, outside of banks, he had this conviction that the markets would do all of the disciplining, in part because there were more sophisticated investors who were involved in what we now call the shadow banking system, and they would do the disciplining. Since they were sophisticated and wealthy, you didn't have to worry about them. But that meant you weren't worrying about the systemic risk of these organizations, and that was clearly a major problem. When I was on the Financial Stability Forum, the Europeans were screaming at us about the black holes in the regulatory system. Regretfully, Greenspan and I were responding that those are more subject to market discipline.

MR. SMALL. An elitist American response would be, "Oh, you Europeans like to regulate everything anyway."

MR. MEYER. That's certainly what we thought. One of the things I'm proudest of during my time on the Board and as chairman of the Oversight Committee of Supervision and

Regulation was my focus on market discipline—that the bank’s supervision and regulation shouldn’t be counted on as the only force in managing risk-taking, but the market discipline could be. But market discipline wasn’t happening effectively, and, therefore, we needed to find ways of improving market discipline.

We had a Systemwide committee, a couple of Governors and some Reserve Bank presidents, and that was one of the things they looked at. I was very much in favor of subordinated debt at the time. So you had bondholders there who were now going to impose much more discipline. And the prices of that subordinated debt would be much more differentiated among banks, because bondholders would have that incentive to monitor risk-taking. The staff was very much in favor of it, but we couldn’t get traction inside the Board. The Board members weren’t in a fighting mood to really support it, and the Reserve Bank presidents for the most part didn’t.

We had a major meeting that I orchestrated of major banks. We wanted to talk to them about transparency and how important transparency was to having market discipline and to have a better sense of where we could get improvements in transparency. We made a little progress, but not a lot of progress. It’s probably much harder today for markets to discipline such complex organizations. They can’t even understand inside a bank how all the pieces fit together, how all the risks interact. It’s hard for outsiders to provide that discipline, but we’re moving towards maybe not subordinated debt, but something like subordinated debt to enhance the power of market discipline.

MR. SMALL. There’s been a trend, perhaps started during your time at the Board, of investment banks shifting from partnerships to corporations where they had limited liability. That corresponds roughly with the growth in some of this.

MR. MEYER. I don't believe that was happening during the time I was there. That happened afterwards. What we missed as supervisors was that investment banks and commercial banks were increasingly alike, but one was subject to supervision and the other not subject to supervision except by the SEC. We came to think that the SEC had no idea of how to do prudential supervision where they oversaw the risk-taking by the organizations. And it turned out as a great surprise to me, and to supervisors at the time, that investment banks were much more subject to runs than banks themselves. We used to think that banks were subject to runs, because depositors would flee when banks become unsafe. But with deposit insurance, depositors didn't flee.

On the other hand, the investment banks financed themselves entirely in the markets, whereas banks at least also had sticky deposits. During the crisis, financing in the markets completely dried up, giving investment banks no access to the funding they needed to stay in business. So it turned out that the investment banks were more subject to runs and were a more unstable part of the system.

Of course, when the crisis escalated, the large investment banks sought to become part of bank holding companies in order to have the oversight of the Fed, which would lead them to be perceived, at least, as safer and also to have access to the safety net of the Fed. Our regulatory framework was incredibly and woefully inadequate at the time and didn't recognize the systemic risk that was building from financial institutions other than banks. Now I think we better understand that. This is a perfect example that it's hard historically for supervisors to adapt to changes in the structure of the financial system, and, unfortunately, that understanding comes only with a crisis.

MR. HAMBLEY. Another effect of the Great Moderation was that there was no driving force to indicate that something is really wrong here. The Fed has a dual mandate. The Fed does not have an explicit financial stability mandate. Isn't this something that makes our system even more vulnerable? The measurements that the Fed uses don't take into account the possibility that by being highly successful in meeting those measurements, you may actually be sowing problems for the future, and then—Minskyesque.

MR. MEYER. Minskyesque—well, yes. First of all, the Fed was created to deal with financial panics and crisis. It wasn't founded to do monetary policy. And for a long time there was no recognition of even what monetary policy was or what it might be. Central banks around the world, whether or not they have direct responsibility or all the tools that might be needed, understand today that they're on the front lines, that they're the ones that could have the reputation risk, and that they have to spend some time overseeing and monitoring financial stability. The resources weren't deployed in a way that was adequate to that, and, indeed, the Fed didn't have the tools to deal effectively with that.

Whether or not it should be a mandate was difficult, because the Fed isn't the supervisor of all financial institutions and, therefore, its jurisdiction is limited. I don't know whether it wants to be the supervisor of all financial supervisions. Having said that, we know that the Fed is putting more resources today into monitoring financial stability and systemic risk, and it certainly believes that it has to improve its supervisory and regulatory functions in order to play an effective role in the areas where it does supervise to contain and respond to excessive risk-taking. While risk can come from other parts of the system, the financial crisis likely becomes systemic only when the banking system is a fundamental part of it, especially now when the large, systematically important financial institutions are all subject to Federal Reserve oversight.

Still, it's not clear how far we've come in our ability to oversee these organizations, to contain risk-taking. And it's not clear that these banking organizations are really able to understand their own risks and manage them effectively. That's partly the challenge of being so big. But it's also the challenge of the dynamism of the U.S. economy, its ability to innovate itself around any regulations in one particular area where you think you've contained risk, and all of a sudden there are other areas outside of your control or outside of your understanding that pop up. Banks are always going to be a step ahead of supervisors. That's inevitable. But you don't want them to be two steps ahead. One step, maybe, you can get away with, but two steps you can't.

This notion of macroprudential supervision is important. You would like to say that a macroprudential supervisor would have seen that subprime loans were not only exploding in the pace of origination, but were morphing into something that was much less safe. And complex securitizations that were intended to move risk off the banks' balance sheets weren't really doing that at all, because banks were principal buyers of those complex securities. In fact, they ended up putting more risk onto the balance sheet and off-balance sheet. You would have hoped that a macroprudential supervisor would be looking for areas that were growing incredibly fast, where financial innovation was taking place, and put the spotlight on those. The question of who is in charge will always remain. Who has the authority to do that? That was one of the real problems for subprime loans. These loans weren't being made principally by the banks the Fed was supervising directly, but either by financial firms that were outside the banking system or subsidiaries inside the bank holding companies for which there was some lack of enthusiasm for the Fed having a heavy hand in their supervision.

The Fed's Banking Supervision and Monetary Policy Responsibilities

MR. SMALL. So these huge banking organizations are too big and complex to manage. One could say that the Fed is too big and complex to manage when it has both monetary policy and bank supervision responsibility under the same roof. Why not just separate those, and then a Larry Meyer chairing a Supervision and Regulation committee wouldn't be distracted by monetary policy? Why should both responsibilities be housed at the Fed?

MR. MEYER. A good case can certainly be made for separating them. I don't prefer that, but there were many outside the Fed who believed that. At the beginning, that was the direction they seemed to be headed. But, in the final analysis, the banks prefer to be supervised by the Fed rather than any new organization, and it's partly because of the competence of the Fed.

MR. SMALL. While in an FOMC meeting discussing raising interest rates, did you ever say to yourself, "Boy, I need to talk to the head of Supervision and Regulation"?

MR. MEYER. Never. There's a synergy there. I don't think it was material in virtually any of the decisions that we made on the FOMC. The problem comes back to whether the Fed has a role in identifying and managing financial crises. The financial crises where institutions are going to be systemically important are going to be basically in the banking institutions that the Fed now has—and, for the most part, had—supervisory authority over, at least at the bank holding company. If you want a central bank to be a backstop, to be on the front lines of crisis management, it's foolhardy to think you can do that without having hands-on oversight of the large banking organizations so that they understand the risks and are in a better position to intervene if they have to. That's much more important than the synergies. Having said that, if I were giving advice to the Congress, I would say, "Consider that separation."

The view about the value of that separation has diminished substantially because of what many people interpret to be the failure in the United Kingdom, where supervisory responsibility was removed from the central bank. It was less clear who was in charge of monitoring and responding to financial crises, the financial supervisory authority or the [central] bank. Ultimately, the Bank of England was the one who had to be on the front lines. But at the time, it didn't have hands-on responsibility and authority over those banks. That made it more challenging for the authorities in the United Kingdom to respond quickly to a financial crisis. It's a lesson of the value of the Fed having oversight responsibility.

My own views are that the Fed should have supervisory authority over systemically important financial institutions. That should be the focal point. That should be where resources should be devoted. That's what the Fed should become experts at. That's where the locus of financial stability is going to be. That would, I appreciate, create a problem for the structure of the Federal Reserve. It would take away a main responsibility of Federal Reserve Banks and, I think, lead the Congress to question whether that decentralized system continues to make sense. That's part of the Federal Reserve's structure that's always been subject to some underlying questioning by the Congress. The structure of the Federal Reserve System is the best structure that it could have, and, as a result, I'm willing to say that we can just continue the small banking and middle-sized banking supervision that Reserve Banks basically do today.

MR. SMALL. What about the notion that, ultimately, it comes down to the simple fact that the Fed has the printing press for money? That's why the Fed needs to be involved in crisis management, and everything drives from there.

MR. MEYER. That's right in the following sense: that being on the front line means ultimately making emergency loans through the discount window. You can't really do that

unless you have knowledge of the insolvency of banking institutions, because the Fed is not allowed to lend to insolvent institutions. But it is the liquidity provider of last resort, so it does have that heavy responsibility, with the discount window, of making a judgment about how risky or how close to insolvency banking institutions are. But that's just part of the story of having to be on the front line of crisis management, and that that is inevitable for a central bank. After all, it is what central banks were always intended to be. Can you really carry out that responsibility in an adequate fashion if you're not hands-on and, particularly, if you don't have your hands on every systemically important financial institution?

Policy and the Acceleration in Productivity

MR. HAMBLEY. When you arrived at the Board, the economy was performing quite well—the unemployment rate was a little below your estimate and other estimates of the NAIRU—but inflation was not moving in the direction that someone with your framework would have thought.

MR. MEYER. That was a tension and a challenge immediately. The data for quite some time did not indicate that there was a productivity acceleration even though the Chairman was convinced of it. That was one of the most remarkable calls that I can remember as a forecaster, because the data didn't suggest it, and yet the Chairman believed it fervently. He was virtually alone. Nobody on the staff supported him in that regard.

So I'm sitting here looking at the unemployment rate being well below what I would think is the sustainable level and likely to, at some point, raise inflation. My view was that this was a matter of timing, that there was a cost-benefit analysis here. I was calling it a "maxi-min" strategy. If there were two alternatives, we need to ask: If we were wrong, which would have the least worst outcome of the two? At that point, I felt that there was relatively little danger of

tightening, and the payoff could be considerable if maintaining the low unemployment rate led to inflation. With the unemployment rate so low, what could you possibly lose? A percentage point increase in the unemployment rate would still leave it at or below where it had been in the best of times. So that was my view, and I held that view until I became convinced that there was a productivity acceleration.

