

General Discussion: Macroeconomic Implications of the New Economy

Chair: Stanley Fischer

Mr. Fischer: Thanks very much, John. Time for questions. We will take three of them to start with: Allen Sinai first, Michael Woodford, and Pam Woodall.

Mr. Sinai: Martin, several times in the paper you stress or seem concerned with a short time—five years is the basis for drawing conclusions—I quite agree with that. I have three brief questions related to this.

First, how long, in your opinion, is long enough to qualitatively and quantitatively draw conclusions about a permanently higher trend growth of productivity and its contribution in potential output growth and of how much of a pickup might occur in the trend rate?

Second, in the 2 and 2¹/₂ percent range mentioned in your paper, the low end of the range you indicate as where you are on data revision. Is that number cyclically corrected or is that a trend notion?

Third, if you agree that the burst upward to productivity growth was over 1995 to 2000—the period of boom in capital spending in U.S. GDP growth—now that capital spending has collapsed, particularly over the last half year and probably for at least another half year (you can disagree with that)—in Information Processing and Related

Equipment we are down 17¹/₂ percent, at an annual rate, so far this year. In computers, which Bob Gordon offers as the main source of the productivity growth upturn, we are down 20 percent at an annual rate so far this year. Will there be a decline in the productivity growth estimates for the future from the new stuff—the new types of capital stock—going down? Do you have any speculation on what that might be? Are we in for, besides a data revision, downward revision in productivity growth, in trend productivity growth, thinking we are going to have a second shoe drop on the collapse in capital stock that may come from the collapse in IT?

Mr. Fischer: Thanks. Over here. Michael?

Mr. Woodford: You discussed the idea that there has been a favorable shift in the Phillips curve trade-off in recent years that has allowed us to have low inflation and low unemployment together for several years in a row. You discussed the idea that this might be caused by higher productivity growth. That idea makes a certain amount of sense, particularly, as you say, when you think about wage behavior in the 1970s when productivity growth slowed down as well. Something that you don't emphasize that I would say about this is that this story about the shift in the Phillips curve trade-off really suggests that it should be a transitory one, even if the change in the productivity growth rate is permanent.

Mr. Baily: That is correct.

Mr. Fischer: Pam Woodall, please.

Ms. Woodall: Martin, you said that you thought monetary policy in the late 1990s was helpful to the development of the information revolution. In particular, what you meant was that it was important that monetary policy wasn't overrestrictive. Now, does that mean that you think the financial bubble was useful in encouraging firms to adopt IT more rapidly? There is an argument that financial bubbles are actually an essential part of a technological revolution. Or with hind sight, would it have been better if policy had been a bit tighter in the late

1990s to discourage some of the overshooting in the stock market and some of the over investment?

Mr. Fischer: Do you want to answer those three, Martin? Then we will go to the next three.

Mr. Baily: Thanks everybody for your comments and I will reply to those that I can give a decent answer to.

One of the really interesting questions is the nature of the stock price increase that took place in the United States. There has also been a substantial rise in stock prices in Europe and then the bubble economy of the late 1980s of Japan. Are they the same? Are they different? Do they denote different things? My view is that they are different. I tend to share the view of Bob Hall and others that quite a big part of, not the whole of, the increase in stock market value represents an increase in intangible capital. I want to treat the Nasdaq bubble as something separate, that was a craziness. The overall stock market is still very high and the Tobin's Q is much higher than it was ten years ago. It represents a shift in the nature of production and the nature of business strategies. They are linked to IT, but they are also linked to other things—branding and so on—that companies do. The Japanese bubble of the late 1980s was not of the same character. It was heavily tied to a real estate bubble. Within Europe I am less certain. I wanted to say more about that in the paper, to get data on what Tobin's Q was for European countries. I was not able to collect any decent data on that. My sense is that stock market valuation or Tobin's Q values traditionally have been fairly low in Europe. That is, maximizing shareholder value has not been something that managers have done in Europe. The increase in stock market valuation that took place in the 1990s in Europe may have been, in part, some increase in intangible capital but was also maybe a shift to more U.S.-style management practices and a shift to maximizing shareholder value.

