Inside the FOMC

In his new book, a former Fed governor provides a rare glimpse of the inside workings of the Greenspan Federal Reserve.

When I was sworn in as a governor on June 20, 1996, the economy was in the sixth year of an expansion. The Dow Jones Industrial Average was up more than 20 percent for the year, manufacturing was picking up steam, and home sales were hitting their highest marks in a decade.

But in the cool confines of the Federal Reserve, the celebration was muted. Already, many staffers were worrying that the strong growth and low level of the unemployment rate would soon encourage workers to demand higher wages. Those demands, in turn, would begin fueling inflation, which had burned through the economy with such destructive force in the 1970s and 1980s.

With the economy growing strongly and already near full employment, the mission of the Fed was to encourage a "soft landing." In economic terms, a soft landing occurs when growth slows—just as the economy reaches full employment—so that the unemployment rate remains steady. If inflation is also low enough, at this point, then the FOMC has achieved its two primary objectives, full employment and price stability.[1]

It's analogous to an extraordinarily smooth aircraft landing, so perfect that you want to applaud the pilot: In this case, the pilot is the FOMC, the airplane is the actual output of the economy, and the runway is the maximum sustainable output of the economy.

In the best of all worlds, the FOMC pilot should be able to bring a soaring economy right down onto the firm surface of the maximum sustainable level of output—without blowing out all the tires. Unfortunately, as I learned over the next few years, it takes a lot more luck to land an economy than it does an airplane.

Nevertheless, it was the issue of bringing the economy down to earth that dominated my first FOMC meeting on July 2 and 3, 1996. Walking into the Fed, you get the feeling that important business is being done here. And so it was that day.

As Alice Rivlin and I entered the room, we were welcomed warmly into the club. I had already met the other Board members—Mike Kelley, Larry Lindsey, Susan Phillips, Janet Yellen, and, of course, Alan Greenspan—but I had previously met only a few of the Reserve Bank presidents.

The senior Fed staff members were also milling about—including Mike Prell, in charge of preparing the staff forecast of the U.S. economy; Ted Truman, director of the Division of International Finance, in charge of monitoring developments in foreign economies; and Don Kohn, director of the Division of Monetary Affairs, in charge of providing guidance about policy options. Prell, Kohn, and Truman played an important role in

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From the book A Term at the Fed: An Insider's View, *by Laurence H. Meyer. Published by arrangement with HarperCollins Publishers Inc.*

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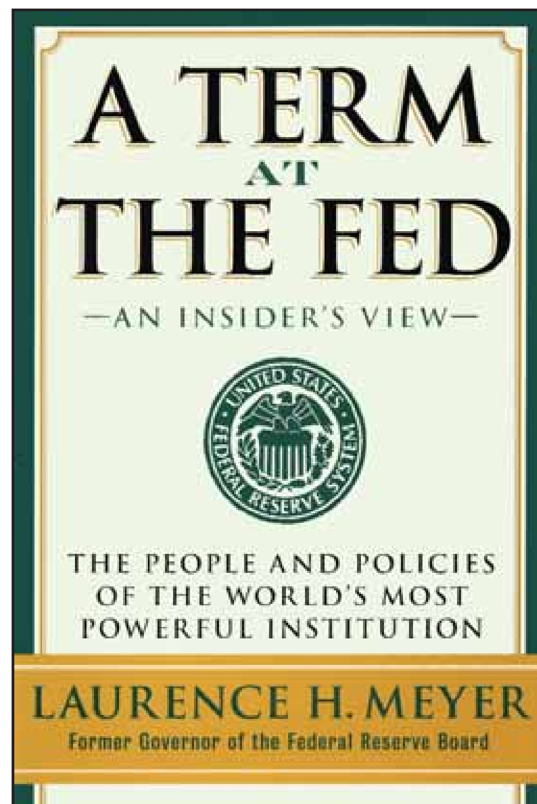

Former Federal Reserve Board Governor Laurence H. Meyer (1996–2002) in *A Term at the Fed* describes how decisions are made at "the most powerful institution in America."

preparing the Board members for FOMC meetings. They also provided guidance to all the Committee members during meetings. As a result, they wielded considerable power. For that reason, as I have mentioned, they have been dubbed "the Barons."

A few minutes later, Greenspan entered the room and walked immediately to his place at the imposing mahogany meeting table, signaling everyone else to take their respective chairs. He already had his game face on, that inscrutable expression behind reflective glasses. The Chairman, I noted, entered from a door that connects to his office. The rest of us entered through the main door of the boardroom.

I FIRST MET the Chairman in December 1994, when I was invited to sit on a panel of academics and present my views on the outlook and monetary policy to the Board. I had seen him three times since then, once at another academic panel discussion at the Board, again at the ceremony for my nomination as governor, and finally at my confirmation hearing. But I had never been in the inner circle before. Now I was about to learn the secrets of the temple.[2]

AS WE SAT DOWN for my first FOMC meeting, I noted that Norm Bernard, the deputy secretary of the FOMC, was seated to the Chairman's right. He was there to keep the agenda on track, help the Chairman determine whose turn it was to speak next, read the proposals as they came up for a vote, and conduct the roll call vote. To the right of Bernard was William McDonough, president of the Federal Reserve Bank of New York, the Vice Chairman of the FOMC, and a permanent member of the Committee.[3] To the left of the Chairman was Alice Rivlin, the new Vice Chair of the Federal Reserve Board.

The remaining governors of the Board were seated relative to the Chairman according to their seniority on the Board. Just so they didn't get it wrong, their names appeared on little plaques on the chairs. The other Reserve Bank presidents also sat around the table in a prescribed order, for which no one could seem to remember the logic. The staff Barons also had a place at the table, while the other members of the staff were seated in chairs on all four sides of the room.

Now I noticed a green light come on in front of the deputy secretary, indicating that the meeting was being

recorded. First, Alice Rivlin and I were formally welcomed by the Chairman. Then Peter Fisher, the manager of the system's portfolio[4] and an officer of the Federal Reserve Bank of New York, briefed the Committee on developments in the financial and foreign exchange markets, using an array of charts to drive his points home. He also reviewed the operations conducted on behalf of the Committee in the government securities and foreign exchange markets.

As I learned over the next few years, it takes a lot more luck to land an economy than it does an airplane.