Ultimately, I came to the view that there was a distinction between what I call the short-run, or effective, NAIRU and the longer-run NAIRU. The short-run NAIRU could be lower than the longer-run NAIRU when the economy was adjusting to a productivity acceleration. So, in this case, you could sustain a much lower unemployment rate without raising inflation. You couldn't do that indefinitely, but you could do that for a while, and that immediately explained the phenomenon of low inflation with a very low unemployment rate. It took some of the pressure away from continuing to focus on immediate tightening. It did mean one had to be alert to what was going on and how fast the economy was adjusting to high productivity growth.

I felt that once I had that understanding, that I fully reconciled what was going on in the economy with my Phillips curve framework. I was very frustrated at that point with the staff, because I thought, well, the staff came to believe that as well, but they never forcefully communicated that to the FOMC, and they left it for me to be alone and argue that. I recall coming in with equations and charts to explain to the Committee what I thought was the staff's responsibility. I basically gave them a lecture on the productivity-adjusted Phillips curve. I don't know that anybody was paying attention. The Chairman seemed to pay attention, but I don't think anybody else was paying attention. I don't think it changed anybody's mind to the point where they said that the Phillips curve was interesting because you can adapt it to explain a phenomenon that otherwise looks difficult to understand.

MR. SMALL. While you were struggling with this, you also were writing a paper with Eric Swanson and Volker Wieland. That's maybe not unique, but it is an example of three academics, one of whom happens to be a Governor, at the proverbial whiteboard working on their equations and doing the academic piece. But you were proactive in that way, of working with staff on the almost purely analytic side of things.

MR. MEYER. That was incredibly enjoyable. It really came out of a comment I made as part of my statement in an FOMC meeting about, given the uncertainty about the NAIRU, one maybe should be careful about responding aggressively when the unemployment rate is not too far from your estimate, on one side or another, allowing for the fact that there's uncertainty about the NAIRU. That really helps you understand that, that there's less sense of urgency about responding when you're not too far away from a mandate. But then, when you get to a certain point away from it, you should become more aggressive.

I thought that was a good idea, and I went to the staff and said, "Do you think we could formalize that? Do you think we could put that in a framework that would be useful?" We did that. We presented the paper at the American Economic Association meetings, and I think it was published in the Proceedings for that meeting. It was one of my particularly rewarding moments at the Fed, both being involved so intensely in an intellectual exercise—one that was directly related to my emerging feelings and adaptation to the uncertainty about the NAIRU—and an opportunity to work with the staff on a difficult problem like that and get to the point where I thought we got that job done. We put it into a framework that I felt was really sound. I enjoyed that.

MR. SMALL. You have said that you enjoyed teaching and enjoyed working with Board staff on purely analytical things. Would it have been fun to be a division director at the Board?

MR. MEYER. That would have been incredibly fun, and, in many ways, more rewarding than being a member of the Board. I believe that the staff directors of Monetary Affairs and of Research and Statistics (R&S) have much more influence on FOMC decisions than anybody outside of the Chairman. Of course, the Chairman has the constant input, advice, and guidance from the staff. The reality is, I'm sorry to say, that the Chairman gets more disciplined input from the staff than he would get from most members of the FOMC. He didn't really seem to take into account the interaction from other members of the FOMC. I don't know whether or not the staff in any way really influenced him. He had views that the staff sometimes found difficult to understand. But, yes, I think either being the director of R&S, in charge of putting the forecast together, or especially the director of Monetary Affairs, thinking about monetary policy strategy and providing guidance, would have been much more fun than being a member of the Board.

MR. SMALL. Did you ever think about, as a director, how you might run the research division?

MR. MEYER. I never thought of it that way. I was on the committee that oversaw R&S, but I think the tradition there was that I wasn't going to impose my views of the research agenda on them or to influence their set of priorities. It was their job, and they should come vet it with me, but they put together the research priorities. An outsider, even an academic, even somebody who had done research, shouldn't be too pushy with that.

In some sense, that was the frustration, particularly with respect to monetary policy. I was an academic. I was an intellectual. I was wrestling with issues. I was talking with the staff. I loved that. And while I said I was frustrated with the staff about the modeling of the effect of a productivity acceleration in the Phillips curve, that was an exception. The fun I had at the Board was with the staff—talking with the staff, writing papers, and getting feedback. Those were the

things that were fun and rewarding. And when I was writing papers, I did think of myself as educating those outside the Fed. I always felt that the attraction of economics was the opportunity to do so many things: teaching, public service, and consulting. I'm lucky to have been able to do all of those in one career—and for some considerable period of time.

MR. HAMBLEY. In talking about the inflation situation and so forth in the late 1990s, you said that the data for a long time did not show an acceleration of productivity. Therefore, that couldn't help you square the circle with your underlying model. Ultimately, the data did become available. At that point, did you have the feeling that it all fits together again? Is there a danger that if you don't have the data, then you've got to keep looking for something else, which may lead you in the wrong direction?

MR. MEYER. That's absolutely right—that, unfortunately, model-based forecasting works best in normal times when there aren't structural changes, dramatic events going on that are outside the model. If you think of a model and empirical equations, it's very difficult for them to pick up structural change, because you need a lot of data before you can make an empirical judgment. You could look back historically 10 years from now and identify structural breaks in the model, but you're not going to do it in real time. That's the advantage that Greenspan had at that point. He didn't have a thoroughgoing model where he was saying, "Let me test for structural breaks." He never would have done this. He was so focused on the data, but he didn't believe the data, because it didn't make sense to him. But, again, he was clever. He looked at other data. He looked at income-side instead of the product-side data, and the income side was growing more rapidly. He was able to say, "That maybe confirms my view."

So, yes, I believe that somebody who is freer of a model-based framework can sometimes respond more quickly to structural change. That's a challenge that one learns painfully in the

model-based framework. You learn about the necessity, particularly, to look for hotspots or to look for things that are out of the ordinary and to think about how you might be missing them and if they were important, how you might take them into account and how they might influence your forecast. It can be a challenge for a model-based forecast to adjust. You know, your model is a caricature, and you can believe it too much. That's very dangerous.

MR. HAMBLEY. On the other hand, basing your models and your equations on data at least gives you the sense that you are not ignoring reality. It's fascinating that an approach that may be very viable also has some dangers.

MR. MEYER. One of the values of model-based forecasting is that it identifies where you're making the errors. That is very helpful. One could have said that you're making errors, particularly with respect to the relationship between inflation and unemployment. Profits are growing faster than you thought. You're making big errors in investment. And you have to start putting things together. I'm typically opposed to one-issue politics, and I'm usually opposed to one simple explanation to a complex phenomenon. But in this case, there was one. It really turned me off to think that there could be such a simple explanation, particularly when the data didn't support it, or I didn't think the data supported it. And you're right. Once that came into view, there was a feeling that all of the tensions that existed in my framework finally could be resolved.

There was that eureka moment, and I'm sorry I didn't see it earlier. It would have influenced my views, to some extent. I had an interesting discussion with a staff member in the hall a couple of weeks ago. He said he objected to my treatment of this in my book, because I claim that I was wrong. He said, "You weren't wrong. If the FOMC had followed your advice,

we would have been much better off in the end. If you write a second edition, please make that point.”

MR. SMALL. There’s the model, and then there’s the policy rule. Could you talk about optimal design for the policy rule? Let’s think of the Taylor rule. If the rule only targeted NAIRU, you could go wildly off, but if it has the inflation gap in there, you can’t go wildly off. So you must design a policy rule, in part, to protect you from inevitable errors that you’re going to make.

MR. MEYER. That’s an excellent point. The Taylor rule was so obvious after one was introduced to it. It basically said two things. When you move away from a mandate, you respond and try to get back to your mandate. And it said, in the long run, when you’re at your mandate, you have pinned down inflation. That’s a central bank’s responsibility. That’s what it does, and that’s what the inflation objective does.

MR. SMALL. I remember doing calculations for you. If you’re wrong on the NAIRU by 1 percentage point, the economy doesn’t spin out of control. You end up off your long-run inflation target—stable, but off your inflation target—by so much, so the rule is known to limit and control and direct your errors.

MR. MEYER. That’s a safeguard that’s important, and I think that’s absolutely true. Certainly, it was great fun to be playing around with estimating, looking at different parameters with policy rules, thinking about forward-looking and backward-looking rules, and thinking about how to come up with a better feel for the time-varying NAIRU. I became very interested in that at the Board and thought that you didn’t have to put in specific parameters, but there was a fundamental disciplining aspect of thinking of the world from the perspective of the Taylor rule: identifying when you were supposed to adjust the funds rate and the aggressiveness, to

some extent, with respect to inflation. I thought that was very important, and, again, it surprised me that not everybody on the Committee saw that value. Maybe they were thinking of a specific parameterized rule. But you can't carry out monetary policy today if you don't appreciate the discipline inherent in the Taylor rule. You just can't do it.

MR. HAMBLEY. This is a quotation from your book. It is a revealing statement about the uncertainty that you folks were facing in the 1990s: "A monetary policy focused on maintaining price stability has to be careful to avoid stifling unexpected increases in trend growth, specifically by confusing higher trend growth with above-trend growth."⁵ This was a very challenging thing to do. Would you say that the Fed was largely successful?

MR. MEYER. The Fed was largely successful—but mainly because Greenspan dominated the decisionmaking. But what I wanted could not have been very damaging. Looking back on what I was proposing at the time, I still think that was the right direction to go in, in the absence of knowing whether or not there was a productivity acceleration in terms of the damage that could have been done by tightening relative to the damage that could have been done by not tightening if there weren't a productivity acceleration. From my framework, that was still a worthwhile direction. I also came to believe that if productivity accelerated, it should raise the real interest rate, so that was another reason not to sit tight.

MR. HAMBLEY. If you think of the entire period that you were on the Board, do you now think that a somewhat tighter policy throughout the whole period would have led to a better outcome?

⁵ Editor's note: This quote can be found in Laurence Meyer's September 8, 1999, speech, "Q&A on the Economic Outlook and the Challenges Facing Monetary Policy," before the Philadelphia Council for Business Economics at the Federal Reserve Bank of Philadelphia.

MR. MEYER. I don't think there's any doubt about that. But that's with the benefit of hindsight, to be sure.

MR. HAMBLEY. Right. Of course, it's not the way policy is made.

MR. MEYER. Unfortunately.

MR. SMALL. That is a little strange, because early on in your career, you went into Greenspan's office with Governor Yellen saying "be tighter."

MR. MEYER. I'd be interested in talking to Janet about this. But, in retrospect, I think we were right. We were certainly right based on what the data was telling us. That was clearly the more disciplined direction to go in, and I do believe, on a cost-benefit analysis, it made sense.