Taka Ito mentioned whether labor markets were the problem or product market regulations or lack of competition. I think it is a combination of those. In a recent McKinsey Global Institute study of

Japan, there was a lot of detailed discussion of the layers of regulation that affect business. Not only at the federal level, but also at the local level which makes it very difficult for industry consolidations to take place, for companies and industries to evolve. This evolution process of companies is really crucial to both productivity increase and to the use of technology. One of the things that Japan has been very bad at is allowing failures. That may be partly tied to the labor market's unwillingness to put people out of work. But, in order to get the kind of change, the evolution that is needed, you have to allow companies to fail. That has been something that Japan has not done in the same way that the United States has done. To some extent, the reluctance to allow failures is also true of Europe.

Regarding John's comments I mostly agree with everything he said, and he was very helpful in drawing out some of the things that I didn't have time to talk about in my oral comments in bringing his own perspective on them. I don't want to get into an overly political discussion of fiscal policy. I would make one comment, however. That is, if you look at federal discretionary spending as a share of GDP in the United States, it has been going steadily down. And the forecasts that he describes that were made in 1997, which showed the surpluses and the level of spending, had as an implication that discretionary spending would gradually get smaller and smaller and smaller as a share of GDP. For some people that would be great. What they want is to have the minimum size of government. I don't think it is really realistic as to the level of spending that will actually take place in the United States, coming from both the political parties.

The comment that Allen Sinai made: I don't have full answers to all of that. I don't think one can necessarily say how long is long enough. Obviously, each year incrementally you get more confidence if the productivity growth acceleration continues. There was a meeting that was convened at the Fed in 1998 or 1999 and at that point we said, "Well, there are three years of faster productivity growth. That is not long enough." I think Alan Greenspan was seeing more in the data. He was looking at additional sources of data and was more prescient than we were in seeing the acceleration. People like Bill Nordhaus and

myself and many others at that meeting did not see it in three years. In five years we all started to see it. In seven years more of us would see it, and so on. I don't know exactly what the point is. My 2 to 2^{1/2} percent figure is intended to be cyclically corrected.

What about the capital spending collapse? Is that going to give a decline in the trend? To some extent, yes. Remember, we had 3 percent growth in 2000. So, to say we are going to get 2 to 2^{1/2} percent is already somewhat slower than that surge. Part of the capital spending boom was a cyclical effect that will not be repeated. For reasons spelled out in the paper, strong real investment should be restored. The rapid rate of price decline is expected to continue, so that even if nominal spending remains flat or declines some, there is still a growth in real capital spending, which helps on the capital deepening side.

The other point was that the share of information technology capital in the total has increased, so you do get a beneficial share effect. So, the short answer to Allen Sinai is "yes." Obviously, in the short run, the capital spending collapse is slowing the economy. However, as we go forward over the next five years, we may not get what we got in 2000, but I would expect that IT would continue to be a contributor to productivity growth.

Mr. Fischer: Thanks very much. Alan Blinder, please.

Mr. Blinder: I'd like to compliment Martin for not only writing a very good paper, but also for specifically calling attention to a point that is mentioned too little in the many discussions of IT and the new economy—the potential effect of the strong cyclical performance of the U.S. economy in encouraging innovation—the idea that creating markets in which you can actually sell goods has to be good for innovation. Martin also aligns himself with a view that others have suggested: that the surge in innovation itself—or maybe the unanticipated part of it—contributed to the superior Phillips curve trade-off that we enjoyed for some years, and maybe still do. If you put those two together, you have a very nice virtuous circle. You get the economy growing fast. It encourages innovation. That shifts the Phillips curve

in, and so you receive a very nice dividend. As Mike Woodford pointed out, most of the models we use suggest that dividend is entirely transitory. That doesn't mean it is a bad thing; you certainly enjoy a very nice period. There are possibilities, however, that it could leave a longer lasting, if not infinitely lasting, impact. For example, if there are positive feedbacks in the innovation process, as were mentioned yesterday, my innovation encourages your innovation. If it is true that high-pressure economies are more conducive to innovation, then you can get a tremendous amount of lift for a long period of time out of this, though not forever.

Mr. Fischer: Thanks, Alan. Over there please.