The core of the meeting began when Mike Prell, thin, bearded, and intensely devoted to the Fed's mission, presented the staff forecast for the U.S. economy. He began by noting that the economy had grown at about a 3 percent rate in the first half of the year, while potential output[5] was growing at a 2 percent rate. This disparity could turn out to be a problem: If the economy was actually growing faster than its maximum sustainable level, the unemployment rate—which was already low—would fall still further. If so, workers would be increasingly successful in their demands for higher wages, which could raise prices and ignite an upward spiral of inflation.

As Prell continued with his forecast, nothing he said came as any great surprise to us at the table: We had already received the forecast in what is called the Greenbook, a report (with a green cover) that is traditionally delivered to Committee members toward the end of the week before the FOMC meeting. I had had my nose buried in my copy of the Greenbook all weekend, in fact.

The numbers in the Greenbook offer probably the best and most worked-over economic forecast available. The Fed's own staff economists, who are certainly among the best and the brightest forecasters in the land (and have the most extensive resources on which to build their forecasts), put it together. Although each of the governors and Reserve Bank presidents comes to the table with his or her own forecast, the Greenbook plays a dominant role in shaping the Committee's views. For that reason, I began to call the Greenbook the thirteenth member of the FOMC.

Before I joined the Board, I wondered whether the Greenbook was really the staff's independent judgment of economic trends or if it was the Chairman's personal forecast, rubber-stamped by the staff. By the end of my very first meeting—after I had seen Greenspan disagree with the staff's forecast for inflation and productivity growth—I realized it was theirs alone.

As the meeting got under way, the staff and some of the Committee members voiced their concern that the economy was "overheating"—reaching the point of growth and low unemployment that would trigger rising inflation. They based this opinion on the view that unemployment was already below its "full employment"[6] level and might be poised to decline further.

But others at the table disagreed. Certainly the unemployment rate was low. But perhaps it wouldn't spark inflation this time. Could some fundamental economic change be under way that would alter the traditional rules? Perhaps there was a boost in productivity—allowing for faster growth and lower unemployment, without an upward trend in inflation.

Productivity refers to the amount of output produced per hour of work, on average, in the nonfarm business sector of the economy. The higher the level of productivity, the higher the level of output that can be produced (for example, when the economy is operating at full employment). And the faster productivity grows, the higher the maximum sustainable rate of growth of output—that is, the faster output can grow without the threat of overheating and triggering higher inflation.

The senior Fed staff members wielded considerable power.

As was generally the case, the debate moved calmly and thoughtfully from one member to another. No one was pontificating. We were struggling with these issues both individually and as a group.

For his part, the Chairman was especially supportive of the productivity explanation. In particular, he believed that computers and other communications technologies might be giving the economy the ability to grow faster and to operate at higher output levels than

ever before—without triggering an increase in inflation. The phrase hadn't been coined yet, certainty not in capital letters—but was this a New Economy?

I knew that Congress and the administration had been raising this very issue. Politicians, in general, liked the idea that a "New Economy" might have arrived, one that allowed the economy to grow faster than ever

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before. This was good for the country, in their opinion, and also, let's be honest, good for their political careers. Not surprisingly, these politicians wanted the FOMC to believe in the New Economy, too. If we did, then we would be far less inclined to raise interest rates and dim the lights on their party.

I expected this from the politicians. But what surprised me was how strongly the Chairman (whom some members of Congress had frequently criticized for resisting the New Economy concept) was now passionately supporting the idea.

For myself, I was not convinced that there was a New Economy. I saw the economy in a more traditional way, one in which continued above-trend growth and further declines in the unemployment rate would threaten a rise in inflation. But I had to admit that, even though the unemployment rate was already at a level that, in the past, might have been expected to trigger higher inflation, inflation was not a problem. In fact, inflation was declining. So while I was not sold on the idea that the economy had fundamentally changed, I still recognized that something out of the ordinary might be under way.

When Prell had finished with the discussion of the forecast for growth and employment, he turned to the prospects for inflation. The overall inflation rate, as measured by the Consumer Price Index (CPI), was running at around 3 percent, he said, and core inflation—the rate for goods and services other than food and energy and the measure of inflation that the FOMC tended to focus on most—was slightly above a 2.5 percent rate.[7] Furthermore, he said, according to their forecast, core inflation would likely rise in the near future, to about 3 percent in 1997.

That remark drew concerned looks from most of the governors and Reserve Bank presidents around the table. The 2.5 percent rate for core CPI inflation was already above their comfort zone. And now Prell was telling them it might climb even higher.

TO UNDERSTAND THE LOGIC of the staff forecast, you need to understand the NAIRU. This has been called one of the most powerful influences on economic policy in modern times. It is also central to how the FOMC staff forecasts inflation.

According to the NAIRU model, inflation will remain steady if the unemployment rate is just equal to a critical threshold, which is called the NAIRU. At this point, there is an equilibrium in the labor market—a balance between the supply of workers and the demand for workers. At this balancing point, there is neither pressure for wages to rise faster nor pressure for them to rise more slowly.

However, if the unemployment rate falls below the NAIRU, there will be an "excess demand" for workers. As a result, wages will start to rise more sharply.[8] A faster pace of wage increases, in turn, will push up inflation.

In the NAIRU model, it is helpful to view the relationship between the unemployment rate and inflation as a seesaw. There is a balancing point, where unemployment and inflation are both stable. That balancing point is the NAIRU. As unemployment descends, according to the seesaw analogy, inflation rises.

I began to call the Greenbook the thirteenth member of the FOMC.

But the NAIRU model is like a seesaw with a bad attitude. If the unemployment rate falls below the NAIRU, and stays there for very long, inflation will rise in a self-reinforcing spiral, rising further and further. You don't want to be on that seesaw. Neither did the FOMC.

If overheating and higher inflation threaten the economy, the FOMC is supposed to swoop in and raise interest rates. That's what the textbooks say. But we were around the FOMC table, not in a classroom. The

question we faced was whether the rules had changed: Whether there really was an imminent threat of inflation—and whether the time had come to cool the economy in order to prevent a rise in inflation.

This leads to another problem about the NAIRU: The concept is about as controversial as global warming and possibly as emotional. Some economists believe passionately in the NAIRU. When unemployment threatens to fall below the NAIRU, they demand preemptive action from the Fed to avoid a rise in inflation. Others, just as passionately, argue that the NAIRU is a myth. They claim that there is no particular rate of unemployment which results in a faster pace of wage increases and no set relationship between unemployment and inflation.