Financial Crises: Asia and Long-Term Capital Management

MR. HAMBLEY. When the Fed first thought about the Asian crisis, it saw the potential for some effects on the U.S. macroeconomy that would probably not be unwelcome, given the state of the economy as you perceived it. There was no Federal Reserve response to the Asian crisis per se, but there was a response after that seemed to be settling down. But then there was the Russian default and devaluation in 1998, closely followed by LTCM (Long-Term Capital Management) and all those problems.⁶ How did the Fed respond to these developments, and what is your retrospective view about the response to that collection of events?

MR. MEYER. It was reasonable to conclude that, in the presence of those developments, the economy would grow more slowly. Therefore, the FOMC should put to the side any inclination to tighten, which was really building at that time. That was in the early stages of the Asian financial crisis. In the beginning, it didn't seem to have a big influence. But when a

⁶ LTCM, founded in 1994, was a large hedge fund management firm that collapsed in the late 1990s.

country like Korea was going under, that changed the whole ballgame and increased the likely impact of Asia on the U.S. economy through our exports. The staff marked down its forecast considerably at some point. The staff had revised it down, but it wasn't as sharp as it was after LTCM and that episode. That seemed very reasonable.

It would have been inappropriate under any circumstances to raise rates during that period. And, again, on the cost-benefit analysis, it was hard to believe that it made any sense to sit there and not do anything. This was another remarkable feature of the resilience of the U.S. economy—and, in part, to the response of low rates with high productivity—that the economy just kept sailing along, never missed a beat. And the staff was absolutely right about the impact of the rest of the world on U.S. exports.

What we all missed was that the U.S. side of aggregate demand—what we call domestic final sales—was booming and completely offset any drag on growth from a decline in U.S. exports. That was a surprise—but no regrets about that, under the circumstances. Easing at that point was the only sensible policy, without any question, although one could question the last 25 basis point cut in the funds rate, because it had already become clear that the U.S. economy was moving ahead much better. And knowing how challenging it is sometimes to turn around and move in the other direction, limiting the decline in rates would have been preferable.

MR. HAMBLEY. At the time, how did you think that the economy roared back so quickly from those serious financial problems? Did you think that something was again different in the economy?

MR. MEYER. I don't know whether it was different. It was, again, a reflection of the resilience of the economy, but also of something that was going on that we hadn't been paying enough attention to. When we looked at Asia, what we saw were exports. What we didn't see

was how much capital was flowing, and would flow, into the United States, because with all that productivity and profit, everybody wanted to be here. In addition, in any financial crisis, everybody wants to be in the safety of U.S. Treasuries. So the reality was that there was a significant improvement in financial conditions coming from the capital flowing in that offset the drag from lower exports. We didn't quite see this relationship between the two sides of the international accounts here: trade and capital flows. So, in my final analysis, I gave that a lot of weight. A crisis like that sets in play a variety of forces that can at least partially or totally offset. In this case, the opposing forces were a decline in exports because of the sharp hit to growth in the Asian economies affected by the crisis and the capital flows into the United States as a result of the anticipated high returns and flight to safety.

LTCM was an interesting experience for a couple of reasons. First, we had never seen anything like that in our financial markets. I remember a call I got, a call from somebody in the private sector who was a former client of mine. She said, "I regret calling you, but I have to let you know. For anybody who's been trading in these markets 20 years, this is like nothing they've ever seen. This is verging on catastrophic."

That certainly put it into more focus for me, but again, as we might have talked about before, I felt totally left out. There was no communication from the Chairman. There were almost no memos being written by the staff to the Governors other than a few updates on a perfunctory basis of what was going on during LTCM and during the Asian financial crisis. Of course, the LTCM implosion happened quickly. But I felt that, as a Board member, I should be intimately involved in thinking about this. I objected both to the fact that I wasn't at least kept updated and to the fact that the Board deferred more than it should have to the New York Fed when the Board had the ultimate responsibility for intervening, even when it was a decision to

bring the parties together to make their own decision. The Board is about policy, and the New York Reserve Bank is about execution. I felt strongly that the staff had let me down. The Chairman had cut out the Board members. My view today is that the Chairman himself wasn't really involved in this as much as he perhaps should have been. I'm sure the Chairman was kept up-to-date on a daily basis by Bill McDonough and the staff of the New York Fed. I presume he had memos from the New York staff, if not from the Board staff, on a daily basis. But for whatever reason, he didn't seem to be playing a leadership role.

MR. HAMBLEY. The financial conditions were so threatening at the time. Supposing you had been more thoroughly briefed, would you have insisted that something different happen?

MR. MEYER. I don't know, probably not. But I would have strongly urged the Chairman to be directly involved and that it would have been perhaps appropriate to have somebody from the Board go to the New York Fed to be involved in any discussions with the major banks. In the most recent banking and financial crisis, that was the case. Bernanke was involved, but he delegated a lot of that to another Governor who was incredibly involved. I think that was an excellent kind of governance of the Fed. The New York Fed played its traditional role. It's always going to play that role. But the Board was intimately involved every step of the way.

MR. HAMBLEY. The Fed averted what could have been a very serious problem. So, at the end of the day, maybe we're debating second-order important questions. If you had to say—you have a choice: Either the New York Fed does what it does, or we just let the crisis play out.

MR. MEYER. No question. But those weren't the only choices. We had another choice other than to hand the ball off for the major directions being proposed by the New York Fed—

that is, along the way, having the Board intimately involved, having the Chairman involved, even if indirectly through another Board member.

I understand that the New York Fed was going to play the most intense role, and it would be making the recommendations. But it was another thing to be totally cut out. The Board should have been meeting regularly, maybe several times a day, to keep abreast of what was going on.

MR. HAMBLEY. Thank you for talking with us.

MR. MEYER. Absolutely. Being a Board member was a high point in my career. Whether or not I had as much influence as I would have liked to on monetary policy, being there and being part of that process, nonetheless, was an incredibly thrilling and memorable experience.

November 18, 2010 (Third Day of Interview)

MR. HAMBLEY. At the time of LTCM, how serious did you perceive the problems in the economy being?

MR. MEYER. It felt like absolute chaos. It was hard to predict or guess when the chaos was going to end, how it was going to end, and how much damage would be done to the economy. It was not just a period of extreme uncertainty, but one that had nothing but downside risks. And it was hard to assess just how serious those risks could be. Also, it was hard to know how policy could respond, what the role of the Fed should be, and what the Fed could do.

MR. HAMBLEY. How did the Fed respond, and how well did it work?

MR. MEYER. LTCM will go down as one of the more controversial periods and decisions by the Fed. That's partly because not everybody will agree on exactly what it did. The inside view, which I completely agree with, is that the Federal Reserve Bank of New York acted as a vehicle for bringing together the major participants in the financial markets who had so much at stake with the failure of LTCM and its consequences and gave them an opportunity to work together to limit the damage. The controversy was whether that was an appropriate role for the Federal Reserve. Did the Federal Reserve prod these firms into intervening? Did they offer them inducements to do so? I wasn't there, but I believe—and take the word of my colleagues at the New York Bank—that the New York Fed offered the facilities and encouragement for those that had a stake in preventing a chaotic failure of LTCM to sit together and decide whether and how they wanted to intervene to limit the damage to the economy, but clearly also to themselves.

MR. HAMBLEY. What is your recollection of what the damage was feared to be if there was no collective response by the interested parties?

MR. MEYER. There was the potential damage economy-wide and to the financial and banking system. Whenever there's uncertainty like this, risk spreads widen, equity prices decline. Markets don't like uncertainty, and they don't like that kind of downside risk. Financial conditions tighten, and that can have a direct spillover—and an obvious spillover—to aggregate demand.

But, as we've seen in more recent episodes, one of the most important channels through which financial crises affect the economy is by undermining the solvency of financial institutions. It was hard to see exactly how that was going to occur, but it was a question of untangling all the ways in which LTCM was involved with the rest of the financial system. How was it positioned? Where was it concentrated? What kind of risk did it pose? What kind of counterparty risks would arise from that? Would there be runs on other hedge funds, particularly those that were large and heavily levered? We understood the channels; the financial conditions were easy to observe. You just looked at them. You tracked them. You understood them. You had a pretty good idea of how they would feed back and affect the economy. But it was much more difficult to read what the implications were going to be for financial institutions and, therefore, for the terms at which they would lend and for their capital adequacy, et cetera. That was the big uncertainty.

Traders will tell you that they never experienced anything like this in their lifetime. We were therefore in uncharted waters. We had never before had a large and so heavily levered unregulated financial institution at the point of failure.

MR. HAMBLEY. Was part of the condition the existing illiquidity of markets and the potential spillover effect of having to unwind positions and sell in illiquid markets and, perhaps, also impose direct losses on others in that way?

MR. MEYER. Well, we learned a lot about this in the most recent financial crisis. At that point, we were, in a sense, just learning about this—while there were natural channels for providing liquidity to institutions that might be cut off from short-term funding because of all these uncertainties, which were not as extensive as in the more recent crisis, and this took place over a relatively short period of time. Perhaps we learned a good deal from that experience.

It is usually the case in financial crises that there's a liquidity panic, but that liquidity panic can quickly turn into a solvency problem as everybody rushes for the exit. It's hard to sell into illiquid markets. All the values of the assets in the bank's portfolio begin to decline sharply. And it's that "gapping" in the markets—not small, not continuous changes, but just a sharp change—that makes you wonder if you can ever get control of it.

MR. HAMBLEY. Perhaps the Fed didn't learn as much as we should've learned from LTCM. Was it because things cleared up rather quickly after that, and there didn't seem to be a lasting imprint on either financial market conditions or the health of the broader economy?

MR. MEYER. You're absolutely right. This was an experience that, although it didn't last very long, was not all that different from what we saw in the subprime crisis, when the big macro effects were not caused by difficulty in getting subprime loans—the macro effect of that market was so small. It was liquidity panic. It was counterparty risk. It was the threat to the banking system. The Federal Reserve, in this latter case, was more attuned to the impact on financial markets, to the liquidity panic aspect of it, and maybe much more so than to the macroeconomic consequences and the implications for policy. In the latter case, the Fed was incredibly aggressive, incredibly creative—as were central banks around the world.

Maybe this prior experience helped, but central banks are very good at the job of dealing with liquidity panics. They're very good in providing liquidity to the system. But you can get to

a point where the fundamental issue is solvency. And, in the current case, markets just didn't know which of the banks held the concentrations of mortgage debt, so nobody wanted to lend to the banks, even on a secured basis. That reinforced the liquidity squeeze and threatened the viability of some institutions. So there were certainly lessons from the LTCM crisis. But I don't think the lessons of LTCM were talked about much during the most recent episode, in part because that was some time ago, in part because most of the people who were making policy weren't involved in that previous episode, and especially because it was resolved so quickly and with, after the fact, so little pain. So perhaps we should've learned more from that episode, but in a way, it all happened too quickly.