Mr. Haltiwanger: I wanted to offer a little bit of evidence in support of this view that the competition creative destruction processes is critical here. In some work that Acton Martin did at the U.S. Bureau of the Census for the U.S. manufacturing sector, Martin found that, over the course of a decade or so, roughly 30 percent of productivity growth was accounted for by the entry-exit process—the process by which less-productive businesses are displaced by more-productive businesses. In more recent work, using microdata at the Bureau of Census, we've been looking at the retail trade sector. These are precisely the distribution sectors where you might expect IT to play a particularly large role. Over the course of the 1990s, we found that 100 percent of the retail trade growth is due to the entry-exit process. For the typical retail continuing establishment, on average, there is no productivity growth; it all comes from this creative destruction process. I should note as well that there is an ongoing study at the OECD that is trying to put together these kinds of numbers so we can do cross-country comparisons. One note of caution that is a little bit related to John Taylor's comments about changes in the nature of cyclical volatility and so on: The United States seems to accomplish this creative destruction process quite well, for the most part. There have been times where we haven't accomplished it so well, and those were precisely in the 1970s and the early 1980s. The creative destruction process there involved a lot of old-economy industries such as steel, and the destruction process was a long and costly one. So, the one

open question is: Ten years from now, are there new-economy sectors that are going to have to go through the destruction of old capital like we saw in the 1970s and 1980s?

Mr. Fischer: Thanks. Chuck Freedman, please.

Mr. Freedman: I just want to come back to the question about the permanent versus transitory nature of the NAIRU. In the paper, Martin, you said that there were some structural changes. What I'd like to see you comment on is whether some of those might be more permanent, particularly things like the way the job search process is going on, job fairs, use of the Internet, and so on. Those don't seem to be transitory, but I'd be interested in your view as to how important they are likely to be in quantitative terms.

Mr. Fischer: Thanks. There is one way back there.

Mr. Breimyer: If you are looking for macroeconomic implications of tech-centered growth, I would suggest one place to look is in Massachusetts, or in New England more generally. During the 1980s, we had a great deal of economic growth that was tech-centered and also centered in financial services, defense, and bio-med. That growth was substantial and ongoing. With it came great increases in productivity, no significant inflation problems, generationally low unemployment, and the creation of much wealth. As a result, households increased their propensity to consume considerably—raising the sales tax to income relationship from about 50 percent to about 65 percent. Then, tech-centered growth stopped. The result was a very quick reversion to less than 50 percent consumption to income. This consumption effect was substantial, just as capital investment and real estate spending dried up. The spillover also affected the financial sector, most notably leading to the failure of the Bank of New England in December 1990. If you would relate what we are going through now as a country to what we went through in New England about ten years ago, that would be helpful.

Mr. Fischer: Thanks. Nick Stern, please.

Mr. Stern: I wanted to follow John Taylor and take Martin's emphasis on productivity growth to the discussion of developing countries. It must clear the growth of productivity, the growth itself, is actually fundamental to the fight against poverty. It has always been central to my own view, but, more important and noncorrelated, it has been central to the strategy. The World Bank agreed with the board earlier this year. It has to be obviously at absolutely center stage at first. Crucial to that, and it is really echoing what Don Johnston was saying yesterday about the information economy, central to that whole process of raising productivity growth is the investment climate and the business environment. It is the whole atmospheric and process in which that investment process operates that is crucial. It is not just crucial to the level of investment, but even more important to its efficiency and to productivity of all the other factors. But it is not just the productivity in aggregate that we are concerned with in fighting poverty, it is also the productivity of poor people. Now that, of course, depends, in large measure, on the productivity of the economy as a whole. There, opportunities depend on the productivity of the economy as a whole. The productivity of poor people depends on their own abilities too to participate. And there, of course, education and health are central to their ability to participate. That is important as a casual observer and a non-American. I believe that education and health are of fundamental importance to the American people to participate in the economy. But also, and perhaps more important in developing countries, it is the way in which poor people get involved in the life around them—in particular, the running of the schools and the running of the irrigation systems and so on. That is a key part of the raising of productivity of poor people. All of the projects function much better in terms of their productivity, their effectiveness of poor people if they are directly involved.

Mr. Fischer: Thanks, Nick. In the interests of productivity, why don't we go to Alice Rivlin next?

Ms. Rivlin: As an old budgeteer, I have just a quick comment on John's "gee-whiz" budget chart. It illustrates amply the ridiculous practice that we now have of adding ten years of undiscounted numbers. It is just as ridiculous for taxes as it is for spending. To reinforce

Martin's point, not only the bottom line of his chart, but the top line of his chart—if done as a percent of GDP—would show a considerable decline over time, for those of you who might worry we are spending ourselves into oblivion.

Mr. Fischer: Thanks. The last two will be Rick Mishkin and Mike Mussa.

