Discussion

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Introduction

Many of us at the Bank believe that there have been two people who have played the same type of role in research, analysis, and communication at the Fed that Chuck Freedman has played here. One is Larry Meyer and the other is Don Kohn. In his introduction, Larry has given us some insight as to why that has been so in his case.

Parenthetically, I might note that I guess I can consider myself fortunate that in drafts of some of my papers, Chuck has actually found fewer than the seven errors he found in Kindleberger's text. Of course, what is more important is that Chuck has always taken the time to carefully read and comment on the drafts of papers written by me and many of our Bank colleagues.

1 Overview

Larry surveys a wide range of lessons that he learned at the Fed. I agree with over 95 per cent of what he writes in his paper; so what I want to do is to focus on the three areas that he spent most of his time on—the productivity growth shock, the asset-price bubble, and inflation targeting.

But rather than proceeding area by area, I'd like to ask some questions and apply them to each area. Chuck would often ask the following questions when confronted with a policy issue. First, "What can we learn from looking at the data and examining the data issues?" Second, "What do we know about the *nature* of the relevant shocks?" Third, "What do we know about the appropriate policy response or policy framework?"

Because I cannot talk as rapidly as Chuck, I only have time to cover the second and third questions today.

2 The Nature of Shocks

One of the lessons I have learned over the past several years is that the nature of shocks matters for policy responses and for the nature of desirable policy frameworks. It matters how fast shocks revert to the mean, whether a level shock can be permanent, and whether there can be growth-rate shocks. Larry's paper brought several such considerations to the fore.

2.1 Productivity

The key aspect of the U.S. productivity shock in the 1990s was that it was a growth-rate shock. As suggested in Figure 4, significant shocks of this type may occur only every 20 to 25 years. They are therefore not what people are typically looking for—or building into their standard model shocks. On the other hand, since the last shock of this nature was in 1973, we were due for one![1] Given the nature of technological progress and the timing of past growth-rate shocks to productivity, the question arises as to whether the chances of a significant growth-rate shock to productivity in either direction over the next decade are quite low.

2.2 Asset prices

Larry notes that "I want to pay greater respect to historical regularities between equity prices and earnings and keep the emphasis on reversion to the mean" (see page 48). So here is a case where one would expect a particular economic variable—the price-to-earnings ratio—to revert to the mean. One should also be suspicious when the ratio of earnings on companies quoted on the stock exchange to National Accounts profits does not revert to the mean. Moreover, in many countries, including Canada, there has been a strong tendency for the ratio of corporate profits to nominal GDP (suitably adjusted) to also revert to the mean. All of these tendencies towards reversion to the mean can be useful in predicting future asset-price tendencies—but probably not the timing (see Longworth 2003).

1. The cyclical positive/negative nature of the shocks with a half-period of 20 to 25 years is reminiscent of the 55-year full period of the Kondratieff cycle.

2.3 Inflation targeting and price-level targeting

Just as shocks can be to levels or growth rates, desired outcomes can also be set in terms of levels or growth rates. One way to look at inflation targeting is that it represents a desire to turn inflation into a mean-reverting variable. In technical terms, it is an attempt to make *prices* integrated of order one rather than of order two, as they arguably were in the 1970s and 1980s.

As Larry notes, Eggertsson and Woodford (2003), as well as others, have proposed price-level rules as history-dependent policy rules to avoid deflation. In one-good models, price-level rules (prices integrated of order zero) make a lot of theoretical and intuitive sense. The real difficulties in application and especially in communication come about because the world is not a one-good world and not all relative price shocks are mean-reverting.

In the simplest of expository models used by economists, prices and wages move together. But, as Larry notes, with productivity growth shocks, wages and prices do not move relative to one another in the same way as they did before the shock. Permanent shocks to real energy prices are other types of shocks that make the implementation and communication of price-level targeting difficult when the general public cannot easily understand that not all prices and wages will now act in the way they did before the shock.

For example, targeting the total CPI in the face of a permanent positive real oil-price shock will require reducing sticky core prices! The alternative of targeting the level of the core CPI might make it difficult to sell the advantages of price-level targeting to consumers who would still see the total CPI price level moving in response to permanent relative price-level shocks.