MR. HAMBLEY. The Fed also cut the funds rate on several occasions to cushion the economy after LTCM, and the economy seemed to shrug LTCM off quickly. The financial system was already troubled when LTCM was occurring, and here was another shock. The LTCM crisis was handled basically by a group of banks, with a little push from the New York Fed. And, suddenly, the financial situation seemed to clear up. It may have been, in part, that people saw the Fed there doing its thing with LTCM and also doing its thing in reducing interest rates. And yet, that kind of intervention wasn't successful in the more recent episode. How do we understand why this passed so quickly?

MR. MEYER. There was an ability to get a relatively small number of parties together. There was a quite obvious solution: to have them provide funding to LTCM, make a transition, and let it go out of business slowly, rather than quickly and chaotically. You were dealing with one institution, and there was an obvious solution. So the markets could have good confidence that, when this was quickly resolved, the danger dissipated very quickly. I think that's really the difference.

In the current crisis, it lasted longer, the risks seemed to cascade, and there was no obvious solution. There really wasn't any way for the large systemically important banks to get together and solve the problem because so many of them were in trouble. Maybe what we should've learned was the danger of a large, highly leveraged, unregulated financial institution failing. LTCM was one. Later on we learned that lesson in a very unpleasant way, when it turned out that standalone investment banks were subject to runs much more so than commercial banks, completely reversing the view that you regulate commercial banks because they're subject to runs, and you don't regulate other financial institutions because they don't have access to the safety net and they're perhaps less subject to runs. We should've learned something of the dangers to the financial system from the experience of a very large, highly levered, essentially unregulated firm, and we certainly didn't. At the time, we were also allowing these huge megamergers of banks, creating some of the problems that came back to haunt us later.

Equity versus Property Bubbles

MR. HAMBLEY. It wasn't long before the economy shrugged off the problems related to LTCM and the predecessor episodes and began growing again quite vigorously. By June 1999, the FOMC had decided it was going to start tightening again. And it did so until May 2000, a year later. What did you see happening in the economy? Inflation was still pretty low, but it was beginning to rise. The unemployment rate didn't get down to its lowest point until sometime in 2000, 3.9 percent. Why did the FOMC decide in May 1999 that it was going to deal with inflation before it got out of hand? Why was the monetary policy reaction so different this time?

MR. MEYER. One of the things that made the tightening more obvious and brought an immediate consensus was that, at the beginning, all you were doing was reversing the easing that

obviously wasn't necessary from the standpoint of the overall economy. The easing was necessary to give confidence. It was necessary to take away downside risks. But this episode did not leave a macro imprint at all. You simply can't look at the quarterly data and identify that some major financial crisis happened to the economy. If you were there, it was obvious. If you're focused on the financial markets, if you were a trader, it was obvious. But a macroeconomist, looking back at history and looking at the data on the unemployment rate and GDP, couldn't see it at all. So it was pretty quickly clear, and it was probably beginning to become clear with the last cut in the funds rate, that that was a close call.

In retrospect, it was a mistake to cut the funds rate that last time, but it was not a huge and damaging mistake. Perhaps we would've been better off if it hadn't happened. The economy just kept rolling along as if nothing had happened. That made it clear that you had to quickly reverse where you were. At the same time—and there's an interesting potential interconnection here—the economy was recovering; the stock market was rising at an incredible pace. There was a lot of talk about bubbles before LTCM and that experience. The surge in the equity markets that took the stock market to what now we would look back at as being clearly into bubble range occurred only late in 1998 and through 1999. I often say that it was the Asian financial crisis and LTCM that caused the equity bubble. The Fed eased during that episode right at a time when the stock market was ready to take off, and when the crisis quickly passed, the stock market continued and accelerated its surge. On the other side, there was no feeling on the Committee that it had to intervene specifically to limit the rise in stock prices to reduce the possibility of a disruptive correction. But this was a time when we were talking about the wealth effect. Consumer wealth was going up at a fantastic rate, and it was having a powerful impact on consumer spending.

Whereas the economy was strong earlier and inflation was falling and unemployment was low, this took us to a later period. Once you start to move in one direction, it's not that hard to continue to move. It's hard to make that first move. You demand a lot more evidence before you do so. I call that the "first-move hurdle." In this particular case, it was obvious. You were hit over the head with a financial crisis, and you knew exactly what to do. Nobody ever thought the economy was going to be as strong as it was. Everybody revised down their forecast significantly. You obviously had to take back the first 75 basis points. Before LTCM, the Committee was moving toward tightening. So one reason I say that the asset bubble evolved from this experience is that, instead of tightening, and let's say it would be 75 basis points, you ease by 75 basis points; the funds rate was 150 basis points lower than it would otherwise be, and that's music to the ears of the stock market. The other reason that we raised rates was that maybe I was more convincing than I had been previously! I was an experienced Governor. I knew how to navigate. That's clearly not the case, but I like to think so.

MR. HAMBLEY. So, basically, taking back the earlier easing that hadn't proved necessary after the fact and then recognizing that what you had already done had contributed to a wealth effect that was going to push the economy too far, you not only went back through where you had been, but you tightened further because you were afraid of what was going to happen.

MR. MEYER. We implemented the tightening that we postponed because of LTCM. I don't think it was surprising, looking back on it, that the FOMC tightened. It's a little fuzzy in my mind to go back to those incidents and remember exactly what I was thinking and exactly what was happening in the economy, but I think that's basically the story: realizing that the easing was not necessary, was not called for from the macroeconomic situation, and then going back, taking it away, and then going back to the tightening bias, tightening that you otherwise

would've implemented had LTCM not occurred. When I say that the Committee was ready, I might've been ready, and I judge that the Committee was ready. It was less clear that the Chairman was ready. So I can't really go back and say it's clear we would've tightened except for LTCM.

MR. HAMBLEY. This latter tightening was very much the Chairman's approach—once you'd gotten beyond the crises, take away the earlier easing.

MR. MEYER. Yes, nobody had to be prodded into that. Everybody appreciated that.

MR. HAMBLEY. So around March 2000, the various indexes of the stock market had reached their peaks, and they started to fall. Over several years, they fell quite dramatically. In the second half of 2000 and into early 2001, there was an economic slowdown, which turned into a recession. What changed this slowdown into recession? In particular, in trying to deal with the wealth effect, did the Federal Reserve overdo it? By dramatically moving the funds rate up in a relatively short time, did the Fed pop the bubble? Did the Fed deflate consumption spending that way?

MR. MEYER. It's hard to make the case that the Fed was so aggressive in its tightening that it burst the bubble. Now, the bubble didn't burst. The air was let out slowly. This wasn't the chaotic and destructive decline that we typically associate with bubbles popping. And to some extent, the downside is often like the upside, where to the extent that the upside evolves over a long period of time, it corrects over a long period of time. But I think you have to remember, when the stock market began to decline, there was a debate about whether this was a brief correction of a steadily rising market. There was a lot of debate about whether there was a bubble that ultimately would be corrected or not. Now, certainly, as we look back, we see the enormous decline: a 40 percent decline in equity values, and what that did to household wealth,

and the role that played in the recession. The recession was very mild, very short. And there is a lesson there. The lesson is that equity bubbles are not really a big deal for economies. They can handle it. They can shrug it off. They can recover pretty well after an equity burst.

The difference from the recent experience of the bursting of the housing bubble is like night and day. Is it an equity bubble or a property bubble? Leveraged institutions don't hold equities. Banks don't hold equities. But the collateral of the banking system is all founded on real estate, both commercial and residential. And when there's a housing bubble that bursts there, you take down the whole financial system. There was no question about this in this particular episode. So, yes, the increase in rates obviously contributed. It was supposed to slow down the economy. While it slowed the economy, we had a recession. As we look back on that, given how far equity prices declined, it was surprising how mild it was.

MR. HAMBLEY. If you had a large equity bubble that for some reason collapsed, presumably you'd have a big wealth effect, that would have a big macro effect, and maybe you could have indirect effects on the health of financial institutions that might not be so different in kind as happened more recently—for example, unemployed people can't pay back their loans.

MR. MEYER. That's a macro effect. We can look at it in models. It's sizable. But the collapse of an equity bubble is not catastrophic. And it potentially can be offset by monetary policy, so that it's not a worry. There's no sense that there's a tail risk out there, that something catastrophic could happen.

But in the case of the property bubble, you're not talking about a direct macro effect. You're not talking about lower home prices lowering household wealth. That's a footnote. What you're talking about is threatening the entire financial system, threatening the solvency of the largest banks, and, in the recent episode, moving the economy to the edge of the abyss.

I don't think there was this sense, with the reversal of the equity bubble, that the economy was ever moving to the brink of anything. There was a danger obviously of a downturn. We got a downturn. But it was very mild. So I do go back to the fact that equity bubbles and property bubbles are dramatically different. They're not different so much because the direct macro effects are dramatically different. They're different because the bursting of a property bubble can bring down the financial system. When that happens, the feedback effects to the rest of the economy are immense. And this is what I would say that I, many others, and the Fed didn't appreciate: They treated the housing decline and the bursting of the bubble initially as just a macro story and, particularly, the subprime part of that story as a macro story. And if it was a macro story, it couldn't be a big macro story. It had to be a small macro story. It only became a big macro story when you connected it back to the financial and the banking system. We didn't have experience with that.

MR. HAMBLEY. Some academic writing that preceded 2007 made the distinction between these two kinds of bubbles. When the Fed saw the more recent crisis, it did not make that distinction and initially tried to deal with it as an ordinary monetary policy event, which proved not to be true.

MR. MEYER. Right. This distinction is not hard to recognize in historical experience. Ken Rogoff and Carmen Reinhart wrote a book recently that's already a classic.⁷ They talk about how damaging these kinds of banking crises can be. That has clear relevance to the struggle to mount a recovery today that is strong enough to bring down the unemployment rate, because their work says that that just doesn't happen after banking crises. So they dug into it. If their book had been written earlier, would that have made the same impression it makes today

⁷ See Reinhart and Rogoff, *This Time Is Different*, in note 4.

after we lived through that recent experience? Would we have said that historical experience tells us how damaging this can be and how we have to work even more aggressively to deal with it? Even once you knew that, once you got that bubble and it burst, it didn't matter. You were dead.

MR. HAMBLEY. It might have led you more quickly to address the weakness of the financial system.

MR. MEYER. Of course, we didn't know how weak the banking system was. The banking system didn't know how weak the banking system was. The rating agencies didn't know. That was part of the problem.

MR. HAMBLEY. Part of it was also that the weakness in property values, which people tended to associate with subprime, was preceded by a much broader weakening of underwriting standards. There were many other kinds of loans that were poorly underwritten, a great number of which were securitized and res securitized in CDOs (collateralized debt obligations). And a lot of that was in the financial system. And when it was undermined, we see it's built on a sandy foundation, or like a house of cards.

MR. MEYER. Subprime was the poster boy, but it was symptomatic of a bigger problem: excessive risk-taking that went throughout the economy. You can see it in every dimension of performance—firms and households.

