Paul A. Volcker

Monetary Policy Transmission: Past and Future Challenges

The subject of this conference—innovation and monetary policy transmission—is something that has naturally concerned me over the years. Historically, the issue has appeared in somewhat different guises. I never thought I had really adequate answers, but somehow the system has worked. Moreover, I am afraid that as far as current technological and financial innovations go, I should be listening rather than speaking. I am not a big user of new technologies. My main experience with technology as president of this Bank and then as chairman of the Federal Reserve Board was asking why staff needed new computers every four years. I always had the feeling that capacity was expanding exponentially over time, but I did not know that monetary policy was becoming any better!

Nonetheless, I believe you are onto an intriguing subject. Indeed, some of the topics covered in your papers remind me of questions I have thought about before. For example, when I was here and when I was in Washington in the late 1970s and early 1980s, we embarked on some new approaches to monetary policy that depended upon control of money by the means of quantitative control of the reserve base.

I can remember tossing and turning at night thinking whatever we do, the banks will try to game us. Could they use the same reserves to satisfy our reserve requirements at the end of the day and satisfy the reserve requirements in Asia and in England? Would the result be an inability to control the effective money supply through U.S. reserve policy? I see from one of your papers that the issue of how globalization may affect policy transmission has not gone away, so I guess my sleepless nights were not entirely misguided.

In preparing for this talk, I read two earlier papers on the topic of innovation and monetary policy, one by Ben Friedman and the other by Mike Woodford. They are both intriguing and reassuring in two respects: First, I am not the only person worrying about the subject of monetary control, and second, while the technical details may be different, the underlying concerns of how to conduct monetary policy in the face of innovations have not changed that much. So rather than trying to look too far into the future, I thought it might be useful to talk about my own experiences in previous periods of structural change and innovation during my career at the Federal Reserve.

I literally have been around the Federal Reserve for more than fifty years. I wrote my senior thesis on Federal Reserve policy in 1949. From then until at least the last few years, I have been more or less directly involved with the Fed. I have always liked one piece of philosophy by Yogi Berra. He said you can observe quite a lot just by watching, and I have done quite a lot of watching of the Federal Reserve. So it might be of some passing interest to share the observations I have made over a period of fifty years. And if nothing else, it will give you some reassurance that the kinds of problems you are worried about are not exactly new, although they certainly come in different packages.

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I remember when I wrote my thesis that the historic, never fully resolved intellectual argument over central banking was between the so-called currency school and the banking school, with its real-bills doctrine. Those schools of thought have gone through several permutations and combinations since then, but the substance of the argument remains the same: Is it money or credit that is important? I would also tell you that fifty years ago, I remember very well, there was a lot of concern about the effectiveness of monetary policy.

At the time, the United States had just finished going through the long depression of the 1930s, which, from the standpoint of monetary policy, was somewhat similar to the experience in Japan now. There was the perception of a liquidity trap. There was a real question whether, under the circumstances, monetary policy was worth worrying about. It seemed helpless. Fiscal policy was the king of the day and that carried over into the postwar period when interest rates were frozen. I remember well that the New York Fed struggled with that problem when I was a young fellow here. (Actually, my conclusion in my college thesis, which I had forgotten about until some student reminded me later, was that monetary policy was so impotent that we ought to just let the Treasury handle it.)

Back then, there was very heavy political pressure to keep interest rates stable, and that was the driving responsibility of the Federal Reserve for many years—not just during World War II, but after. By the time I had actually arrived here in 1951, the so-called Treasury/Federal Reserve Accord allowed the Federal Reserve to move interest rates freely. But the Fed was not about to move them very far.