A lot of people fall in between. Many believe in the concept of the NAIRU but are uncertain where it is. That uncertainty made it difficult to marshal support for a preemptive attack on inflation—that is, for raising interest rates in anticipation of a rise in inflation.

When I joined the Board, I came with a strong commitment to the NAIRU concept. In my private consulting business, we had won awards for the accuracy of our forecasts. I always noted the contribution of our NAIRU-based model, in particular, to the accuracy of our inflation forecasts. What surprised me, once I joined the FOMC, was the extent to which my belief in the NAIRU was challenged, not only in terms of my estimate of the NAIRU, but in terms of the validity of the NAIRU model itself.

When a Committee member wants to make his presentation, he winks at the deputy secretary.

Indeed, my beloved NAIRU was not working as it should: Although unemployment had been below the prevailing estimate of the NAIRU for nearly two years, inflation had not reared its ugly head. My NAIRU paradigm had predicted a rise in the core inflation rate, but inflation was stable, even declining slightly. Something was amiss.

We were now grappling with a seductive proposition: If economic growth could be stronger than previously imagined—and the unemployment rate could fall to a level that in the past would have triggered higher inflation without triggering inflation—then the FOMC might not need to raise rates as hurriedly as it had in the past. Could the economic expansion we were experiencing in the summer of 1996 be sustained without the FOMC tapping on the brakes? We didn't know. We were fumbling around in the dark, wondering what would happen next.

AFTER THE COMMITTEE had the opportunity to ask the staff questions about their forecast, we were ready to begin the outlook "go-around." In this segment of the meeting, each member of the Committee had an opportunity to make a brief presentation on the outlook. By tradition, the presidents go first, reflecting the fact that they bring a rich supply of anecdotal information gleaned from interactions with businesspeople and community leaders in their districts.[9] Anecdotal information delivers a different perspective from that of the data and is especially valued in that it arrives fresh and without the time lag of the data.[10]

Reserve Bank president Al Broaddus from the Richmond Fed began the go-around, noting that his inflation forecast was similar to that of the staff. For that reason, he was arguing for a tightening of monetary policy. Bob Parry, president of the San Francisco Bank, agreed, noting that the risk of rising inflation was "alarming." Presidents Mike Moskow from Chicago, Cathy Minehan from Boston, and Tom Hoenig from Kansas City all said that they saw upside risks to both growth and inflation.

I knew that Greenspan was less concerned with rising inflation at this time and was also inclined to keep rates as they were. So I was surprised to see the Reserve Bank presidents so openly laying their cards on the table. They were not afraid to challenge the Chairman. This meeting was going to be more interesting, I mused, than I had imagined.

Others around the table disagreed with the first group of Reserve Bank presidents. President Edward Boehne of the Philadelphia Fed, for one, noted that inflation was in fact falling, not rising. The Committee needed to be "watchful," he said, but didn't need to tighten rates at this meeting. Presidents Jack Guynn of Atlanta and Jerry Jordan of Cleveland agreed.

While the presidents begin the outlook go-around, the order of presentations is otherwise set through what I call the "wink" system. When a Committee member wants to make his presentation, he winks at the deputy secretary, who then puts the member on the list, in the

The NAIRU: The concept is about as controversial as global warming and possibly as emotional.

order of the winks.

I also learned that FOMC meetings are more about structured presentations than discussions and exchanges. This surprised me. Each member spoke for about five minutes, then gave way to the next speaker. Many read from a prepared text or spoke from a detailed outline, diverging only occasionally to include a comment on what was said earlier in the meeting. To my surprise, what evolved was not a spontaneous discussion, but a series of formal, self-contained presentations.[11]

After the presidents had spoken, and my wink had come to the top of the list, I was able to address the Committee for the first time. I was a bit nervous, but very energized.

I began by noting that the staff and I had the same number in mind for the NAIRU, about 5.75 percent. That said, I quickly conceded that the unemployment rate had been below my NAIRU estimate for nearly two years—without any broad-based evidence of an acceleration in inflation. Indeed, core inflation had declined in 1996.

That suggested that my estimate of the NAIRU might be a little too high, I said. But that did not justify abandoning the NAIRU model, I continued, a model that (in my view—and the staff's) had previously been so useful in forecasting inflation. My defense of the NAIRU must have made an impression, for from then on, I would be tagged as the NAIRU guy, both inside the FOMC and out.

After the outlook go-around was completed, the Chairman turned to another topic, the meaning of the FOMC's price stability objective.[12] In other words, what level of inflation should the FOMC shoot for—and why? This discussion turned out to be one of the most interesting ones I participated in during my time on the FOMC.

Janet Yellen, who had taught economics at Harvard, the London School of Economics, and most recently at Berkeley, was the first to address this question. She was very much respected by the members of the Committee, the staff, and the Chairman. I soon became her biggest fan on the Committee.

There is no doubt that low inflation is advantageous, Governor Yellen began. But, she argued, there are also significant costs to very low inflation. If there is zero inflation, for instance, then monetary policymakers cannot lower the "real" interest rate below zero.[13] A little inflation, therefore, gives monetary policymakers a greater degree of latitude to stimulate the economy, permitting them to drive real short-term rates into negative territory, if necessary, to stimulate the economy.

Furthermore, she said, a little inflation "greases the wheels" of the labor market. Relative wages across different industries and occupations must be free to change, thereby signaling workers to migrate from one industry or occupation to another. If there was no inflation, some wages would rise, but others would have to fall.[14] There is, however, some evidence that workers are reluctant to accept outright declines in their wages. In this case, it might be impossible for relative wage rates to vary enough to ensure an efficient allocation of labor across industries and occupations. If there was a little inflation, however, and therefore a higher average rate of wage increases, some wages would rise more slowly than the average, but none of the workers would have to experience an actual decline in their wages.

In arguing that inflation could be too low as well as too high, Yellen anticipated the deflationary problems that Japan would face in the second half of the 1990s.

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The FOMC's definition of price stability, she was saying, should be true price stability—plus a cushion. It should first allow for the upward bias in measured inflation rates (perhaps 0.5 to 1 percentage point for the CPI) and then add an additional amount, perhaps another percentage point, to provide that extra latitude for the FOMC to ease, if necessary, and to grease the wheels of the labor market. Today her comments would pass as conventional wisdom, but at that time the case for a positive inflation target had not been articulated so clearly.