September 11, 2001 (9/11)

MR. HAMBLEY. The economy moved into a rather mild recession in the early 2000s. The Fed had a further monetary response to this. What was your impression about the economy's reaction? Did the economy seem to be pretty much on the mend before 9/11?

MR. MEYER. I don't have a strong memory of that. But I would say this: 9/11 was another experience where the macro imprint was hard to see after the fact. There was, naturally, great uncertainty about how the economy would be affected. But the extraordinary role of the Fed in leading the effort to make sure that the payment system continued to function, working closely with the banks, was the critical role the Fed played. Again, here the risk turned out not to be the macroeconomy so much. It turned out again to be the financial system. September 11 threatened to bring down the payment system in a way that would have catastrophic consequences for the whole economy. But the Fed rose to that challenge. There was a major event that had limited macro consequences but which had the potential of having massive financial consequences. But the Fed and other supervisors and regulators acted so quickly and so effectively that we never got to that point.

MR. HAMBLEY. What were some of the responses of the Fed during that period?

MR. MEYER. Well, I wasn't in the control room all the time, but the main issues there were that we had a system where the payment system was concentrated in a relatively small number of institutions. There was not sufficient duplication of all of these accounts. It wasn't just these institutions collapsing, but the payment system, the communications collapsing. Had that happened, it would've been an extraordinary catastrophe for the economy. I remember the staff working on the phone all the time, working with the institutions, helping them get back on track. It was a very cooperative effort, certainly, with the institutions involved. The Fed was there at every moment. I don't remember all the details, but that was where it was centered—in the clearing mechanisms, in the payment system. Potentially, this was much worse than a subprime crisis. If this can't be mended quickly, the economy comes to a halt.

MR. HAMBLEY. The Fed engaged in large open market operations. It engaged in large discount window lending. It provided a lot of credit to institutions for check float when we couldn't collect the checks. Nonetheless, the credit was passed on. The Fed created currency swaps, all of which added up to a prompt and effective response so that the incident didn't have the kind of effect it might've had.

MR. MEYER. Right, but I would make a distinction between two things. When you have this kind of a financial shock and potential crisis damaging the financial infrastructure, you have, at the same time, an enormous increase in the demand for liquidity. Central banks are good at responding to that. The Fed was good at that. It didn't miss a beat. Dealing with the liquidity side was easy. But that had nothing to do with being sure that the financial infrastructure itself didn't collapse. If the liquidity needs weren't met, that would have increased dramatically the risk to the banking and financial system. But I believe that experts at the Fed on the payment system would know much better that the heart of the problem was the clearing and payment system. That was something that liquidity provision couldn't deal with. The demand for liquidity was a result of all of these dangers. That was easy to deal with. The Fed was also really focused on risks related to the clearing and payment system and monitored this very intensely.

MR. HAMBLEY. We survived the terrorists' attacks. The Fed eased monetary policy after 9/11 in three rather dramatic 50 basis point cuts. But there wasn't much macro impact from 9/11, and the economy got over it relatively quickly, followed by a slow recovery in which the unemployment rate took a while to come back down again. Did policymakers take from this experience that they had weathered some serious shocks and nothing really bad had happened?

MR. MEYER. I don't think that was a lesson that was incorrectly learned. For those with the memory and who were there with that memory, it reinforced the essential role of central banks as liquidity providers.

In this most recent episode, the increase in the demand for liquidity was worldwide. And it required unusually coordinated actions by central banks around the world that were doing much the same thing and were as effective and as aggressive as the Fed was. So, looking back, it could've given confidence that, with respect to liquidity panics, the central banks in general and the Fed in particular were very good at dealing with those. But during the recent crisis, the value of assets on the balance sheets of banks was plummeting. It was impossible to know what the value was. So the sense of counterparty risk was much greater.

With 9/11, there was a natural uncertainty and demand for liquidity, but it didn't go to the extent where everybody was concerned with the solvency of the banking system and nobody wanted to lend to anybody because of all of that counterparty risk. That was very different. And after 9/11, the Fed never had to face the problem of failure, or near failure, of financial institutions. The Fed didn't have to get into the situation that no member of the Board ever wants to be in, where it has to invoke the Section 13(3) of the Federal Reserve Act, declare "unusual and exigent" circumstances, and be prepared to lend outside of depository institutions. No Board member ever wants to be in that position. It's always going to be a difficult decision. This Board had to grapple with it in the recent banking and financial crisis, the potential of cascading failures across the financial institutions. So this was very different, but it comes back again to equities versus property. And, of course, this time the economy was in a different place. The economy was just humming along at the time of 9/11, and 9/11 was without a macro imprint. The recent crisis was a much more dramatic episode, for sure. It left the economy so

wounded that it was unable, on its own, to mount even something that was anywhere near a normal recovery.

Unorthodox Monetary Policy Tools

MR. HAMBLEY. From the late 1970s not only in the United States, but in most places around the world, there had been a general, gradual, secular decline in inflation. And by the early 2000s in the United States, we could actually contemplate being at price stability and maybe not meeting the mandate of price stability on the downside, in the sense that as we got into the 2000s, deflation was suddenly a real possibility. Was that a big surprise? Did that cause people to think in—and worry in—new ways about monetary policy in this new world?

MR. MEYER. At the first FOMC meeting I attended, we had a discussion of what price stability meant to each of us. The most important theme there was that inflation could be too low as well as too high. That was just to say that you needed a cushion. Instead of being at zero, you needed to be at something like 2 percent, so that if the economy weakened, you had room to lower the funds rate.

When I got to the Board, I think everyone on the Board saw their responsibility as maintaining all of the success that we had seen in the Volcker years. The Board viewed its task as bringing down inflation to a level consistent with the mandate and protecting that. I think every one of us thought that was our most important responsibility, given where the economy had been.

Around that time, too, there was a lot of writing about the Great Moderation. Ben Bernanke was one who said that monetary policy played an important role. By stabilizing inflation expectations, you made it easier for inflation to stay at the desired rate without intervention by monetary policy. And, as a result, you didn't have to destabilize the real side of

the economy to keep inflation where you want it. Not only did we want to preserve what had been so hard to achieve before, but we also were understanding the incredible value to the economy of maintaining anchored inflation expectations. At that point, nobody was dreaming that inflation would in fact become too low. We were all thinking that we were there to protect against inflation rising too high. And, all of a sudden, inflation was very low. Remember, we had the Japanese experience to look at. So this made a big difference; we had a laboratory experiment. And the view became that deflation was extraordinarily costly, even relative to inflation.

Any central bank can cure inflation just by raising rates, and you can raise them to an unlimited degree. When you get to deflation and you get the funds rate to its near-zero lower bound, there may be nothing you can do. That means you may not be able to get out of a deflationary situation with monetary policy, or maybe it's hard to see how you ever extract yourself. And we had had no experience with deflation for a very long time. We would be entering into an unknown situation, so that fear of deflation became very important. Looking at what had happened in Japan and drawing lessons about optimal monetary policy from what happened in Japan became a source of a lot of writing by the Board staff at that time. Japan, combined with what was otherwise an extraordinary angst about what would happen if the economy fell into deflation, became a center of concern of policy at that time.

MR. HAMBLEY. If you have a still positive but very low funds rate and you're concerned that you might fall into deflation, you pull out the stops, whatever stops are left, and shoot as much ammunition as you can to avoid getting into a deflationary situation. So the Fed got down to a funds rate of 1 percent—essentially negative in real terms, even then. So that's one way, when you're close to price stability and you don't want to go over the edge into

deflation, you may be more inclined to take a bigger step than you would otherwise take, because you want to have some insurance. You don't want to get to that bad deflationary outcome.

MR. MEYER. That was the risk-management approach that Greenspan articulated and that seemed logical. I bought it completely then, and I do now. I've said that I don't think this FOMC today paid enough attention to this risk-management approach. The key there was that the risk of deflation was so much greater than the risk of inflation that you ought to take out insurance. You should make policy so easy to limit the risk of deflation that you increase the chance that inflation will be unacceptably high later. That's an asymmetric probability distribution. When the risks to the downside are so much worse than the risk to the upside, you have to do that. That was very much a driving force of thinking about monetary policy in a way that hadn't been articulated earlier. It's hard to say whether this was on the mind of policymakers in the past, but conceptualizing in that way helped the Committee understand what it needed to do.

MR. HAMBLEY. A little later there was an exploration of what else besides lowering the funds rate the Fed could do if it got the federal funds rate to the zero lower bound. And some of those thoughts seem to be relevant to the current situation. Were any of those discussions going on while you were here, or did that come later?

MR. MEYER. That came later. I left before Ben Bernanke was nominated to be a Governor. At the time that Bernanke wrote these fantastic papers about unwelcome disinflation, about unwelcome decline in inflation, about deflation and how to avoid it, he laid out essentially the playbook that was not used and not needed at that time but became the playbook that has guided monetary policy later. There was a staff working paper right at the time that Bernanke was developing this playbook. The paper seriously questioned the effectiveness of all the tools

that he was showing so much optimism about. But he laid out a playbook that included buying longer-term assets, which is the main nonconventional tool that the FOMC has used. He talked about all the other ones that are on the list: He talked about communication policy, he talked about targeting longer-term interest rates, and he talked very importantly about the most effective policy when we get to the zero bound and the economy remains weak—namely, that you need money-financed fiscal stimulus. This was the backstop.

There was uncertainty about whether any of the other policies would really work. You know what the playbook was. You knew where to start. You knew how to proceed. But you didn't know, and you didn't have any experience with, how effective they would be. We had a fair amount of experience—even though it's been so controversial recently—that fiscal stimulus works. This notion of money-financed fiscal stimulus was, in a way, cooperation between an independent central bank and the fiscal authorities. That was what Bernanke brought to the table. It wasn't needed then, but all of the thinking basically had been done by Bernanke at that time.

It's a different story than during the recent liquidity crisis. During the liquidity crisis, at the beginning, the Fed didn't really know how to get the job done. As it found out, the discount window wasn't sufficient, partly because of the stigma associated with it. It had to scramble. It had to invent facilities on the fly. It had to put in place facilities that it certainly didn't have time to analyze and were uncertain how well they would work. And it wasn't taking pages from the playbook. It was on the fly, writing a new page and sticking it in when there weren't any pages. Asset purchases are different this time. They are different this time because the playbook was written. We can argue about how effective they are. We can argue about whether they're needed. But the playbook is there, and, to this point, the Federal Reserve is following it,

although it's only on page one or page two. We've done communication. We've done these asset purchases. And there are serious questions about the costs and the benefits of anything else other than the fiscal.

So I think we're fortunate here. We were fortunate in the sense that these tools were thought about, written about, and studied before they were used. So, although we didn't have any experience with them, you can't say that we hadn't thought a lot about them.