Inflation targeting may not always seem theoretically elegant, but it does have the practical advantage that even permanent relative price-level shocks disappear from the relevant inflation measures over time.

My conclusion is that more work will have to be done on how to implement and communicate price-level targeting before it will be viewed as preferable to inflation targeting.

3 Policy

3.1 Productivity

Larry concludes (see page 52) that “policy-makers should respond more gradually to robust growth and declining unemployment rates following a productivity acceleration . . . but would ultimately have to raise interest rates by more than otherwise” (because the equilibrium real rate of interest will

have risen). He notes that one way to deal with uncertainty is to continuously update the estimate of the NAIRU (or potential output), based on all available information, with special emphasis on prediction errors for inflation. This appears to be the appropriate lesson for policy.

3.2 Asset prices and monetary policy

Larry notes (on page 57) that "the suspicion of an evolving bubble should encourage monetary policy makers to reassess the consistency of their policy posture with their traditional objectives. An emerging bubble is like a neon sign flashing a warning—a warning that policy may be more accommodative than you think and therefore more accommodative than appropriate."

The emphasis here is not on bursting bubbles but on the fact that financial conditions are becoming increasingly accommodative and the equilibrium short-term interest rate may have risen (when there is an increase in the underlying productivity growth or a decline in the equity premium). I would note that it may at times be difficult for policy-makers to raise interest rates when there is a simultaneous positive productivity growth shock that is threatening to put short-run *downward* pressure on inflation. For inflation targeters, this combination of shocks may cause them to have to look beyond their normal horizon of one and a half to two years. Of course, in a loss function sense, what is relevant is the sum of all future squared deviations of inflation from target and of output from potential.

I think that the lesson Larry draws here is correct. Because of problems in interpreting the data and the nature of the shock, however, it will be difficult to apply and to communicate to the public—but that doesn't mean that we should not try our best to implement it.

3.3 Inflation targeting

Larry analyzes the productivity growth shock and asset-bubble shock using a framework that almost any inflation-targeting central bank would be happy with. For the purposes of my following comments, there are two requirements in inflation targeting:

(i) an explicit inflation target, and

(ii) recognizing that although there is no long-run trade-off between output and inflation, there is a short-run trade-off. For this reason, and for reasons of avoiding instrument instability, there is no sense in being an "inflation nutter," in Mervyn King's terminology.

For central banks that have an explicit inflation target and that accept a short-run (but no long-run) trade-off between output and inflation, the only way to characterize their behavioural differences is by the relative weights they put on inflation variance and output variance in their loss function.[2]

Trying to determine behavioural differences by examining communication based on emphasizing "hierarchical mandates" or "dual mandates" is, I think, largely uninformative from an economic point of view. Although such communication could be important domestically when one considers the cultural, historical, or political views in a given country, this communication tells us little about differences in behaviour across central banks in various countries.

Indeed, I think that there are likely few significant differences in the effective relative weights placed on inflation and output variances across the group consisting of the United States and the major inflation-targeting countries in the industrial world.

Thus, if the United States were to adopt an explicit numerical target for inflation, I would argue that it would become a full-fledged inflation targeter, not one constrained by a "dual mandate" to do anything different from the rest of us in the inflation-targeting club. I would note that the preamble to the Bank of Canada Act gives us a "multiple mandate," but all mandates need to be interpreted in terms of what is economically feasible and consistent in the real world.

Thus, most of the 5 per cent where I would differ with Larry concerns what I believe is his overemphasis on the importance of a "dual mandate" in making the U.S. situation different. When I told Chuck that this was the only major comment I had on Larry's paper, he told me that it was interesting, because in his paper at the Goodhart Festschrift (Freedman 2003), he had made the same comment in writing about an earlier paper by Larry (Meyer 2001).

So, I am not sure that I have ever had a comment that could not be traced back to Chuck! In any event, he has certainly shaped the frameworks within which we examine policy issues here at the Bank. Larry has done the same at the Fed, as is clearly evidenced in this paper. Sooner or later, he may even persuade them to adopt numerical inflation targets.

Thanks for sharing the lessons you have learned, Larry. They are valuable for us all.

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2. Svensson (2003) has put some emphasis on central banks communicating the relative weights of inflation variance and output variance in their loss function.

References

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