Mr. Mishkin: I'd like to return to the issue of the role of macroeconomic policy in terms of the productivity growth increase. There is no question that the increase in productivity growth is a real sector phenomenon. That is very important to emphasize. The key point is that if macroeconomic policy and particularly monetary policy are done right, it promotes the environment in which the real sector can do its job properly. Monetary policy is very important in terms of promoting stability—particularly price stability in a stable economy. The issue that is relevant to this is the discussion of Japan that Taka brought up. I don't think you sufficiently addressed the problem of having a poor macroeconomic policy in terms of slowing down the use of IT in appropriate ways. If you think about it, IT—to make it useful—requires a lot of investment. If your economy is not doing well because of poor policies, either in terms of monetary policy which is deflationary, or in terms of policy with regard to the financial sector, which does not allow it to promote movement of funds to productive areas, then the development of the IT sector will be hindered. So, that is one of the key problems.

The second issue relates to whether deflation can be driven by the decline of prices in the IT sector. The decline in IT prices is a shift in relative prices, and we clearly had this going on big time in the United States. However, this did not result in deflation because we had good monetary policy. One of the key problems for Japan has been deflationary monetary policy, which has not only had direct negative effects on the economy, but has also weakened balance sheets, which has made the financial sector perform less well.

Mr. Fischer: Thanks. Mike Mussa, please.

Mr. Mussa: I wanted to note that the favorable shift in the Phillips curve does seem to be a broader phenomenon than the acceleration of productivity growth. We have seen in the United Kingdom, Sweden, Australia, the Netherlands, now also France, and a couple of other economies substantial reductions of unemployment below the barriers previously thought to produce higher inflation. Not all of those economies have experienced any substantial acceleration of productivity growth. I would take there John Taylor's point. The more disciplined monetary policy and the perception of monetary policy will remain more disciplined have had a broader effect in helping produce a more favorable trade-off for the inflation-unemployment nexus. It is not just productivity, though I think productivity has certainly played a helpful role in the United States.

Mr. Fischer: Thanks, Mike. I apologize to all those of you who wanted to ask questions or make a comment, but we are out of time. John and Taka have foregone their rights to reply and let's turn to Martin to sum up and comment.

Mr. Baily: I never got to comment on Pam Woodall's question: Did we get too much of a good thing in terms of monetary policy? Well, I remember being in a plane landing at Heathrow and there was a thick Heathrow English fog. The plane came down on radar, and when it hit the ground it hit so hard that I actually thought we had crashed. The pilot came on and said, "Well, you know. I don't know what to say about this. On the one hand, it is lucky we have this radar, otherwise we would still be flying around up there. On the other hand, I wouldn't have minded if the radar had set us down a little more gently than it did."

Obviously, if one could replay history, it would be nice to have avoided some of the excesses of the financial bubble. It is possible that slightly different monetary policy might have contributed to that, but in fairness to monetary policy, Chairman Greenspan and others were warning of irrational exuberance and the tendency of the markets to overreact. Monetary policy did tighten quite dramatically starting in 1999. So, it wasn't as if the Fed just let things rip. On balance, with

20/20 hindsight one could maybe do things better, but it would be hard to second guess. I would say, and this came up yesterday, that some of the innovations in the financial sector which allowed venture capital funding and IPOs were helpful contributory factors to the new economy and have been somewhat understated in their importance, both in my paper and in this discussion so far.

In terms of the job search process, the difficulty there is figuring out how much has changed. You can clearly see that the labor market has changed. There is more temporary help, more computer search for jobs. The job matching process is different. The labor market is both more efficient and more ruthless. People achieve their marginal products now much more than they used to, which creates a somewhat less equal income distribution, but a somewhat more market-oriented labor market in the United States. That has helped somewhat to lower unemployment. What is hard to determine from the literature is how much of a reduction in unemployment has been the result of these structural changes aside from the demographic effects.

That takes me also to Mike Mussa's comment. I did not claim that everything was the productivity acceleration. There is an interesting paper you didn't mention by Blanchard and a co-author in the Brookings papers. They make the case that the U.S. economy has been getting more stable gradually over the postwar period, but was interrupted by the supply shocks that hit. One of the reasons that the 1970s and 1980s were so difficult in terms of the trade-off was the very severe price shocks.

I thank you again for your comments and the opportunity to be here.

Mr. Fischer: Thanks very much to the participants. We now move on to the next session.