

# Structural Change and the Conduct of Monetary Policy

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I have arranged my remarks around three types of structural change. The first is change in the underlying structure of the real economy. The second is change in the inflation process. The third is change in the financial structure. I will argue that the last is probably the most difficult for central banks to deal with.

## **Structural change in the real economy**

Changes in industries' relative shares of production or employment, or changes in the extent to which foreign competitors penetrate national markets, have always been a feature of market economies. This kind of structural change reflects shifting tastes, the opening of new markets, the advent of new competitors, and the introduction of new technologies and so on, which periodically disrupt established patterns of production, distribution, and consumption.

What's monetary policy's job in the face of such changes? Generally speaking, it is simply to let them occur and to resist any temptation to use monetary policy to address the adjustment issues. Monetary policy cannot, for example, cure an unemployment problem that is the result of the collision of changing industrial patterns with rigid labor market practices. Nor can it address the inter-regional differences in an

economy caused by concentration of declining sectors in one area and of growing sectors in another. Other policies must come to the fore in dealing with these sorts of problems. (That said, an improvement in structural policies which enhances the economy's supply side should ideally be complemented by more accommodating demand management, all other things equal.)

That is not to say that these sorts of structural change may not raise some technical issues for monetary policy. They may well affect our judgment as to what setting of the instrument will contribute to the long-run goals of policy, which themselves are invariant to the changed structure. If structural changes are, for example, affecting the relationships between conventional measures of economic slack and prices, or the economy's medium-term potential output path, or the relevance of particular economic indicators, then that should be taken into account in setting the instrument.

How does one go about that? There is no simple device available for this purpose. It is essentially a matter of trying to be quick learners—continually being on the lookout for things that are different to the past, and not being too wedded to particular empirical representations of the economy. We have to develop some notion of the economy's behavior—it's not good enough to say we know nothing. But “models” of the economy—whether of the formal or informal kind—need to be viewed as working hypotheses, continually open to amendment in the light of new experience.<sup>1</sup>

This holds as well for analytical constructs we commonly use, like output gaps, NAIRUs, natural real interest rates, and so on. It's important to keep these devices in the realm of useful ways of organizing our thinking and to take care not to elevate numerical estimates of them to central status, lest a shift in relationships take policymakers off course. The Reserve Bank of Australia's (RBA) approach has been to do our best with various pieces of empirical research in these and other areas, and to allow them to inform our judgment about the

outlook and policy, but not in any sense to be a substitute for that judgment. I'm sure that the same occurs in other central banks.

Provided we are mindful of these broad principles, and I think most central banks are, we should be able to cope with shifting economic structure acceptably well. And there is little to suggest that this sort of ongoing evolution of economic structure poses greater problems for policymakers today that it has in the past.

A different type of structural change has to do with the time series properties of the economy—in particular, the degree of variation from quarter to quarter. As we have heard at this conference, there seems to be reasonably clear evidence that, for many of the major countries, this variation diminished during the 1990s. This was also true in Australia's case, where the standard deviation of quarterly GDP growth in the 1990s was about one-third lower than in the 1980s and two-thirds lower than in the 1970s. Better policies, more flexible economies, and smaller shocks—that is, better luck—are all (complementary) explanations for this phenomenon. That is a very favorable environment for central bankers. To some extent, we've been given an easier hand to play than some of our predecessors. I for one would very much like to see it continue!

Of course, it may not continue. Shocks could be bigger in the future. Or structural policy improvements might be partly reversed (e.g., if there were an increase in protectionism). Perhaps the relatively stable geopolitical environment that must have helped growth in the 1990s will not be present in the decade ahead. In such a world, monetary policymakers would face a tougher time. Even optimal policy adjustments would most likely be associated with more volatile overall performance. Whether financial market prices currently embody any significant probability of such an outcome is an interesting question to ponder—my guess is they do not. In a scenario like this, expectations about what monetary policy might be able to deliver in terms of smoothing the business cycle and year-to-year inflation rates could turn out to be disappointing, and we would all have a more difficult time explaining

this to our respective citizens. But apart from sharpening our communication skills, there is not much we can do about these possibilities other than to wait and see if they occur.

### **Structural change in the inflation process**

The second type of structural change about which I want to talk is change in the inflation process. In the post-World War II era, we have witnessed two structural changes in the properties of the aggregate price level. First, there was a tendency for persistent inflation, to an extent not seen before, which had become quite noticeable by the late 1960s. "The Great Inflation" accelerated in the 1970s, and for most industrial countries, the peak inflation rate was reached sometime between about 1974 and 1982. Since then we have seen a second phase, during which the continual rise in the price level has slowed down, and in many places we today see, more or less, price stability.

A few factors made a contribution to these swings, including adverse supply shocks in the 1970s, and favorable ones for much for the 1990s. These sorts of things can make monetary policy's job harder or easier, though, of course, monetary policy ultimately has to take responsibility for price-level outcomes in the long run.