The Challenge of a Fiscal Surplus

MR. HAMBLEY. In the late 1990s, the federal government was moving toward a budget surplus, and it had a budget surplus for several years. And the projections of the time suggested that if fiscal policy didn't change, surpluses would mount, and there would be a rather dramatic buydown of outstanding federal government debt. What challenges did that pose for monetary policy?

MR. MEYER. Well, it posed a very real challenge, and one that didn't seem to be that far over the horizon. If the debt was all retired, then the normal way that the Fed carried out its operations, through buying and selling Treasury securities, would no longer be available. The Fed then had to study how it would carry out monetary policy under those circumstances. I remember fascinating meetings as we discussed very seriously that this was a real possibility. It certainly looked that way, and I wrote papers on this. I think it was reasonable to think at that time that we had to think about it. It's kind of easy to see conceptually what you want to do here: instead of buying and selling government assets, you want to buy and sell private-sector assets. Most of these cannot be bought and sold under the Federal Reserve Act, even under 13(3). It would've taken opening up of the Federal Reserve Act to do it.

But, obviously, you were going to need to do something. And what was fascinating is that the discussions inside the Committee were not just about that general direction, but what should you do if we were going in that direction, how should you do it without distorting the economy? The obvious way was—and it's today the case with facilities that the Fed puts in place—that you couldn't buy assets of an individual company. You have to have eligibility requirements so that everybody can borrow in those facilities. You never wanted to get into the situation where you were making choices between lending to Firm A and lending to Firm B. We needed to develop a mechanism like an indexing system so that we'd be lending a little bit to a lot of places. The most interesting part of that discussion—and one that I was heavily involved in, and I think was the only person on the side I took—was, if you were thinking that you wanted to be neutral and distort the markets as little as possible, then you had to be careful about what we'll call your asset allocations, just as an individual would. How many bonds do you want to hold? How many equities do you want to hold? The Fed's focus was only on buying bonds.

There can be credit allocation that way as well. In fact, it's easier to avoid credit allocation with equities because of indexes that are available. I said that the Fed should buy bonds (including private bonds) and equities in relationship to their outstanding relative amounts, which might require a change in the Federal Reserve Act. I thought this was a very good idea. I thought it was obvious. But I don't think anybody on the Committee wanted to take that hurdle and even contemplate buying equities. This was an intense period of work by the staff. And there was serious contemplation by the Committee. We weren't fooling around here. We weren't speculating about something that had low probability. We were dealing with something that looked like it could be over the horizon and to which we had to have an answer.

MR. HAMBLEY. There was some discussion then about buying agency securities too, GSE (government-sponsored enterprise) debt. But the Fed did not get to that point.

MR. MEYER. Agency debts are complicated because of the question of whether this debt is private or public, but it's certainly a natural asset to buy. Those are securitized. They deal with the bundling. And those are backed by the underlying mortgages. I honestly don't remember whether or not there was discussion of that.

MR. HAMBLEY. I was thinking of the discussion of purchasing GSE debt rather than GSE guaranteed mortgage-backed securities. But the Fed never got there, so this has been forgotten. For a while, the Fed thought that federal budget surpluses would cause all federal debt to be retired, and the Fed tried to get ready for that possibility. But it turned out that it wasn't necessary, and that was the last problem the Fed had.

MR. MEYER. During the time I was at the Board, although the Fed was not a regulator of the GSEs and although it was therefore outside of its authority and it was somebody else's problem, the Federal Reserve staff was heavily involved in studying the GSEs. To what extent were taxpayers in fact subsidizing them, subsidizing the incomes of the managers, et cetera? We did a lot of research that was quite controversial at the time. I don't know whether it was Fannie Mae or Freddie Mac coming in to see me.

MR. HAMBLEY. What were they saying?

MR. MEYER. They didn't mention the research. This was like a road show, where you come in and say, "I just want to make sure that you understand." And of course, part of the understanding is the extraordinary subsidy that's going to housing and how important this is for the economy. I think this was clearly an interest of the Chairman. And when he's interested in it, the staff is interested in it. And, indeed, it was one of those really big issues out there. So I

think it was a good idea to be involved, to have done that research, because it was inevitable that the Chairman was going to be asked about this. And there are some things that you can deflect, and some things that you can't.

The FOMC: Hawks and Doves

MR. HAMBLEY. Most of the time that you were on the Board, you were considered a hawk on inflation. When you first came to the Board as a Clinton appointee, people thought that you were going to be a dove, even though neither President Clinton nor anyone on Clinton's team had asked you whether that was your position.

MR. MEYER. They assumed with great confidence that I would be a counterweight to Chairman Greenspan, who was then viewed as a hawk—a hawk who was preventing the economy from realizing its potential because of the restrictive policy that he appeared willing to pursue. When I came in, I didn't say to myself, "I'm going to really fool them. I'm really a hawk." I'm not a hawk. I'm not a dove. I'm a centrist. I will flip to one side or the other as necessary. Ironically, when I came in, Greenspan was already moving towards being a dove—probably already was a dove, in the sense that he supported a policy of allowing the unemployment rate to go to unprecedentedly low levels relative to recent experience without tightening.

MR. HAMBLEY. What do you understand these terms "hawk" and "dove" to actually mean?

MR. MEYER. I wrote a chapter on this in my book, but my views have evolved, and I have written some interesting commentaries. One is called, "Counting Heads: Does It Matter?" It was about how much fun it is to observe an FOMC meeting and to identify who was a hawk and who was a dove. As one Board member said to me, "Don't forget, Alan Greenspan owns the

room.” So all of this is going on in the background, but the only thing that matters is where the Chairman is.

I have strong views on what it means to be a hawk and what it means to be a dove. It starts with an objective function. You have two things you want to do—promote full employment and price stability. How much weight do you assign to each one? Well, that’s your set of preferences, and they can be weighted differently. Hawks weight price stability much higher than full employment, but that’s not the only story. Hawks generally don’t believe that monetary policy can do anything to promote full employment over what we call the policy horizon. If it can’t do that, then you should not focus on the short term. Forget about that two-year cycle. Look at the three-to-five year cycle and control what you can, and that’s inflation.

You have a dual mandate, and yet the hawks appear to say they’re not bound by the dual mandate. They say there’s nothing they can do about one of the mandates, but they have total control, in principle, over the other. Finally, it comes back to perceptions of how the economy works. Hawks and doves today are from different planets. Another paper I wrote was “Hawks Are from Venus, and Doves Are from Mars.” They almost cannot talk to each other. They have totally different models of inflation. If you’re a dove, you think that slack, the unemployment rate, is central to inflation in the short run. Therefore, the unemployment rate matters. It not only matters because you care about full employment, it matters because you care about inflation. If you’re a hawk, you don’t think that unemployment matters at all for inflation.

When I was on the Board, the Committee was never split like it is today. You could identify that there were hawks, the more monetarist ones, like Thomas C. “Tom” Melzer (president of the St. Louis Reserve Bank, 1985–98), William “Bill” Poole (president of the St. Louis Reserve Bank, 1998–2008), and Jerry L. Jordan (Cleveland Reserve Bank, 1992–2003).

But these hawks were quieter hawks. They were less willing to, in public, oppose the Chairman. I think they were more willing to abide with what seemed to me at the time to be a firm tradition of consensus voting. That's basically disappeared today. Now you have a rather unpleasant situation—from the public perception as well as, I believe, from what's going on inside the Committee.

When I was at the Board, Committee members didn't interact that much. You have to remember that, embarrassingly, we prepared our presentations over the previous weekend. We read them. There were no discussions. You just went from one member to the next, and nobody referred to what anybody else had said except maybe the Chairman, who brought it together when he talked. That's why I say it was so exciting to be in the first meeting. The discussion—particularly of the special topic, the meaning of “price stability”—was fantastic. It was intellectually stimulating. You wanted to listen to everybody around the table. You wanted to put your views on the table. But pretty soon it became clear that I didn't have a vote, and I knew what was going to happen before I got to the meeting. The meetings took on a little less sense of excitement than they did before. But this is the way the Fed has worked for as long as I can remember it, and probably long before. By tradition, the Chairman is invested with great power—not by law, but by tradition, and perhaps because of the careful selection of the Chairman so that he's not one among equals. That very much colored my experience, but it would've been very unpleasant for me to be on an FOMC that's as split as this one.

I was viewed as very outspoken. And I was, to a certain degree. I didn't want to be muzzled. I wanted the opportunity to talk about the outlook and about monetary policy strategy on the outside. But I hope that I behaved differently than the hawks do today. I wanted to put big ideas on the table—like NAIRU, the Phillips curve, the new economy, the relationship

between productivity and inflation—to focus on these and think about what the implications were for monetary policy. I was told by many folks, particularly by Public Affairs and Joe Coyne, that when you give a talk, when you answer questions, you never give away your next vote. That is extraordinarily important when you're always going to vote with the Chairman, because you'll look pretty silly opposing the Chairman, taking him on with respect to policy and then voting with him. You look like a wimp.

I don't think the Chairman and I were that different with respect to policy except for the first year or so. We had different views. We had different ways of looking at the world. We thought different things were important with respect to monetary policy, but when it came down to the end, we didn't disagree that much on policy. And I think—and I hope—I tried to go out of my way not to take on the Chairman on policy, not to do so explicitly.

The media sometimes presented it differently. The media looked at every word. They tried to read between the lines. They tried to exaggerate what differences there were with the Chairman with respect to policy. It was not fair to read between the lines and say what I thought as opposed to what I said. But I tried hard. This Committee today is in a very different place. I didn't think about it this way when I was on the Board. I didn't think that I couldn't communicate with Jerry Jordan, that I couldn't communicate with Bill Poole, that I held no respect for them and didn't want to listen to them. But I think that's changed today.

The New Economy

MR. HAMBLEY. You were sometimes portrayed as the Grinch of the Fed, the person who wouldn't let the new economy do what it was capable of doing if you were allowed to make policy. What did the idea of a new economy imply for monetary policy, and how did you react to those implications?

MR. MEYER. Well, I spent an extraordinary amount of time, I don't know how many years, when I was on the Board and the Committee talking about that—both about what the “new economy” meant and why I didn't believe it was useful to think in terms of a new economy. One of the best papers I wrote was called “What Happened to the New Economy?” Basically, it said that we get the new economy every 25 years. There are long periods of high productivity growth, long periods of low productivity growth. We don't know very well why. We know they're persistent, and we have some ideas, but we don't have any real empirical evidence. Once I came up with that theme, the staff did a great job of going through and providing background. I think I called my view “temporary bliss” as opposed to a new economy.

MR. HAMBLEY. “Permanent bliss,” wasn't it?

