

Discussion

1. David Gruen

Frank Smets has written an interesting and thought-provoking paper on the role of asset prices in the formulation of monetary policy. Of particular interest is his comparative analysis of Australia and Canada – two commodity-exporting economies that one might have thought would behave similarly, but which in fact differ in interesting ways. In my comments, I want to talk about some of the things that Smets discusses in his paper, as well as some things that he does not discuss. Let me begin with the things he discusses.

When thinking about asset prices and monetary policy in a small open economy like Australia, perhaps the first asset price that comes to mind is the exchange rate. Policy-induced changes in the exchange rate are an important transmission channel through which monetary policy affects both inflation and activity. The most rapid transmission channel from monetary policy to inflation in an open economy occurs via the exchange rate's effect on import prices. Other transmission channels eventually have a much larger impact on inflation, but they occur more gradually. The effect of changes in the exchange rate on activity arises, of course, because of the exchange rate's effect on the volume of exports and imports and, therefore, on activity in the export and import-competing sectors and the wider economy.

Not all changes in the exchange rate, however, are a reaction to interest-rates changes. When the exchange rate changes for reasons unrelated to monetary policy, these changes have implications for monetary policy. Smets makes the crucial point that, to understand what are the implications, one must take a view on what caused the exchange rate to change. For concreteness, think about an exchange-rate appreciation and assume that the appreciation is expected to last long enough to make a difference to the macroeconomy. For the sake of the argument, we should also assume that the appreciation has not been accompanied by any change in macroeconomic fundamentals; that is, it is purely a financial shock in Smets' terminology. In that case, the exchange-rate appreciation will have a contractionary effect on the economy, at least for some time. It will also put downward pressure on inflation. Other things unchanged, monetary policy should be eased in reaction to such an exchange-rate appreciation.

The alternative case is when the exchange rate is simply responding to a change in macroeconomic fundamentals. In Australia's case, the really important fundamental for the exchange rate seems to be the terms of trade. So let us assume that the terms of trade have risen, and that the exchange rate has risen one-for-one with the terms of trade. (This seems to be roughly the average response of the Australian trade-weighted exchange rate to a terms-of-trade change.) In this case, a back-of-the-envelope calculation suggests that the combined effect of the exchange-rate appreciation and the terms-of-trade rise is mildly expansionary for the domestic economy in the short run.¹ It also appears that the

1. Assume that the terms of trade rise is driven by a rise in the world price of Australia's exports, which is usually the case. If the exchange rate rises proportionately, the \$A price of exports is unchanged, while the \$A price of imports falls. If the price elasticity of imports was unity, then the fall in their \$A price would raise the demand for imports sufficiently to leave nominal expenditure on imports unchanged. In that case,

net effect of the appreciation and the terms-of-trade rise is to reduce inflation in the short run (Gruen and Dwyer 1996).

So in the case of a terms-of-trade rise leading to an exchange-rate appreciation, output expands and inflation falls. For a central bank that cares about both medium-term price stability and output stabilisation, the appropriate monetary-policy reaction is ambiguous. The fall in inflation suggests an easing while the boost to output suggests a tightening. We do not have to resolve this ambiguity here; the important point is the one that Smets highlights. For monetary policy to react appropriately, one must take a stand on what caused the exchange rate to change.

This brings me to some of the interesting empirical results in the paper. Smets finds that terms-of-trade shocks are a much more important driving force for the Australian dollar than they are for the Canadian dollar. We have also noted this empirical regularity. The Australian exchange rate seems to respond more to the terms of trade than any other exchange rate we are aware of. Figure 1 shows how strong the relationship is for Australia, and how much stronger it appears to be than the corresponding relationships for Canada or New Zealand.

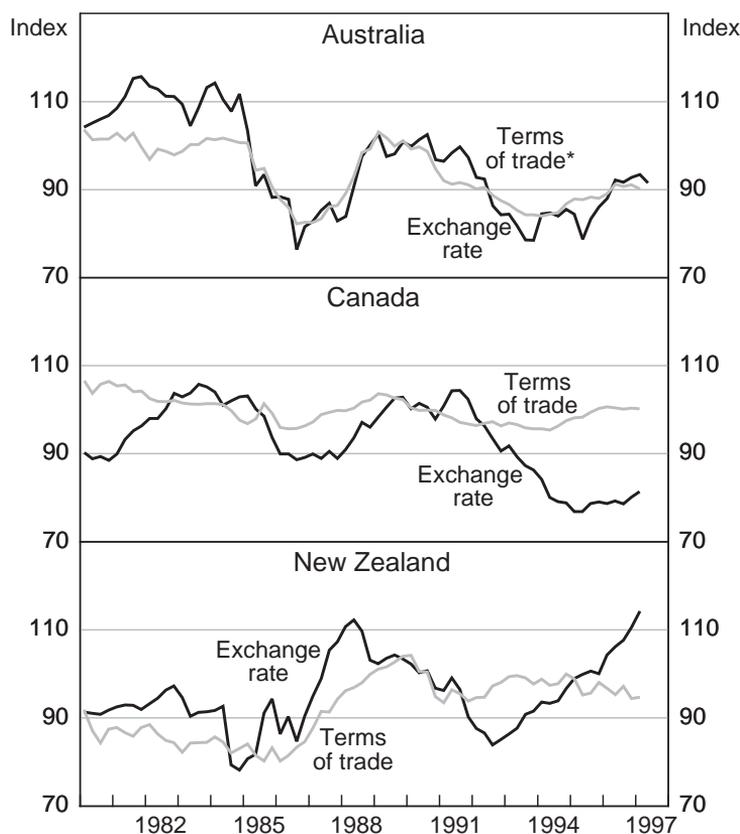
We are rather at a loss to understand why the Australian relationship is as strong as it is. We have done some empirical work suggesting that forward-looking participants in the foreign-exchange market ought to be able to profit from the inherent predictability of the terms of trade and their close medium-term relationship with the Australian dollar. Foreign-exchange market participants do not appear to exploit this relationship, at least not in sufficient numbers to weaken it significantly. I have even heard it said that the foreign-exchange market is just responding to all the research the Reserve Bank has published on the strength of the link between the Australian dollar and the terms of trade. If that is true, it seems like a novel example of central bank credibility.