This was the only time in my years at the Board that anyone successfully baited a number out of the Chairman.

Yellen concluded that a cut in inflation from the current 3 percent rate to 2 percent would "very likely, but not surely" yield net benefits. This reflected her assessment that the "grease the wheels" argument would not be very significant at a 2 percent inflation rate, but would be more compelling as inflation fell below 2 percent. She added that she would be increasingly skeptical of any net benefits as inflation declined to a level below 2 percent.

When she was finished, Greenspan looked over and said, with a tone of surprise and implicit criticism: "You did not even accept…price stability as a goal." The Federal Reserve Act states explicitly that the Fed should promote price stability, yet Janet had called for a positive inflation rate.

She thought for a moment. "I would simply respond to that by saying that the Federal Reserve Act directs us to aim for both maximum employment and price stability. …I do not read the Federal Reserve Act as unambiguously telling us that we should choose price stability and forgo maximum employment," she replied with a cool smile. If there was a conflict between the two objectives, Yellen believed it was up to the Committee to reconcile them. She concluded that she would opt for a 2 percent rate of inflation and maximum sustainable employment as the FOMC's objectives.

Although I was unaware of it then, this was an unusual exchange. Yellen was directly challenging the Chairman's views. She was getting away with it, I suppose, because of her style and great smile. Of course, as I would come to appreciate later, the Chairman never shied away from a good intellectual battle.

"Mr. Chairman, will *you* define 'price stability' for me?" Yellen asked.

The Chairman considered for a moment and then responded with a characteristic, vague definition: "Price stability is that state in which expected changes in the general price level do not effectively alter business or household decisions," he said. That is, price stability existed when inflation was so low that people didn't pay attention to expected changes in the price level in their household and business economic decisions. This definition allowed the Chairman to assert the importance of price stability, and his commitment to it, without ever having to name a numerical inflation target.

Although I suspect that most of us were dissatisfied with that answer, only a few would have dared press the Chairman further. But Yellen was on a roll. "Could you please put a number on that?" she asked boldly.

Before the Chairman could respond, he had to wait for the laughter to subside. But he was surprisingly willing to do so. "I would say the number is zero, if inflation is properly measured," he said.

This was the only time in my years at the Board that anyone successfully baited a number out of the Chairman. Yellen countered, saying that she preferred 2 percent, imprecisely measured. That was precisely the number that I would have named.

Now the debate spread across the table. A few members said they didn't believe that inflation could be too low. They preferred a target of zero inflation—price stability, pure and simple. I said I supported Yellen's analysis and choice of 2 percent as the FOMC's inflation objective. Other members—most, in fact—favored holding core inflation to the prevailing 3 percent rate and then moving slowly to reduce it to 2 percent. The Chairman later summarized the discussion: "We have now all agreed on 2 percent."[15]

Now that the Committee had reached a consensus on the implicit inflation target, it could identify whether inflation was above or below its objective. Since core CPI inflation was about 2.5 percent, inflation was running modestly above the Committee's preferred target. The next question was whether monetary policy should follow a "deliberate" or "opportunistic" strategy toward reducing inflation over time.

The "deliberate" strategy judges the success of policy exclusively by whether it lowers inflation toward its target whenever inflation is above the target. The "opportunistic" strategy calls for policy initially to en-

courage full employment and trend growth, hopefully preventing a further increase in the inflation rate, and, over time, to take advantage of "accidents" that would lower inflation toward its target (for example, an unexpected and unavoidable recession).

I preferred the opportunistic approach and, indeed, before joining the Board had coined the phrase *opportunistic disinflation* to describe this strategy. Most of the Committee members had said they wanted to hold the line on inflation—or at least prevent inflation from rising above a particular ceiling. The ceiling, as I noted earlier, was generally considered to be 3 percent, although most of the members wanted to see inflation reduced gradually over time until the 2 percent target was achieved.

The following morning, the Chairman reminded us of "the highly confidential nature of what we talk about at an FOMC meeting." He looked at us around the table and said quietly, 'The discussion we had yesterday was exceptionally interesting and important. I will tell you that if the 2 percent inflation figure gets out of this room, it is going to create more problems for us than I think any of you might anticipate."

Greenspan did not elaborate on his concerns. But I suspect he worried that the discussion might be interpreted by some, including members of the Congress, as suggesting that the FOMC would henceforth focus its attention more single-mindedly on inflation, thereby paying less attention to its obligation to promote full employment.

In any case, the transcripts have been out for about two years now, and I have yet to hear much outcry about the discussion. Of course, that may be because no one reads the transcripts.

That may be because no one reads the transcripts.

FOLLOWING THIS WARNING, our discussions turned to monetary policy—the setting of a target for the federal funds rate. The federal funds rate is the interest rate that banks pay when they borrow reserves from one another. It, in turn, affects mortgage rates, bank loan rates, and rates on commercial paper and corporate bonds. The federal funds rate also sways equity prices, which in turn affect consumer spending (through the effect on household wealth) and business investment (through the effect on the cost of financing the purchases with new issues of equity).

The FOMC tries to achieve its objectives—full employment and price stability—by adjusting the federal funds rate to influence the level of aggregate demand—that is, the spending by households and businesses. If output is below the level consistent with full employment, the FOMC will lower or ease interest rates to stimulate spending of households and firms, encouraging firms to raise production and hire more workers. The Taylor rule—which I found to be a useful set of guidelines for making monetary policy while I was on the FOMC—suggests that policymakers lower the federal funds rate by 50 basis points (0.5 percentage point) in response to a 1-percentage-point decline in output relative to potential.

If the economy is overheated and inflation begins to rise, the FOMC will raise or tighten interest rates to restrain spending by households and businesses. This then restores production and employment to levels that are consistent with stable inflation. Of course, to ensure that the "real" federal funds rate rises, the FOMC must raise the federal funds rate by more than the increase in inflation. This is the most important rule for central bankers to follow. In this case, the Taylor rule calls on monetary policymakers to raise the funds rate by 150 basis points in response to a 1-percentage-point increase in the inflation rate. This would raise the real federal funds rate by 50 basis points in response to a 1-percentage-point increase in inflation.[16]

We now had some policy decisions before us. First, we had to decide whether to tighten policy, ease policy, or keep policy unchanged. Second, we had to choose the Committee's "policy bias"—in other words, the direction in which we were leaning for future policy decisions. This was to give the financial markets some warning of where we were heading.