MR. MEYER. My view was that we were in a period of temporary bliss—that we were in a period of a productivity acceleration. And during this period, when the economy was adjusting to the higher productivity growth, you could get to unusual behavior which couldn't be sustained afterwards. You could have inflation lower for any given unemployment rate; that was clear. The question is what it meant for the long run. If productivity growth was higher, then you'd grow at a faster pace. That's a great thing. But it doesn't change the story about monetary policy in the long run. You still have a capacity constraint, however fast it's growing. If you exceed capacity, inflation picks up. Monetary policy has exactly the same role as it did before. It was important to identify where you were in that timing. Perhaps it changed the timing of when you needed to tighten, but it fundamentally didn't change the role of monetary policymakers and what they had to do to protect against rising inflation.

I've sometimes said that you walk through that Board's entrance on C Street, and, all of a sudden, the burden is on you. The only line on your report card, or the first one in really big

letters, is: Did you keep inflation at its reasonable objective? Everybody wants to get a check there. Nobody wants on their permanent record that they didn't do that. So that's the way you're going to be judged. You're not going to be judged in the long run by how good you were in stabilizing the economy at full employment.

The Fed's Dual Mandate

MR. MEYER. When I was nominated, and when I walked through those doors on C Street, I don't think that was what immediately occurred to me. I became a hawk only because the models I was using suggested that if we allowed the economy to proceed as it was proceeding, inflation was going to rise to an unacceptable degree. As I became a true central banker, a member of this long family of central bankers, I began to understand this extraordinary responsibility you have. And it makes it very difficult for me to talk about the dual mandate.

I'm a great proponent of activist policy. Alan Greenspan was a very activist Chairman. Ben Bernanke is a very activist Chairman. They both respect the dual mandate, though I think Greenspan would've been less anxious to admit it. And yet, as a central banker, you know that one is the ultimate story. If you do achieve one aspect of the dual mandate, the other one is going to fall in place. That's what hawks believe. So as I came along, I'm a dove, in the sense that I weigh the full employment objective relatively highly relative to the hawks. But at the end of the day, I'm always persuaded and move to that hawkish camp whenever inflation is threatening. That's the difference, frankly, between hawks and doves. Doves all do that. Hawks never move. I called it "constitutional versus circumstantial." There are these constitutional hawks. They never budge. And there are sort of constitutional doves, but they're more willing to let circumstances push them one way together. And then there are the people in the middle who are either circumstantial doves or circumstantial hawks, depending on where we are. That's

the best place to be. Even those centrists will say, when push comes to shove, there's no give with respect to keeping inflation well anchored.

MR. HAMBLEY. In that sense, you were like Alan Greenspan. He was a centrist, and if you just listened to his words, particularly early in his chairmanship, you would've thought that he didn't even know there was a dual mandate. He also saw that there was a role for policy in actually affecting output relative to what the economy could produce, and he certainly didn't act like a constitutional hawk.

MR. MEYER. Absolutely right. You bring out an interesting point that I haven't thought that much about. In some fundamental respect, we were similar in our views about monetary policy and what it can do, what it should do. The only difference about us, but that was such a dominant difference early on, was about how the economy works. I never really knew what he thought about how the economy works. Everybody knew how I thought the economy works. I talked about it all the time. Originally, the issue was whether there was a productivity acceleration. What does it mean? That was the dominant story, having different views of what was really happening in the economy. If we believed the same thing in terms of what was happening, we would've had the same views about policy.

MR. HAMBLEY. In Chairman Greenspan's monetary policy testimonies, there are statements from earlier in his chairmanship that sound like he believed in a NAIRU, that he believed in a vertical long-run Phillips curve. It was also clear that he believed that any sustained inflation was clearly a monetary phenomenon. And there is an awareness of the importance of inflationary expectations in the policy-setting process. I don't think that he didn't have the same policy framework; I just don't think he wanted to talk that way.

MR. MEYER. Absolutely right. In some sense, we know that's the case from the experience with Alan Blinder when he was a member of the Board. Alan Blinder was virtually the first person on the FOMC to say, "We've got a dual mandate." This just shocked everybody around the world; central bankers were shocked. You look back on that and say, "I don't understand what world they were in. That's just crazy." I haven't read those early speeches, but I expect that a Chairman has to be very careful about the views that he expresses publicly. My view suggested to the Congress that if inflation was too high, I was willing to throw workers out of work, raise that unemployment rate to get it down. It's true! And it was inescapable once you held this view about inflation and the NAIRU, but no Chairman wants to be in the position where he has to tell members of the Congress, "Don't worry about inflation, I'll just throw people out of work. We'll get it done." The Chairman was clever, as Chairmen should be. There's a role for education. I'm all for education. But there's a role for political reality as well.

When I was on the Committee, other than Janet Yellen who was on the Committee for a short time with me, no one else would admit they believed in the Phillips curve. Today it's very different. It's no longer un-central-bank-like to admit it, and we have to thank Alan Blinder, in part. He bore the scars of moving us in that direction.

MR. HAMBLEY. As time went on, it became more and more important both to know what the dual mandate was if you were going to be appointed to the Board and to say that, at least in the short run, they are comparably important goals, and there may be tensions between them.

MR. MEYER. It is the natural mandate.

MR. HAMBLEY. Some would argue that it is a better mandate than the other ones because it opens up the possibility that you can do things that don't compromise your inflation

goal. But that might make things better than they would otherwise be in real terms. It was a big change.

MR. MEYER. Right, so I think that's an interesting development. And it's a little surprising that FOMC members could avoid talking about that other mandate, given the Democrats' view about the importance of achieving full employment. That's a little hard to believe. It didn't seem that it was the political pressure not to admit that you believed in the Phillips curve, although there were consequences. What do respectable central bankers think and do? That was a driver. You wanted to be respectable in the central bank community. You wanted to be able to hold your head up high when you went to international meetings of central bankers. And you don't want to be looked at as somebody who isn't a hawk.

MR. HAMBLEY. So there's a culture of central banking, too, and it changes. It's a language, and it's the willingness to pull out certain examples from history and say, "We certainly don't want that to happen again."

MR. MEYER. It's language, and sometimes it's body language as well.

Public Speeches

MR. HAMBLEY. While you were a Board member, you publicly spoke a lot about the monetary policy outlook. Was there any effort to make sure that, when Governors spoke, they gave a consistent set of messages? Was there a preclearance of speeches?

MR. MEYER. Absolutely not. It was almost just the opposite. Greenspan never read one of my speeches before I gave them. That was his practice. He didn't want to. He certainly wanted you to be respectful of your role and to use good judgment. But that was all he asked for. He did explicitly say that he didn't want me to move markets. And if I did, he was the first one to greet me when I got back. In general, I never showed my speeches to any Board member.

The only exception was Janet Yellen, because we were so close intellectually and such good friends. I didn't share them with her all the time, but occasionally.

My interaction was always with the staff. The other interaction was with the Public Affairs group. When I came to the Board, Joe Coyne, in particular, read everything. I don't know whether there was a choice about giving Public Affairs a chance to look at a speech before I gave it publicly. There probably was, but to not give them a chance to read it would have been terribly frowned upon. Joe Coyne came in very early and said, "I know you're going to say what you want to say, but my role is to make sure you understand what the headlines are going to be. If you can live with the headlines, then the rest is for you. But I'm going to tell you which things are going to be big issues and make sure that you're prepared to live with them." And I loved that. That was great. There was the editing process as well that was very helpful to me. I thought that role was an important one for Public Affairs.

When I arrived at the Board, I didn't appreciate that few Board members gave speeches on the economic outlook and monetary policy. I decided quickly that I wanted to give a speech like that once a quarter. I became very committed to it even as I saw how few people were doing that. At any time there are relatively few people on the Board who come from the background where they would be inclined to talk about the outlook and monetary policy. Based on my background, I felt it was natural for me to do this. And there was the transparency part. The public had a right to know what I thought, and I had a role in educating the public. It seemed natural to me. I never once looked back during the time or after and never questioned my own judgment about whether or not that was appropriate.

MR. HAMBLEY. Doing that was probably also a useful intellectual discipline.

MR. MEYER. That is so right. As many people come to understand, you don't often know how to coherently make a point unless you sit down and labor over it, write it down, look at it, and have other people look at it. That was the staff's role. The staff's role was to discipline my thinking.

When I became a Governor, there was a luncheon for the senior staff. I told them that I have to have the luxury of saying stupid things in my office. And they would find out that I do so on occasion, but hopefully not too often. I told them that it was their role to shoot down all the stupid ideas that I float out, because if I say something stupid in public, I'm coming back and I'm going to blame them. This was the interplay that I wanted.

The staff was there to discipline my thinking. They were there to sharpen my thinking, ask me to reconsider, and provide what they thought was the correct analysis. That was the greatest joy. The joy of writing papers was not in giving them. That was not that pleasant. You had to read them. You had to be very nervous in response to questions. The fun was the process of writing the paper. The fun was the process of having this wonderful interaction before—brainstorming, getting the comments back, et cetera. That was more fun than anything else I did at the Board.

Transparency in Monetary Policy

MR. HAMBLEY. You favored greater transparency in monetary policy. You conceived giving speeches as being consistent with that. And in your prepared statement for your confirmation hearing, you said, "It serves the ends of monetary policy well to communicate Federal Reserve decisions in a clear and timely fashion." Thinking over your time at the Board, were there major developments in the Fed's growth of transparency that you would point to and be glad that you had been associated with those developments?

MR. MEYER. Absolutely. It didn't go far enough, and at the last meeting, I used my policy go-round statement to put on the table a series of improvements in transparency that I thought were warranted. Many of them have happened already. The greatest improvement in transparency came from the evolution of the FOMC statement. And being explicit at first about bias, and then we changed it. I opposed moving away from stating a bias towards tightening or from a bias towards easing to letting the markets infer that from the public statement of whether you're more concerned about inflation or growth. The evolution of the statement was the most important development.

MR. HAMBLEY. And having the statement at all?

MR. MEYER. Oh, having the statement—you can't talk about transparency if you don't tell the public what you've done. You can't talk about transparency unless the Chairman is willing to take questions at testimony about what and why. When I say the statement didn't go far enough, I was—and wrote about towards the end of my term—in support of an explicit agreed-upon inflation objective. I felt strongly that that was a fundamental step that should be taken in the direction of transparency. It's more than transparency. It means that everybody should agree to get to the same place. That seems pretty reasonable. I wanted minutes to be released earlier. I wanted the minutes to be changed to make them more reader friendly. And I had some suggestions there.

MR. HAMBLEY. You may have also thought that the Fed's NAIRU estimate should be public.

MR. MEYER. That's what I was thinking. I don't recall whether I said that. It's a tremendous step to have the Committee give central tendency estimates of long-run inflation and of the unemployment rate in the long run. This tells you so much. This is basically coming in

part from the careful thinking of the staff, but also the preferences of the Committee. So they've taken a big step towards transparency in doing that. But I had a bunch of other suggestions, and, at the end, Greenspan said, "I think those are all very good. We'll think about that." I don't know whether or not that list ever was looked at again.

MR. HAMBLEY. Ultimately, the FOMC sped up public release of the FOMC's minutes shortly after you left.