One of the central lessons drawn from that experience was the importance of expectations in the inflation process. The more ambitious expansionary policies could only deliver the intended gains, while expectations remained stable. Once expectations started to move up, policies were less effective in boosting output because people behave differently when inflation is thought to be a part of the economic furniture. Moreover, expectations of continuing inflation, once they had developed, proved to be fairly stubborn, which tended to constrain the ability of monetary policy to support the economy when demand was weak.

But by the same token, something we observe today is that when expectations are anchored at appropriately low levels, monetary policy has more flexibility. Policymakers have room to be a little more

tolerant, for example, of a decline in the exchange rate. Our own experience in the aftermath of the Asian financial crisis from 1997 was that in the face of a pronounced weakening in the exchange rate, inflation expectations remained quite well-anchored. While inflation did increase temporarily as a result of the fall in the exchange rate, the likelihood of a persistent problem with inflation was low. Hence, monetary policy was able to follow a fairly accommodative stance, in the face of a very weak international environment, rather than needing to tighten to safeguard medium-term price stability. This would not have been possible in earlier times, and the extra flexibility made a considerable difference to economic performance.<sup>2</sup> So, expectations matter, and it is not unreasonable to think that the efforts of policymakers to be clear about their goal of controlling inflation, and to act consistently with that goal, made a difference to the characteristics of the inflation process. That, in turn, has allowed policy some additional short-run flexibility.

The question many have recently debated is whether there is now another sea change occurring in the inflation process that is every bit as profound as that which took place during the 1960s but in the other direction. That is, is the prevailing problem in the future going to be not inflation but deflation?

For my own country, the answer is clearly “no” for the foreseeable future. Others are more qualified to answer for other countries. But either way, here again expectations will be important. While they are strongly held above zero, it will be easier for monetary policy to help get an economy out of an incipient deflation. Were expectations of deflation to become entrenched, on the other hand, policy would face a more difficult task to remedy the situation. This highlights the importance of articulating the goals of policy as clearly as possible in order to give expectations an anchor. For inflation targeting countries such as Australia, stressing the symmetry of the target is quite important in this context. Countries such as the United States, without a formal target, have also indicated that there is an inflation rate so low as to be undesirable. Mere announcements are not in themselves enough, of course,

and have to be backed up by credible policy actions. And in countries where chronically weak demand is already accompanied by flat or falling prices, not all of these actions will necessarily be in the realm of monetary policy. But to be clear that policy is seeking to maintain or to return to low but above zero inflation is probably a necessary, even if not sufficient, condition for adequate outcomes.

Experience of previous periods of deflation in our own countries (admittedly not first hand for most of us here) and observation of Japan's travails in the past decade also points to the importance of financial structure. This leads naturally into my third topic.

### **Changes in financial structure**

There has rightly been much emphasis on corporate-sector finances and government finances in most of the industrial countries for many years. One or both of these areas have created big problems in just about every country at one time or another, and in a number of countries the struggle to get public finances in order is set to continue for some time ahead.

But one of the most striking areas of financial change in recent times has been the increased opportunity for *households* to adjust their financial positions, certainly in the English-speaking countries. Access to credit has expanded remarkably over the past couple of decades. The structural decline in inflation has produced much lower nominal interest rates, and it is nominal rates that matter for households looking to borrow to finance a housing investment. At the same time, lenders find households to be less risky borrowers than companies. Both of these factors are encouraging households to take on more leverage. Financial innovation also means there is much greater opportunity to collateralize assets. With the big run-up in house prices, there is a very large pool of potential collateral that has not as yet been tapped. And a fairly long period of relative economic stability—in Australia's case, a quite long expansion, now in its thirteenth year—has meant that people feel more comfortable with more leverage.

In Australia's case, household gross assets are now about 8½ times current income, compared with about five times in 1980 and about six times as recently as the mid-1990s. Financial assets have grown, but much of the increased wealth has been in the form of dwellings. Since 1997, the Australia-wide median price for an established house has doubled. At the same time, Australian households are more indebted. The ratio of debt to income has risen from a point well below that seen in comparable countries in the mid-1990s to now being toward the top of the range seen in like countries today. Leverage—the ratio of debt to assets—has not increased as fast as the ratio of debt to income (which implies that net worth has increased substantially) and it remains lower than in some other comparable countries. But even so, it has increased noticeably. These trends show few signs, at present, of imminent change.

We have yet to see the full ramifications of this structural change in household behavior and balance sheets. The fact that balance sheets are so much bigger presumably means that changes in wealth are likely to matter more, relative to changes in things like current income, than they used to in determining the course of household spending over the business cycle. Secondly, higher leverage means that negative shocks to income are more likely to be amplified as they work their way through the economic system. Moreover, leverage may yet increase a good deal further, since the as-yet-untapped equity in the housing stock is still very large and the capacity to access it is growing. And thirdly, of course, higher leverage means that monetary policy's impact via its effect on the behavior of borrowers will be bigger than in the past—especially in a country like Australia where the majority of household debt is at floating rates. The asset price channel of policy might also end up being bigger.