The FOMC's policy bias at the time was either "symmetric" or "asymmetric." Although symmetric meant there was an equal chance of tightening or loosening rates in the future,[17] in practice, a symmetric posture implied there was little prospect for a change in rates in either direction in the near term. An asymmetric bias, on the other hand, meant that the FOMC was leaning in one direction or the other, either toward raising or lowering rates.

An asymmetric directive was sometimes interpreted as a license for the chairman to hike rates or lower them between FOMC meetings. Technically, the Chairman, at that time, had the authority to change

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policy in between meetings whenever he wanted and without consultation with the Committee. Some chairmen took advantage of this power, although during my term Greenspan always chose to consult with the FOMC members before intermeeting moves, with the governors assembled in the boardroom, and with the presidents connected by phone.[18]

The asymmetric directive also played a role in providing financial markets with a heads-up. The FOMC does not like to surprise the markets, so moving to an asymmetric directive prepares them for a possible policy change. It also allows the markets to more confidently price the expected course of monetary policy into long-term interest rates.[19] The effectiveness of monetary policy, I learned, depends not only on decisions taken about the funds rate at each meeting, but also on the expectations that monetary policymakers convey to the markets about the future course of monetary policy.

Finally, an asymmetric directive allowed the Committee to shift gradually from no change in policy to a tightening or loosening of rates. It provided a middle ground—a compromise—that often helped the Committee reach a consensus. If the Committee believed there was a strong possibility that a policy move would be needed in coming months, but could not reach a consensus on the timing of that move, an asymmetric directive could serve as an acceptable solution.

We all knew that Greenspan would disproportionately influence the outcome of the policy decisions.

DON KOHN, always calm and thoughtful, and perhaps the staff member the FOMC members relied upon most frequently for guidance at meetings, now led us to the various policy options that might be appropriate in light of the outlook. In this endeavor, the staff never provided a specific recommendation on the appropriate policy direction for the Committee. Instead, its role was to help the Committee understand the policy options, given the prevailing economic conditions and uncertainties.[20, 21]

We'd already seen these options outlined in what is called the Bluebook, which had been circulated to us earlier. The Bluebook generally suggests the two most likely policy options, given the economic landscape, and provides a coherent rationale for each.

The first option in this case was to hold the funds rate constant. This option rested, in Kohn's views, on two arguments: first, that policy was already restrictive enough to keep inflation from rising much, if at all; and second, that there would be relatively little cost in waiting to get a clearer picture.

The first argument was based on the relationship between the federal funds rate and its neutral value. The concept of a neutral rate plays an important role in the Committee's thinking and is the final component of the Taylor rule. The neutral rate is the rate that would provide neither stimulus nor restraint to the economy. This rate would be appropriate when the economy is sitting happily at both full employment and price stability.

The federal funds rate at the time was about 0.5 percentage point above the staff's estimate of its neutral value.[22] So policy could be interpreted as already being slightly restrictive. This meant that policy might already be consistent with slowing growth, as projected by the staff, and consistent therefore with achieving a soft landing.

Second, Kohn noted that even if the unemployment rate was already below the NAIRU, it was unlikely that it was far below the NAIRU. In this case, if inflation rose, the rise would be small and gradual.

Members sometimes got giddy with the prospect of actually having an opportunity to debate some aspect of the policy decision at the meeting and decide on it, as opposed to accepting the Chairman's recommendation.

There would be little damage in holding rates unchanged, therefore, even if the staff estimate of the NAIRU was correct. This would allow us more time to assess whether or not the unemployment rate was in fact below the NAIRU.

Kohn then provided a rationale for the second option on the table, which was raising the federal funds rate. The case for a tightening, he told us, rested on the notion that "short-term rates likely will need to be tightened at some point to keep inflation in check." He also noted that "waiting risks complicating the conduct of policy down the road;" in fact, "the longer the adjustment is postponed…the larger it will have to be." In other words, the rate would ultimately have to rise enough not just to contain inflation, but to reverse any increase in inflation that occurred because of the delay in raising rates.

This was a clear argument for preemptive monetary policy. It could stop a rise in inflation, or at least minimize the increase. And it would also reduce the total amount of tightening that might otherwise be required.

Finally, Kohn turned to the policy bias. Should the Committee remain symmetric, or should we move to an asymmetric posture? If the Committee chose not to raise rates at this meeting, Kohn counseled us, but saw the risks as decidedly skewed toward the need for a tightening, we might consider the asymmetric directive. Kohn's suggestion immediately provided a formula for a consensus—holding policy unchanged but

The Committee, at this time, did not even officially admit it had a target for the federal funds rate.

explicitly recognizing the risk of higher inflation and leaning toward a possible subsequent tightening.

THE PREVIOUS DAY, as was his custom, Greenspan chose not to participate in the outlook go-around. He preferred to wait for the policy go-around before initially addressing the Committee. I soon came to understand why: This arrangement gave him the final word on the outlook and, simultaneously, the first opportunity to set out a policy recommendation. This made it easier for him to build a consensus around his own positions.

The anticipation built as Greenspan prepared to speak. We all knew that he would disproportionately influence the outcome of the policy decisions. In fact,

While this is not written anywhere, the Chairman is expected to resign if the Committee rejects his policy recommendation.

he would almost certainly define them. His remarks would also often bring new data and a unique perspective to the table. But what surprised me most was that regardless of how obscure the Chairman was in his public declarations, he was much clearer and to the point when speaking to the FOMC.

This was always the case when he presented his recommendation for the target for the federal funds rate. He always made a specific recommendation. He also usually indicated his preference for the policy bias—whether he wanted a symmetric or asymmetric posture. On occasion, however, he left this decision to the Committee. When he did so, it seemed to energize the Committee. Indeed, members sometimes got giddy with the prospect of actually having an opportunity to debate some aspect of the policy decision at the meeting and decide on it, as opposed to accepting the Chairman's recommendation.

The Chairman began by noting the tension between the incoming data and the staff's forecast. "We obviously are viewing an economy that at the moment does not resemble most of our textbook models," he said. "The unemployment rate is low and has remained low for quite a while. Anecdotal evidence continues to indicate tight labor markets, but…broader measures of price inflation are, if anything, still declining."