The idea that was promoted by this particular institution at the time was something called the availability doctrine. Bob Roosa, a name that may resonate with some of you, was the key economist here and an ingenious analyst of monetary policy. He developed the idea that interest rates did not need to move very much to be effective; it would in fact be dangerous to move them very much because of the heavy, excessive overhang of government securities in the hands of the banks, most of which was fairly long-term debt. He proposed that the Federal Reserve could take advantage of the situation by implementing a very small increase in interest rates, which, as we all learned in Economics 101, would push down the prices of assets on bank balance sheets. That would so disturb the banks that they would refuse to liquidate any securities because they would not want to report losses. Therefore, they would have to restrain their lending activity. And that would be the mechanism by which Federal Reserve policy would be effective.

The mechanism obviously relied upon a market imperfection, which I do not think was totally unrealistic at the time, but it was not lasting. At the end of World War II, banks were loaded with government securities and there was a big question of how they would react to even a relatively small decline in the securities' value.

I should point out that during the same period, we did not just think about monetary policy and fiscal policy. It was monetary policy, fiscal policy, and debt management. As unlikely as it sounds today, debt management was considered to be an active "third leg" of policy. In 1953, the Treasury got aggressive and issued some thirty-year bonds—the "3¼s of 78-83." The Treasury market was somewhat disturbed, and the economy went into a recession. Whether the Treasury's aggressive debt issuance was a contributing factor was much discussed, and a long argument ensued about whether the Federal Reserve should intervene directly by conducting open market operations in the long-term market or whether such intervention should be left to debt management, with the Fed operating with "bills only." While we all know how that discussion ended, the debate at the time clearly centered on whether monetary policy could be effective independent of debt management.

In the 1960s, I moved from the Federal Reserve to the Treasury Department. At the time, we faced what was perceived as a dilemma for debt management and monetary policy. We had a trade surplus, but the balance-of-payments deficit probably ran as much as $2 billion or $3 billion a year. This was a matter of some considerable concern around the world, since it raised questions about whether our low interest rates and capital outflow would determine the role of the dollar in the world economy. Bob Roosa had preceded me in moving from the Federal Reserve to become Under Secretary of the Treasury for Monetary Affairs. In response to this situation, he helped develop what was called Operation Twist: the Treasury would retire long-term securities and issue short-term securities based on the theory that it was the short-term rate that was relevant for international capital flows, while long-term rates were more relevant for the domestic economy, mainly because they affected the mortgage rate.

Well, to the extent that Operation Twist worked at all—and I must confess I was a little skeptical about it, given the fluidity of markets even then—it too depended on some degree of market imperfection. And I think it became apparent fairly quickly that the market imperfection was not as great as had been assumed.

Instead, a quite different imperfection was imposed on the market, and it was not ineffective at all. Regulation Q, which placed a ceiling on commercial bank interest rates, became in practice the "hammer" of Federal Reserve policy. The restraints on interest rates that banks could pay may have dropped from recent memory, but suffice it to say that Reg Q's major components were that 1) interest on demand deposits was not permitted and 2) there was a hard ceiling on interest rates on time deposits of all types, including savings deposits. Furthermore, commercial banks' liabilities were the dominant financial savings instrument at the time. When interest rates went up and impinged upon the interest rate ceilings, the commercial banks could not raise money. They pulled back on lending, particularly mortgage lending.

Reg Q worked with extreme force, I think it is fair to say. When interest rates rose above the ceilings, you had a recession, and the recession was concentrated in the housing sector. Reg Q therefore became a matter of political concern as well as economic concern because of the concentration of its impact.

By the time we got to the late 1970s and early 1980s, inflation had picked up a lot of steam and was pushing interest rates progressively higher. Restiveness about the Reg Q structure came to a head and the interest rate ceilings were gradually removed. In fact, the effectiveness of Reg Q was partly removed by the actions of banks themselves in developing other techniques for raising money.

So by the late 1970s, we felt that if we wanted to control inflationary pressures, we were left with having to follow the advice of Anna Schwartz and others: we should carefully control reserve growth, which, via open market operations and the fulcrum of reserve requirements, should limit the expansion of bank deposits and credit. Whether or not one believed in the strict interpretation of the "monetarist" theories, the operational relationship between reserves and money, however measured, was direct. Controlling reserve growth was one way to slow money growth and get some restraining influence on the economy. And I think it is fair to say that eventually we did get a restraining influence.