We have watched these developments with rather mixed feelings. For some years, the most plausible explanation for the trends I have just described was that there were good fundamental reasons for a change in households' balance sheets. Households had for various reasons been constrained to a position of relatively low borrowing,

but when the various constraints were lifted, it was inevitable, perhaps even desirable, that there would be a period of strong growth in lending to households as they moved toward a new balance sheet equilibrium. From the mid-1990s until about 2001, this seemed the best story. But over the past year or two, we have become less confident that a sensible one-time balance sheet adjustment should still be continuing and more concerned that an increasing number of households may be putting themselves in a position of vulnerability.

This is, of course, our particular experience of the thorny question of monetary policy, debt, and asset prices. Like other central banks, we have grappled with the question of what, if any, response monetary policy ought to make to this situation, and, like others, we have not found that question amenable to a straightforward answer. On the one hand, these developments are exerting some expansionary impetus to the economy at a time when global demand conditions are weak. To that extent, they are helpful in avoiding undue weakness in the Australian economy. On the other hand, the household sector's ability to cope with some future contractionary shock is probably being impaired at the margin as leverage continues to increase. While we do not think that there would be any significant financial sector fragility as a direct result of this increased debt even if house prices were to fall in the near term, we fear that there could still be significant general economic fallout if the economy is subject to some other shock, mainly because household consumption could retreat quite quickly.

Dealing with all this is still very much a work in progress, but as I reflect on our own experience to date and that of others, a few observations come to mind.

First, it is not very helpful to couch the discussion in terms of whether monetary policy should try to prick "bubbles." This tends to sidetrack discussion onto questions like whether we can confidently identify, indeed even define, "bubbles" and whether or not aggressive policy action is appropriate if we can. A more helpful way to set it out is to think about the balance of risks facing the economy: Is there something

occurring that is increasingly likely to be a misalignment, a subsequent reversal of which could prove to be disruptive? And if so, is there some monetary policy course that, while possibly involving some short-run cost to economic activity, would reduce the risk of bigger loss of economic activity later? Can we, to use the popular metaphor, buy some insurance and at what price?

Second, any response by monetary policy is bound to be relatively moderate because the uncertainty about the effect of policy on the dynamics of asset prices is considerable. That means that asset prices still are likely to move quite a bit in these episodes. Policy's ability to smooth things out is limited, which is something we already know as a general proposition anyway.

Third, I am inclined to agree with recent work in the Bank of England that suggests that it is possible, at least in principle, to embed this discussion within a medium-term inflation-targeting framework. For inflation-targeting countries, it would certainly be a retrograde step in my view to be perceived as walking away from a framework which has for a decade delivered good results, in favor of some explicit pursuit of asset prices per se.

Fourth, even if we do bring asset prices and debt within the existing framework, we have a difficult problem in practice. Our approach to monetary policy and our presentation of the objectives of monetary policy are usually geared to horizons of a year or two. This holds for most explicit inflation targeters and also, I think, for those with more implicit goals. But asset price events and the balance sheet changes that accompany them usually do not occur neatly on that frequency. The really big ones can be once-in-a-generation developments.

If it were to be decided that monetary policy should be more responsive to asset price events, such an approach would have to be motivated by a broader and rather more long-term notion of financial and monetary stability than is in common use today. For those of us who use explicit inflation targets, for example, there would be a need to focus on

a longer time horizon and perhaps somewhat greater toleration of short-run deviations from the medium-term target. The presentational difficulties of this, while not necessarily insurmountable, are certainly not trivial. If we do need to move in the direction of giving asset price and debt developments more weight in the conduct of monetary policy than hitherto, we need to educate our respective communities about these issues. That education process is probably a good thing anyway, regardless of policy intentions.

## **Conclusion**

Discussion about these matters is, doubtless, set to continue. It is pretty certain that structural change will always be with us. Central banks routinely have to be on the lookout for the sorts of changes that, while leaving ultimate objectives unchanged, might alter the short-term tactics of policy settings. But I think that financial structure changes, which often occur over long periods, will probably be the most difficult ones for central banks to handle.

## **Endnotes**

<sup>1</sup>It could be added that taking on board some of these sorts of change may involve being prepared on occasion to give some weight to judgment before all the empirical evidence is crystal clear—while recognizing that you might be wrong and trying to weigh the costs of being wrong. A case in point would be the way U.S. policymakers backed their judgment about higher trend productivity growth before it was all that clear in the official data.

<sup>2</sup>It's true that generally lower pass-through of exchange rate changes to inflation has also helped in instances like the one I mention here—though I can't help feeling that the low inflation environment generally, and the associated set of expectations, have been important in driving that result.