Despite this tension between the data and the conventional NAIRU model, the Chairman took a balanced view. He was not suggesting that we abandon the old model, but that we recalibrate it to account for a high-

er level of sustainable output and employment than we had previously imagined.

In terms of the outlook, he voiced his skepticism about the staff's forecast for higher inflation, arguing that an acceleration in productivity might be allowing the economy to grow faster than previously and operate at a lower unemployment rate without rising inflation. At the same time, he expressed concern about the tightness of the labor markets and suggested that a further tightening of those markets could trigger higher inflation.

This was characteristic of the Chairman's stance throughout the second half of the 1990s. He understood that there were new possibilities (higher productivity growth and a lower NAIRU) to take into account, as well as old regularities (labor markets that were already tight and likely to get tighter) that would at some point reassert themselves. By keeping a foot in each camp, he was able to argue either way—either that the economy was sound, and it would be prudent to hold policy unchanged, or that the economy was beginning to overheat, and it was time to raise rates to avoid higher inflation.

While Greenspan was a NAIRU skeptic at this time, he was not an atheist. He saw the decline of the NAIRU as a "onetime move of the goal post." In fact, he said: "Inflation is not dead. As we get closer to the new goal line, the old inflation pressures will reemerge." In this, he was noting a change in the parameters of the paradigm, not in the paradigm itself.

When it came to the policy, the Chairman said he believed we had "the luxury of waiting." He added, "Accordingly, I would hope that this Committee, while accepting alternative 'B' [holding the funds rate unchanged] to give us an opportunity to assess what is going on, would nonetheless accept an asymmetric bias toward tightening.…My judgment is that in all likelihood, if the Committee does not move at this meeting or during the intermeeting period, we probably will do so at the August meeting or later. It seems quite unlikely to me…that we will luck out and find the economy expanding at a pace that would not necessitate moving."

A debate followed the Chairman's remarks—not a noisy debate, as some outside the room would later imagine it, but one that studiously posed the alternatives before us. Some members said they would prefer an immediate tightening. Others agreed with the Chairman: It would be better to wait for additional data.

For my part, I was very comfortable with the Chairman's recommendation, although I was not as convinced as he was that we would have to raise the funds rate by the time of the next meeting or two. First, if the staff forecast of a slowdown to trend proved correct, the danger of significant overheating would be quite small. Second, I was not convinced that we were already below the NAIRU.

At this point in my term on the FOMC, the Chairman and I were on opposite sides of the policy debate (as President Clinton had expected when he appointed me). For the Chairman's part, he appeared to be preparing the Committee for a possible near-term increase in the funds rate. For my part, I believed that an immediate tightening was premature and quite possibly unnecessary in the near future. Ironically, as you will see in the coming chapters, the Chairman and I would soon trade places.

One or two dissents are not unusual. A third, however, would be viewed as a sign that the FOMC is in open revolt with the Chairman's leadership.

At the end of this discussion, the Chairman presented a proposed "directive" for the Committee to vote on.[23] Norm Bernard read it to us: "In the implementation of policy for the immediate future, the Committee seeks to maintain the existing degree of pressure on reserve positions. In the context of the Committee's long-run objectives for price stability and sustainable economic growth, and giving careful consideration to economic, financial, and monetary developments, somewhat greater reserve restraint would or slightly lesser reserve restraint might be acceptable in the intermeeting period."

As I listened, I wondered what that statement had to do with the discussion we had just concluded. Where was the decision to maintain an unchanged federal funds rate target of 5.25 percent? Where was the decision to shift from a symmetric to an asymmetric directive?

These decisions were in the message but concealed by the code. "Maintaining the existing degree of re-

serve pressure," for example, was code for leaving the federal funds rate unchanged. The Committee, at this time, did not even officially admit it had a target for the federal funds rate.[24] Meanwhile, the woulds and mights were code for an asymmetric directive. Those who read the sentence carefully enough might find the message that the Committee was more likely to raise the funds rate over time than lower it.[25]

Finally, we voted. There was no suspense in the outcome. The Chairman's recommendation would prevail.

THE CHAIRMAN'S disproportionate influence on FOMC decisions, his efforts to build consensus around his policy recommendations before FOMC meetings, and the strong tendency for Committee members to support the majority view—all these were secrets of the temple that I learned at my first FOMC meeting.

All of this was for a reason. The Chairman, by tradition, is always expected to be on the winning side of the policy vote. Indeed, while this is not written anywhere, the Chairman is expected to resign if the Committee rejects his policy recommendation. For this reason, and since the Chairman also votes first, he prefers to know in advance that he has the support of the majority of the Committee.

To ensure he has the votes to support his policy recommendation, the Chairman visits with the members of the Board in advance of FOMC meetings. When I began my term, the Chairman would meet individually with the other governors during the week before FOMC meetings. His assistant would call to make an appointment, and he would then come to the office of each of the governors. He would sit down and explain his views on the outlook and his "leaning" with respect to the policy decision that would be considered by the Committee at the upcoming meeting.

Some governors found this rather offputting. They interpreted the Chairman's visit as his way of informing them in advance of the outcome of the FOMC meeting rather than an opportunity to sound them out about their own views and to work with them to build a consensus. I was just happy to have the opportunity to visit one-on-one with the Chairman and to talk economics and monetary policy. I always used these meetings as opportunities to engage him in a discussion, to let him know my own views and how they differed from his—and to reveal my own comfort or discomfort with his policy recommendation.

After a while, the Chairman abandoned the private talks before the FOMC meetings and instead used the Monday Board meeting (the day before the FOMC meeting) to share with us his views on the outlook and indicate where he was leaning with respect to policy.

With a skillful Chairman, as Greenspan certainly is, you never knew whether he had to alter his position to lead the consensus.

Unlike the FOMC meeting the next day, the discussions at the Monday Board meeting did not consist of prepackaged presentations. They were a much truer give-and-take, a serious exchange of ideas, with each of us questioning one another along the way. I often used the pre-FOMC Monday Board meetings as an opportunity to engage the Chairman in a discussion of the outlook and monetary policy, as I had previously done in the individual meetings.

While we may not have always explicitly voiced our support of his policy recommendation at the end of the individual meetings, and later, at the end of the pre-FOMC Monday Board meetings, there was, in my view, an implicit commitment to support the Chairman the next day. Of course, if you were not prepared to support the Chairman at the FOMC meeting the next day, you had the obligation to tell him so at the Monday Board meeting. During my term, no governor dissented in the vote at an FOMC meeting.