The problem, of course, is that it took a very high level of interest rates to get that restraining influence. Al Wojnilower, who was observing all this from outside, was one of the first to point this out, and he turned out to be absolutely right. I do not think that any of us embarking on this policy felt we were going to end up with bank lending rates at 21 percent in the United States. I think that happened because people dependent upon bank lending did not follow a nice conceptual textbook approach and say, "the interest rate is a little higher, so we'll pull back a little bit." They were caught up in ongoing operations; they were caught up in planned investment programs; they were caught up in their habitual methods of operation. So they kept borrowing and implicitly thinking, "well, this interest rate is awfully high today, but maybe it will come down tomorrow, so we'll keep at it." And the credit expansion continued until, to exaggerate a little bit, this became a policy of restraint by bankruptcy. If you keep tightening policy until borrowers and lenders really cannot stand it anymore, you begin to have a real degree of restraint on the economy and on prices. And indeed, we had a real degree of restraint, and inflation came down.

The economy was affected by direct controls as well. I neglected to mention earlier that direct controls on credit extensions were a favored instrument of monetary policy in the late 1940s and 1950s. When I wrote my untitled, uncompleted thesis for my Ph.D. (which I understand I am still eligible to receive if I ever complete the thesis), I contrasted the use of direct controls on credit in the United Kingdom with direct controls in the United States and how they operated (or did not) in a market system. But I do not want to gloss over the fact that we had a little experiment with direct credit controls as late as 1980 during the Carter Administration. We designed what we thought was a modest, market-mimicking restraint on some parts of consumer credit. This was something we anticipated would have a modest restraining effect on the economy, supplementing our control over reserves. It turned out to have a huge psychological effect. I never saw anything like it. There was a sharp reaction by consumers that single-handedly drove the economy into recession in a matter of weeks. I believe that was the last time there was any experimentation in direct control of credit.

Since the early 1980s, I think it is fair to say that we have returned to a kind of approach that relies upon direct influence on the short-term interest rate and a much more fluid market situation that allows policy to be transmitted through the markets by some mysterious or maybe not so mysterious process. I think we have found two important "transmission belts"—domestic asset prices (particularly the stock market) and the exchange rate—that were not considered to have much importance earlier. I think we also know that relationships between monetary policy and stock prices and between monetary policy and exchange rates are not the most predictable relationships that exist in the economy. We have certainly seen demonstrations of that recently. I was a little bit bemused by the reports in the press recently that the euro declined because the European Central Bank did *not* reduce interest rates, which is not what you consider the normal and predictable reaction to monetary policy.

I think this caution helps demonstrate the importance of central banks having a clear and unambiguous decision-making process when they operate in much more open and fluid markets, if market responses are to be predictable. Indeed, you sometimes might ask the question whether the Federal Reserve is driving asset prices and the exchange rate or whether the exchange rate and asset prices are driving the Federal Reserve. That is an uncomfortable question to ask when you are trying to run a central bank.

So now we look ahead and the markets are getting ever more fluid and flexible. We have several papers here today asking what is the result of running the world on fewer and fewer reserves (which, in the United States, we apparently no longer try to control anyway). Moreover, the commercial banking system and bank deposits are getting progressively smaller as a part of the financial system.

So what happens? From my recitation of this history, I think it seems clear that both the market and the political system will always try to game the Federal Reserve and find ways of getting around restraint. Nobody likes restraint. Everybody likes the stock market to go up forever and the economy to go up forever. When the central bank tries to restrain, the natural instinct is to find some way around it, to find money substitutes and new political instruments less directly under central bank influence. If they cannot find the way economically, they will look for it politically, which presents another problem. It is also very clear from history that whatever changes in procedures and policy are made today will cause changes in the market system tomorrow, as the market adapts to what you have done and tries to find a way around it.