Smets goes on to argue that differences in the source of exchange-rate shocks in Australia and Canada provide a key to understanding the different policy responses in the two countries. This seems to me a sensible conclusion to draw. I do think Smets overstates the argument when he claims that ‘the Reserve Bank of Australia does not respond to changes in any of the financial prices including the exchange rate’. There have clearly been times when the behaviour of the exchange rate did lead to policy responses. The 35 per cent fall in the trade-weighted exchange rate over 18 months in the mid 1980s, and the 20 per cent fall in 1992–93 were both episodes which had a bearing on policy interest rates. Steve Grenville discusses these episodes in more detail in his paper for the conference. But the general conclusion that emerges from Smets’ econometrics seems the right one. On average, monetary policy in Australia did not respond to changes in the exchange rate because these changes were driven largely by the terms of trade. By contrast, in Canada, the effects on domestic demand of changes in the exchange rate were not, in general, offset by income effects from the terms of trade, and so monetary policy in Canada was used to lean against the wind.

the rise in Australian real income implied by the improvement in the terms of trade would manifest itself solely as a rise in import volumes, at least in the first instance. In fact, the price elasticity of imports seems to be less than one (Dwyer and Kent 1993) implying that the fall in their \$A price will result in a fall in expenditure on imports. As a consequence, some of the rise in Australian real income is available to be spent on domestic goods, which should have an expansionary effect on the domestic economy.

Figure 1: Real Effective Exchange Rate and Terms of Trade

Real exchange rate based on relative consumer prices



* Excluding computers.

Such considerations lead naturally to a discussion of the advantages and disadvantages of monetary conditions indices (MCI), and Smets spends some time on this. One of the problems he sees with a fixed-weight MCI is that interest rates and the exchange rate affect different sectors of the economy differently. Much the same could be said about the different sectoral impact of fiscal and monetary policy. Despite this, however, macroeconomists have spent a lot of time debating the trade-off between fiscal and monetary policy, fruitfully in my view. This seems to be the nature of practical macroeconomic analysis. While it would be nice to have a detailed understanding of the evolution of the whole economy on a more microeconomic, disaggregated basis, most practical macroeconomic analysis is done in terms of economy-wide aggregates.

My view on MCIs is that they can be useful in assessing the stance of monetary policy or, if you like, financial conditions, but that they should come with a warning label: 'use with caution'. For Australia, it will come as no surprise when I say that it makes little sense to construct an MCI which weights together the interest rate and the exchange rate without making some allowance for the terms of trade.

When thinking about asset prices and monetary policy, there is a question which is not directly addressed in Smets' paper, but which I think is important. It has come up on a few occasions in this conference already. Let me conclude with an examination of this question. Does monetary policy have any special role to play when the policy-maker judges that an unsustainable asset-price bubble may be developing? Let us take as given that asset-price bubbles can have high social costs. Japan in the 1990s provides perhaps the most obvious example of this, but Australia in the late 1980s is also an example.

Smets' implicit answer to the question of whether monetary policy should respond is given at the beginning of his paper: 'The central bank's response to unexpected changes in asset prices should depend on how these changes affect the inflation outlook; if they imply a rise in the inflation forecast, policy should tighten and *vice versa*'.²

If the policy-maker suspects that an asset-price bubble is forming, it may raise his short-term inflation forecast, but lower his longer-term forecast, as he anticipates that the bursting of the bubble will have a disinflationary impact on the whole economy. But even these conclusions may not be robust. In the late 1980s in Australia, when the price of commercial property was rising rapidly, underlying consumer price inflation was slowly trending down. One might want to argue that the asset-price inflation threatened to spill over into consumer price inflation, and that may well be right. But the point is worth making that it is by no means assured that an asset-price bubble will eventually lead to higher consumer price inflation.