Thus, by the time the Chairman enters the FOMC meeting, he is virtually guaranteed the support of the members of the Board, who are, in turn, the majority of the voting members of the Committee. In my five and a half years on the FOMC, never once did the Chairman fail to secure a vote in favor of his initial recommendation. In fact, within recent memory, there has never been the case of a chairman losing a policy vote at the FOMC.

WHILE THE RESERVE BANK presidents are not part of the premeeting discussions at the Board, they have their own devices for influencing the policy discussion in between meetings. They do this specifically through requests to change the discount rate.

The discount rate is the interest rate banks pay when they borrow from Federal Reserve Banks. Discount rate requests are formally made by the board of directors of the Reserve Banks—not by the Reserve Bank presidents themselves. The view of a Reserve Bank's board of directors on the appropriate level of the discount rate, however, is generally shaped by its interaction with the bank's research staff and the bank's president.

I therefore view requests for changes in the discount rate as a source of information about the policy preferences of Reserve Bank presidents, specifically as a noisy indicator of the bank presidents' preferences for a change in the federal funds rate at the next FOMC meeting.

So was the FOMC meeting merely a ritual dance? No.

If a relatively large number of Reserve Banks request an increase in the discount rate, for example, this would suggest potential support among those presidents for an increase in the federal funds rate at the upcoming FOMC meeting. This hint of wider support for a tightening, in turn, can give leverage during the pre-FOMC discussions to a governor, for example, who preferred to tighten (while the Chairman preferred to hold policy unchanged). The influence of the discount requests are perhaps reinforced by the fact that the pre-FOMC Board discussions of monetary policy come at the time the Board reviews the Reserve Bank requests for discount rate changes.

WHILE THE CHAIRMAN clearly does wield disproportionate power in the FOMC, he does not necessarily always get his way. It was the Chairman's responsibility, for example, to count heads to ensure he had a majority supporting him. He might on occasion find himself moving sooner than he would otherwise prefer to ease or tighten in response to the strong consensus within the Committee for such a move. He sometimes would lead by persuading others of the merits of his argument and sometimes perhaps by skillfully adopting as his own view what had become the consensus of the Committee. With a skillful Chairman, as Greenspan certainly is, you never knew whether he had to alter his position to lead the consensus. Indeed, I ended my term not sure I had ever influenced the outcome of an FOMC meeting. This was one of the frustrating aspects of serving on the Greenspan FOMC, but it never stopped me from trying.

Once the majority view (which, as I've already mentioned, is that of the Chairman) is apparent at FOMC meetings, the Committee is expected to rally around it. This means that most votes are unanimous—and when there are dissents, they are typically limited to one or two opposing votes. This is sometimes referred to as a system of "collective responsibility" for decisions, in which the majority view is adopted and supported by the entire body.

There are, nevertheless, occasional dissents. Indeed, while most votes are unanimous, one or two dissents are not unusual. A third, however, would be viewed as a sign that the FOMC is in open revolt with the Chairman's leadership. The dissents, rather than the policy decision itself, would become the story. This would be disruptive to the process of monetary policymaking and unsettling to the financial markets. Because of this, I came to think of the voting process as a game of musical chairs. There were two imaginary red chairs around the table—the "dissent chairs." The first two FOMC members who sat in those chairs were able to dissent. After that, no one else could follow the same course.[27]

I never dissented during my term as a governor. I differed on occasion with the Chairman's recommendation but, after making clear my reservations, joined the consensus. I believe that dissents are an important part of the process. They allow the public to appreciate when the decisions are particularly difficult without undermining the consensus process. This is the case as long as there are no more than one or two dissents. Because I was often visibly identified as someone who disagreed with the Chairman, I believed that my dissents would draw special attention and divert focus from the issues to personalities. So I talked about the issues and, as I said, voted with the consensus.

SO WAS THE FOMC MEETING merely a ritual dance? No. I came to see policy decisions as often evolving over at least a couple of meetings. The seeds were sown at one meeting and harvested at the next. So I always listened to the discussion intently, because it could change my mind, even if it could not change my vote at that meeting. Similarly, while in my remarks to my colleagues it sounded as if I were addressing today's concerns and today's policy decisions,

in reality I was often positioning myself, and my peers, for the next meeting.

I could not contain my enthusiasm for being part of the Committee and part of the process of making monetary policy. Toward the end of the first day, I even had to interrupt the meeting to say: "Gee, this is even more fun than I thought it was going to be!" You didn't hear laughter spilling out of the Committee room too often, but this was a memorable exception. ◆

NOTES

1. The Federal Reserve Act specifies the FOMC's objectives as price stability and maximum employment. "Price stability" is typically interpreted as a low, stable rate of inflation. "Maximum employment" has typically been interpreted by the FOMC as maximum "sustainable" employment, meaning the maximum level of employment sustainable without rising inflation. This is usually referred to as "full employment." With this definition, price stability and full employment can, in principle, be achieved simultaneously.

2. I am alluding of course, to the phrase William Greider used in his prizewinning history of the Fed, *Secrets of the Temple* (New York: Simon & Schuster, 1987).

3. The other presidents served as voting members of the Committee on a rotating basis for one-year periods every two or three years.

4. Monetary policy is implemented through open market operations, purchases and sales of government securities from the Fed's portfolio. When the Fed purchases bonds from the private sector, it injects reserves into the banking system. When it sells bonds, it withdraws reserves. The FOMC does not directly control the federal funds rate, but through open market operations it can generally keep the funds rate very close to its target. The manager of the system's portfolio, an officer at the Federal Reserve Bank of New York, oversees the conduct of open market operations.

5. Potential output is the economy's maximum sustainable level of output, the maximum level of output sustainable without upward pressure on inflation.

6. By full employment, we mean the maximum sustainable level of employment—that is, the maximum level of employment sustainable without rising inflation. This is equivalent to the minimum sustainable level of the unemployment rate, or the NAIRU.

7. Both energy and food prices are particularly vulnerable to sharp but transitory increases and decreases, so core inflation generally provides a better measure of the underlying momentum in inflation going forward.