MR. MEYER. I'm very happy with what's happened since, although the precursor of this was what was going on with the FOMC statement. My recollection is that the Chairman was resistant to most of these developments, but after a while, he appreciated how valuable they were and how useful they were to monetary policymakers.

MR. HAMBLEY. The earliest statements didn't ascribe who voted for or against. So initially, even such a fundamental thing as that wasn't done.

MR. MEYER. Before coming to the Board, I didn't read the FOMC statement. It's amazing to me how little focused I was on the details of monetary policy, reading speeches, reading the statement, and watching the testimony. Here I was, someone who was thinking about monetary policy, who had to put in his forecast assumptions about monetary policy, and how uninformed I was about what was going on.

When I got to the Board, the directive to the Federal Reserve Bank of New York was hysterical. It had the "woulds" and the "mights," and it never talked about the funds rate. It talked about increasing reserve pressure or whatever. It was the silliest thing I ever saw. I couldn't believe that that's how the Fed wanted to communicate. Now I can't remember when that was changed. To me, that was just incredibly embarrassing. And it showed that sometimes it takes new eyes to come in and say, "You've got to be kidding me." But once it's there, it's

there. It's part of the way things are done. And you're much less inclined, in the middle of the story, to say that was okay for two years, but now all of the sudden I don't like it.

MR. HAMBLEY. There it was resistance to more transparency, and it took a while. Some of the increase in Fed transparency was in response to external pressure, like the pressure from House Banking Committee Chairman Henry Gonzalez. But part of the evolution of Fed transparency came from observing the actual consequences of increased transparency and then seeing that the consequences weren't bad.

MR. MEYER. One of the things you saw as Ben Bernanke came on as a Governor and when he became Chairman was this more intense focus on the contribution of transparency to the effectiveness of monetary policy. While I believe that Chairman Greenspan was coming to believe that after initially being resistant, I don't think he ever articulated it in the way that Bernanke did and has continued to do.

Economic Forecasting

MR. HAMBLEY. You were a forecaster when you came to the Fed. How did the Fed's own forecasting evolve while you were on the Board?

MR. MEYER. At the outset, Alan Blinder, and in particular maybe Janet Yellen, had always wanted to have some role, some participation, or at least be there when the staff was developing its forecast. I would've loved to have been there, but I understood that wasn't appropriate. And I wanted the staff to tell me unambiguously what they thought and not to be influenced by what I thought. They should make their forecast. I'll make my forecast.

Even though I was a forecaster before, forecasting is a complicated, time-consuming job. Therefore, to a substantial degree, I had to trust the staff to put together a disciplined forecast. And when I made my own forecast, I was starting with theirs. I would make judgments: a little

faster growth, a little lower unemployment, a little faster inflation. But as I think most members of the Committee did, but most wouldn't admit, I began with the Board staff's forecast and then tweaked it as opposed to sitting down and doing my own forecast.

I honestly don't recall any way in which the staff forecasting process fundamentally evolved. I came to understand better how it was put together. It's a judgmental forecast, but it's done in a very disciplined way, with a lot of people participating, with a lot of sector specialists. It was an interesting way of doing it, very disciplined.

MR. HAMBLEY. Disciplined in what sense?

MR. MEYER. Disciplined in that they were looking at a lot of economic regularities, because there is not a single consumption function, there were several. They look at all that information and the different relationships, and they decide which of the variables they think are most important right now and which of these do they think they want to be persuaded by and which one they want to emphasize.

The only major innovation that I can think of was the forecast by the model group. That model later became to be called, affectionately, "FRB/US," F-R-B-U-S model. I had a particular routine leading up to an FOMC meeting where, for the forecast, I would talk to the model group that made their own forecast and the judgmental group. And I had a particular order. I wanted to speak to the forecast team earlier, because they would bring me, before I saw the Greenbook, a comparison of the Greenbook and the model forecast. I could then talk to them about what the differences were. The model forecast was put together in a very pure way, with really no judgment involved. I called this "the judgmental forecast without a model and the model forecast without any judgment." And they should just meet in the middle. That's what I always thought.

When they came in to me the first couple of times, I'd look at them and say that they've destroyed their credibility right off the bat. They'd get me a number here for the quarter, maybe that has just ended, and it's crazy. Absolutely no way that could be true. And they let the model run at a time when they should've known what that number is. It's a data exercise. Just look at the numbers, add up the monthly data, put in a reasonable guess, and at least start off so you have some credibility going forward. That was the one thing I influenced, that they fixed the first quarter and then went off from there.

I loved to talk to both groups. At some point, perhaps when David Stockton became director of the Division of Research and Statistics, they began to use the model in a more effective way to complement the judgmental forecast. The way you want to use the model is to overlay the judgmental forecast, force it onto the model, and see how it conflicts with what the model would've forecast. You look at the errors that would've occurred if you had used this judgmental forecast and you say, "If that's your forecast, this equation will overpredict in a way it never has in the whole historical experience. So you can't tell me this, it can't possibly happen." That's wonderful interplay. That's what model-based forecasting is really all about.

I can't really think of changes. What I do know is that when it came to the forecasts of FOMC participants themselves, I wanted quarterly instead of semiannual forecasts. I wanted more variables. I wanted the core PCE (personal consumption expenditures) instead of the CPI (consumer price index). So I did a variety of things that made enough sense that they were later done.

The Chairman hated that exercise. I don't know whether Bernanke participates now, but Greenspan certainly didn't participate in submitting forecasts. Perhaps it's understandable that the Chairman had his own reservations about the staff forecast, because it used this structural

model that he thought either left things out or couldn't respond quickly to changing structural developments in the economy, which to some extent was true. I think he believed that at least the staff put together a disciplined forecast, but what could you expect from the members of the FOMC themselves, most of whom weren't economists? So that to him was a silly exercise. I think Bernanke thinks that's a very disciplining exercise, a very good one to force FOMC members to put down on paper what they believe and what's guiding their own judgment on monetary policy. And I completely agree with that.

MR. HAMBLEY. What was Greenspan's own relationship with the Greenbook forecast? He didn't do what Alan Blinder wanted to do. He didn't do what Janet Yellen wanted to do. Did he want them to produce a forecast supporting his own policy choices?

MR. MEYER. He wanted them to provide independent information. And he didn't really care what they said. He was going to be undeterred in his own views, but he did want independent information. He didn't push the staff in one direction or another. And the result was a staff forecast that was often inconsistent with what Greenspan thought. He was going to be totally independent. Therefore, he didn't really care. But he was good enough that he didn't impose his views about the economic outlook by limiting and forcing the staff to converge to his own views.

The Fed has a powerful staff, and these people couldn't have tolerated interference with their forecast. You're talking about the independence of a central bank. We're talking about the independence of the staff. They play a very special role. I felt very strongly that the staff does not support the Chairman. The staff supports the Board and the FOMC. The staff should be as sensitive to anything I say as they would be to what the Chairman says. I didn't try to influence

them, I tweaked them. I tried to get them to tell me a coherent story, to explain things that I had trouble with. They explained it, and they were going to make their own judgment.

MR. HAMBLEY. But the Fed has a powerful Chairman who most of the time has a clear idea of where he wants to go. Then you have the staff forecast, which is doing its own thing. Yet everybody is doing their forecast of the economy around the staff forecast, around the Greenbook. So when you're representing what the Fed has done to the outside world, how do you come up with any consistency between these stories?

MR. MEYER. Who cares? Governors aren't supposed to go out there and present an alternative forecast. The Chairman downplays the staff forecast in his monetary policy testimony. So, essentially, you have in the very background here the FOMC forecast, their semiannual forecast. Nobody's really paying a lot of attention to them at that time.

Under Bernanke, it's different. He values the staff. His views are going to be consistent with the staff. He's not going to go out there and make his own forecast. That's why he has a staff. Even so, he doesn't really organize his monetary policy testimony around the explicit quantitative forecast. But he is always going to be in line with the staff. In general, he values that process, values the staff more than perhaps Greenspan did.

But Greenspan would be the first to say that there is no central bank in the world, there is no institution in the world that has as capable and as dedicated a staff as the Fed does. He absolutely was a big fan even though he had a lot of experience. He'd been through a lot, and he was going to make his own judgment. Most of the time, Greenspan wasn't out of step with where the staff was. We're really talking about an unusual episode where the Chairman was all alone on the productivity acceleration. The staff completely disagreed and was not shy about telling the Chairman they didn't agree, although sometimes I'd have to buttonhole them

afterwards and say, “Did you believe that?” One of my favorite episodes was when the Chairman came up with something I thought was poorly thought out, a little bizarre, to defend his views. Staff came running into my office and said, “We didn’t see that before. Don’t blame us. We didn’t think that. Don’t worry.”

Leaving the Board

MR. HAMBLEY. Why did you decide to leave the Board?

MR. MEYER. When I was nominated, when I was talking to my wife about it, we looked at the remaining term of five and a half years and said, “That is perfect.” I loved being on the Board. I hated to leave, in that respect. But there were two things.

It was, first of all, a financial decision. In 2002, I was 58. I hadn’t made a lot of money. I was a professor. I was with a firm that was fledgling and growing, et cetera. I felt that I had to look after my family. I had to take care of my retirement. And it didn’t hurt that I understood that my value in the private sector had increased dramatically as a result of my experience at the Board. I didn’t have an idea by how much, but I appreciated that was the case. So it was really a financial decision.

But it had to be colored to some extent by the fact that I probably couldn’t have been renominated if I wanted to. There was only a 20 to 25 percent chance that I would’ve been renominated by Bush. The reason that it was so high was because the Republicans liked me better than the Democrats. I got along with the Republicans much better than I did with the Democrats. But my recollection at the time was that the President had made some reappointments, and he probably wasn’t willing to make another one of somebody who wasn’t more Republican. I certainly didn’t want to subject myself to a situation in which I wanted to

stay and couldn't get renominated. But that didn't make any difference for me. So it was giving up something that I loved to do.

But I've never had more fun than currently. I'm having much more fun than when I was on the Board. I enjoy my freedom. I look back at my days on the Board as the highlight of my career. Public service is very uplifting. It's important. I found it rewarding. I know I would have felt that I missed the opportunity and would be sorry if I missed the opportunity, whether it was to be in an Administration or someplace in public service. And I'm lucky that it was at the Board, because the Board is a place where there's no partisan bickering. You can say whatever you want inside, just to a lesser extent outside. But you're sitting together. You're collaborating even if you, on some things, don't really so much have a vote. But you can present your views. You can try to influence the Chairman's thinking. And nobody's going to say that's a Democratic point of view, that's a Republican point of view. Nobody's going to take sides. On regulatory matters, that was different. You did see this difference between Republicans and Democrats come through, but never in a really partisan way. There are different views here that people have that get reflected there. But for monetary policy, it shouldn't matter at all. It does today, but it didn't then.

MR. HAMBLEY. Thank you very much for taking so much time with us.

MR. MEYER. My pleasure. It was fun.