If that is the case, then the question becomes, should monetary policy seek to burst an asset-price bubble, even when developments in the asset market are expected to be consistent with acceptable outcomes for consumer price inflation and economic output over the policy horizon of the next year or two? The grounds for doing so would be that the larger the bubble becomes, the more costly it will be when it eventually breaks.

This seems like a pretty important question, but also a difficult one. Let me give just a few brief thoughts on it:

- How confident can policy-makers be that they can distinguish between an unsustainable asset-price bubble and a realignment of asset prices that is justified by fundamentals? This distinction is usually painfully clear with the benefit of hindsight, but the crucial decisions have to be made in real time.
- Is monetary policy the appropriate policy to deal with a suspected asset-price bubble, or should other (regulatory) instruments be used?
- If monetary policy is used, will the central bank's reputation suffer if it is seen to be the proximate cause of the busting of an asset-price bubble?
- Even if one is confident that a bubble is forming, are there criteria for deciding whether the bursting of the bubble will be costly? Presumably widespread leveraged buying of assets would be a danger sign. If financial institutions have lent money on the basis of asset values that are judged to be unrealistic, then the stability of the financial system is also an issue.
- Are some types of asset-price bubbles, for example property-price bubbles, intrinsically more of a worry than other types of bubbles?

2. Smets does revisit the issue of asset-price bubbles in the final paragraph of his paper, where he argues that the possibility of large and persistent asset-price misalignments is an issue deserving of further attention.

As ever, it is easier to raise these issues than to resolve them. But they are issues on which we need to take a view if monetary policy is to respond appropriately to some of the more troubling developments in asset markets.

References

- Dwyer, J. and C. Kent (1993), 'A Re-examination of the Determinants of Australia's Imports', Reserve Bank of Australia Research Discussion Paper No. 9312.
- Gruen, D. and J. Dwyer (1996), 'Are Terms of Trade Rises Inflationary?', *Australian Economic Review*, 114, pp. 211–224.

2. General Discussion

Discussion of the paper focused on two issues:

- the response of monetary policy to asset-price movements; and
- the role of a monetary conditions index in an inflation-targeting framework.

The discussion on the link between asset prices and monetary policy followed on from the discussion of Stephen Grenville's paper. At the conceptual level, there was reasonable agreement that there are two reasons why monetary policy might need to respond to asset-price movements. First, a change in asset prices may affect future output and inflation; for example, movements in the exchange rate have a clear impact on prices and the business cycle, and depending upon the circumstances, this may require a change in interest rates. Second, monetary policy may need to respond because of the potential for financial instability in the future if and when an asset-price bubble bursts. By bursting a bubble in its early stages, the costs of the instability might be avoided.

The debate centred on whether there were better instruments than monetary policy for dealing with these problems, and whether it was even practicable to use monetary policy to respond to asset-price bubbles.

Some participants argued that increasing interest rates to burst a bubble could have adverse consequences. When the bubble finally bursts there are likely to be strong contractionary effects: the lagged effect of high interest rates would restrain growth, the fall in asset prices would harm confidence and balance-sheet problems would see investment fall. In this situation, deflationary forces are likely to be strong. There was agreement that this creates a significant problem for monetary policy: should high interest rates be used in an attempt to burst the bubble, or should the authorities simply wait till the bubble bursts of its own accord? The choice was seen to depend upon an assessment of the costs of further asset-price inflation and the costs of high interest rates and falling asset prices.

Some participants suggested that other instruments be used. Clearly, if the asset-price movements are driven by distortions, those distortions should be removed. Some participants thought that the deregulation of the financial system in the 1980s had made the economy more prone to asset-price bubbles, and therefore more vulnerable to the

ensuing asset-price deflation. Others noted that asset-price booms and busts had occurred in both the regulated and deregulated financial environment.

One suggested response to asset-price bubbles was to adjust prudential requirements. For example, collateral standards could be tightened when it was perceived that an asset-price bubble was developing. Some participants thought that prudential standards had not kept pace with the speed of financial deregulation and this had contributed to some of the problems in the 1980s, while others suggested that the tax system could be used to influence asset prices. However, some participants suggested caution, arguing that changes in prudential and taxation policy could have unintended side-effects such as encouraging the expansion of institutions which are not subject to prudential regulation.

It was noted that even if one had the right instrument, identifying asset-price bubbles, and their origins, is a difficult task. It was generally agreed that economic models of asset prices are inadequate. One clue to potential problems was seen to be the combination of rapid increases in asset prices and bank credit. There was no agreement on whether the increases in asset prices in Australia in the 1980s were the result of policies in Australia, or were simply part of a wider global phenomenon.

There was a brief discussion of the role of the exchange rate in an inflation-targeting framework. One point of view was that the exchange rate was simply one of the many variables that influences future output and inflation, and should not be accorded a special place in the monetary-policy framework. Others argued that since the influence of the exchange rate is so pervasive in small open economies, the central bank should focus its deliberations on a combination of the exchange rate and short-term interest rate. This argument has led some central banks to publish monetary conditions indices and to use them as a tool for explaining policy decisions, and a rough operational guide for policy in periods between formal monetary-policy meetings.