Despite those efforts and those changes, a simple observation suggests that monetary policy is still pretty potent. In fact, the 1990s, as you all know, have been regarded as the great glory days of monetary policy. There is a sense of conviction in the market that we can press a few monetary buttons and everything will be solved.

Of course, that is an illusion. The most recent events have undermined that impression to some degree. Nonetheless, monetary policy here, and to some degree elsewhere, has achieved an almost mystical status. You wonder whether it has any real substance at all, or whether it is all shadow.

I am reminded of the comment by Denis Robertson, a well-known economist of the 1930s, when he described some monetary phenomena by referring to the story of the Cheshire Cat in *Alice in Wonderland*. The cat disappeared, and all you were left with was the grin, but the grin was all that was necessary.

I think that reference is entirely fitting because you have to wonder whether anything more is necessary these days than a pronouncement that the Federal Reserve would like to change the federal funds rate by x percent. The Fed does not actually have to do anything. The rate will immediately change by x percent.

Will it stay there or not? Well, I think the market is still dependent upon some action by the Federal Reserve. Sooner or later, there has to be some intervention. But I think this is a basic question that we are grappling with at this conference, and one that I believe we will continue to debate for some time.

When I think about what the central bank ultimately controls, I am led to thinking about what functions of the central bank cannot and will not be taken over by the other operators in the financial markets, either individually or collectively. Market participants certainly sit around ingeniously thinking of how to intermediate and satisfy every possible demand for liquidity and credit at the lowest possible cost. So it seems to me—and I say this with some tentativeness—that the market is going to try to minimize the use of "base" money, the one thing the Fed controls. If no interest is paid on base money, market participants will try to minimize the need to hold reserves or currency, or develop other payment systems, once again trying to work around any constraint set up by the central bank.

So what is left for the central bank to control? I think the market is still a long way from doing without currency or reserves as a means of interbank payments. At the end of the day, it is only the central bank as an institution that can satisfy our demand for currency and create or withdraw reserves, and therefore provide a sense of liquidity in the markets. In the extreme case, it can create liquidity without end, since there will be no question about its credit status. In most circumstances, that power does give the central bank special influence, both through its actions and through its potential influence; markets respect this, and will therefore respond to the intention of policy.

This seems to me to be the last strand of permanence in central banking. Of course, influence over liquidity does not provide any assurance that you will use that influence wisely or that the transmission belt to the economy is going to be obvious and direct. Operating monetary policy in open, liquid markets means that the transmission belt will inevitably be unstable: the market in effect is competing with you, and the central bank will find it necessary to adjust. All of the history I have recounted suggests that this will be a continuing struggle. A fixed rule cannot solve the problem. I think that is the lesson of the past fifty years. Those fifty years also offer some hope that central banks will not be inconsequential, even if they have to adapt their modi operandi constantly.

I want to leave you with one other thought, which may make some central banks inconsequential. What is the endgame in all of this, of open markets: the free flow of capital around the world, a couple of hundred independent countries, some big, some small? I think the logical long-term result—extending far beyond my living horizon, but perhaps not yours—is a world currency. With a world currency, we will not have a lot of independent central banks. What I have not quite figured out is what the one remaining central bank will do, what instrument it will use, and how it will be controlled. But I think that is the direction in which economic and financial logic guides us.

I suspect there will be a lot of way stations along the road to a world currency. For example, I am pretty sure we are going to go to some regional currencies, and we will almost certainly have many fewer currencies. In such an environment, will we have a few large central banks centered around big countries and monetary centers, each with some influence, but with their interrelationships guided, influenced, and affected by the exchange rate between them? Such a structure leaves open a lot of questions about the organization of the world economy in ways unrelated to central banking. Nevertheless, I think that if the net result of that kind of a world is very widely fluctuating exchange rates between the major centers, then it will not be a world conducive to the kind of multilateral open trading system and political harmony that we like to associate with the benign leadership of the United States and its partners during the postwar period.

So I will leave you with that thought, confident that you will not be able to disprove it to me, in my lifetime anyway. That is the safest kind of projection to make.