8. English engineer A. W. Phillips developed this relationship between the inflation rate and the unemployment rate, based on his observations of unemployment rates and wage change in the United Kingdom between 1862 and 1957. A. W. Phillips, "The Relationship Between Unemployment and the Rate of Change in Money Wage Rates in the United Kingdom, 1862–1957," *Economica* 25 (November 1958). The relationship became known as the "Phillips curve." Economist Milton Friedman significantly refined the theory in 1968, when he noted that there was "a natural rate of unemployment," a level consistent with steady inflation. Milton Friedman, "The Role of Monetary Policy," *American Economic Review* 58 (March 1968). The natural rate of unemployment today is generally referred to as the NAIRU. For a thorough discussion of the relationship between inflation and the unemployment rate, see Laurence H. Meyer, *Macroeconomics: A Model Building Approach* (Cincinnati: South-Western Publishing Co., 1980), chapter 18.

9. Some disparage the usefulness of such anecdotal reports, viewing them as unreliable "gossip." I always think of a quote I once heard, attributed to George Stigler, an economics professor at the University of Chicago for most of his career: "Data is just the plural of anecdote."

10. Such anecdotal information likely plays a more important role for the Fed than for other forecasters, in part because Reserve Bank presidents specialize in collecting such information and can be expected, over time, to learn to sort through the comments they receive and identify early signs of changes in the outlook. In addition, they might have access to higher-quality anecdotes than others, because firms will more candidly share information on their spending and hiring plans with the Fed than with others.

11. I am told that the presentations used to be more spontaneous and interactive. But this changed once the decision was taken to release the transcripts after five years. Committee members apparently want to make sure that their remarks, when read five years later, will be coherent and graceful. So most would write them down and read them. I quickly fell into the practice of doing the same.

12. This was one of the two two-day FOMC meetings each year. These preceded the Chairman's semiannual testimony on monetary policy before the Congress. It was typical at the two-day meetings to reserve a portion of the time to discuss a broader topic of monetary policy strategy, one not necessarily immediately related to the policy decision to be taken at that meeting.

13. The effect of changes in the federal funds rate on household and business spending occurs through the effect of these changes on the "real" federal funds rate. The real funds rate is the nominal funds rate less the expected rate of inflation. The expected rate of inflation is often proxied by the actual rate over the last year. If there is zero in-

flation, and expected inflation is zero, the lower limit for both the nominal and real federal funds rate is zero. If there is a 2 percent inflation rate, on the other hand, and expected inflation is 2 percent, the FOMC can drive the real federal funds rate to -2 percent if it lowers the nominal rate to its lower limit of zero.

14. When inflation is low, the average rate of increase in (nominal) wages will also be relatively low, leaving little room for adjustment in relative wages without some wages falling. However, the average rate of increase in wages also depends on the rate of increase in productivity. If productivity growth was relatively high, therefore, it would be less necessary to "grease the wheels" of the labor market with a higher inflation rate.

15. There was, however, an important area of ambiguity about the 2 percent inflation rate—precisely what measure of inflation did it apply to. Most members of the Committee appeared to be talking about the Consumer Price Index (CPI), specifically the core measure of the CPI, which was running at about a 2.5 percent rate at the time. The Chairman argued that the price index for Personal Consumption Expenditures (PCE) was the better measure of consumer prices. The core rate for this measure was running at about 2 percent at the time. My interpretation is that the consensus was for a 2 percent inflation rate for the core CPI and that, given the average differentials between these measures over the last few years, this would be consistent with a 1.5 percent rate for the core measure of the PCE price index.

16. Before each meeting, the staff sent Committee members a chart showing the path of the funds rate consistent with the Taylor rule. This was a useful point of departure for some members in thinking about possible adjustments to the federal funds rate target. However, there was little explicit discussion about the Taylor rule in general and few references to the Taylor rule prescriptions for the funds rate during FOMC meetings.

17. Technically, the policy bias applied to the intermeeting period. Most members of the Committee, however, interpreted the bias as applying over the near term, perhaps over the course of the next couple of meetings.

18. Later in my term, the FOMC's "authorization of domestic open market operations" was amended to attach some conditions to intermeeting moves. It now reads: "Any such adjustment shall be made in the context of the Committee's discussion and decision at its most recent meeting and the Committee's long-run objectives for price stability and sustainable economic growth, and shall be based on economic, financial, and monetary developments during the intermeeting period. Consistent with Committee practice, the Chairman, if feasible, will consult with the Committee before making any adjustment." These guidelines were followed scrupulously by the Chairman during my term, including during the period before this language was explicitly introduced into the authorization.

19. This reflects the conventional understanding of the relationship between short-term and longer-term interest rates, often referred to as "the expectations theory" of long-term interest rates. This theory holds that long-term rates depend on current and expected future short-term rates. As expected, when future short-term rates change, the current long rate is immediately affected. Thus, by affecting expectations about future federal funds rates (future short-term interest rates), the FOMC can affect current long-term rates.

20. The staff forecast, in general, avoids any assumption about a change in the funds rate over the forecast horizon. That is, the staff forecast is generally based upon an assumption of a constant funds rate over the forecast period. In this way, the staff avoid appearing to recommend a policy direction to the Committee.

21. On those occasions where it appears clear that a constant funds rate would be greatly at variance with the Committee's objectives, the staff will generally incorporate into the forecast some judgment about the change in the funds rate over the forecast horizon, though they will generally not assume that a policy change is made at the current meeting.

22. The neutral rate is usually expressed in terms of the real federal funds rate. A typical estimate of the neutral real federal funds rate is 3 percent. If inflation was 2 percent at the time, that would translate into a neutral value for the nominal funds rate of 5 percent.

23. The proposal is called a directive because it provides instructions to the manager of the system's portfolio about how he or she should conduct open market operations during the intermeeting period—specifically, to hit the target for the federal funds rate set by the Committee.

24. Today the language is clearer. The reference to reserve pressures has been replaced by an explicit statement about the federal funds rate target.

25. The woulds and mights have also become history, replaced by language about the way the Committee views the balance of risks to the forecast.

26. Each Monday, the Board reviews the requests by Reserve Banks for changes in the discount rate. Under the Federal Reserve Act, discount rate requests originate with the Federal Reserve Banks but have to be approved by the Board before they become effective.

27. This has a remarkable implication: The probability that a given member will dissent depends on his or her name! If your name begins with a low letter in the alphabet, like Broaddus, you are more likely to be the one to get to the red chair first, compared with, for example, Santomero—because other than the Chairman and the Vice Chairman, everyone else votes in alphabetical order.