Draft, December 2005

Instrument insufficiency and economic stabilisation

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Abstract

Recently concerns have been raised about the effectiveness of monetary policy in controlling inflation while avoiding damage to the economy from high exchange rates. This paper examines the basis for concern and identifies the problem as a failure in the primary instrument, namely the Reserve Bank's operating cash rate, to adequately impact further along the term structure curve, which has become the more sensitive area for aggregate demand. This means that direct control over expenditure is weak, and too much leeway is left to the housing and other asset markets to sustain demand in the economy. Globalisation of credit availability and financial technology have helped to blunt the policy instrument in this respect, shifting the adjustment burden on to the exchange rate. Deft management of interest and currency expectations can help, but the problem may require closer coordination and cooperation between monetary and fiscal policy, restoring a stabilisation role for the latter.

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I Introduction

Economic policy is one of those areas where it is hard not to find an expert. Monetary policy, in particular, is constantly in the news and attracts more than its fair share of public debate. It is easy to see why, for interest rates and exchange rates are readily observable things that can impact in a very direct way upon corporate viability and personal welfare. Indeed, the conduct of monetary policy has become associated in the public mind with the discretionary side of economic policy as a whole. And, it seems, even in the minds of senior politicians. In a recent TV interview[2], Prime Minister Helen Clark of New Zealand referred to 'the governor's stabilisation policy' in the context of discretionary economic policy as a whole. This may or may not have been a slip. But it seems true that with fiscal responsibility rules now in place in a number of OECD countries, the apparently diminished scope for fiscal policy has led to a greater emphasis on monetary policy as a way of securing internal and external balance.

Perceptions of the importance of monetary policy have been reflected in the academic and professional literature over many years. In recent times, the role of monetary policy in the open economy has been singled out, undoubtedly because of the increasing international dependence of financial markets and national economies. Issues addressed[3] have spanned the form of targeting (and if any), the instruments and signals to use for the purpose, whether the rule should respond to the exchange rate, what inflation measures to use (e.g. traded v. non-traded goods), the impact of uncertainty of various kinds, whether forward-looking rules rather than feedback reactions are best, and other concerns. There is much to admire in many of these studies: their models are internally consistent, sometimes quite ingenious in their solutions, and academically correct in the way that they handle the consistency of expectations through time via boundedly rational equilibrium paths. One would therefore expect a better understanding to have emerged of the scope and efficiency of monetary policy.

Unfortunately reality is a poor respecter of academic correctness. Not only do we not have a good understanding of alternative policy rules in practice, there is no sense that any monetary policy rule whatever has in reality much impact on its intended primary target. If the rules operate at all it is via incidental or tangential targets, and the welfare effects may not be spread in the way that the policymakers would like. Thus in recent times, successive hikes in the New Zealand operating cash rate (OCR), already high by world standards, have had remarkably little, if any, cooling effect on the state of aggregate demand in the economy. The primary impact, perhaps the only one, has fallen on the exchange rate, which is at any time only the most indirect way of cooling off an economy. From the welfare point of view it is also a damaging way of doing so. For the primary impact does not fall on the traditional commodity sector, but on ventures in manufacturing and technology – so that the so-called 'new economy' is in danger of becoming the newly deceased economy. The primary sector, on the other hand, is well protected both by virtue of currently high world commodity prices and by a measure of economic rent derived from a Hecksher-Ohlin style comparative advantage that constitutes a natural buffer. The secondary sector is more exposed to competitive price pressures, whether these are in offshore markets or in local import substitution. To be sure, there are those who might claim that if the new economy cannot withstand exchange rate shocks, there is no permanent welfare loss in its decease, and comparative advantage should prevail. But economic rationalism of this sort ignores infant industry arguments, the local welfare costs of production outsourcing or relocations, and the long-term risk management benefit of having a more diversified economy.

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[2] Monday 21 2005 November TV1 morning news.

[3] For discussions spanning these and related issues see e.g. Ball (1999), Dennis (2001), Obstfeld and Rogoff (2000), Svensson 2000, Batini *et al* 2001, Clarida et al 2001, Froyen and Guender (2002), Guender (2002), Gali and Monacelli (2005), Ortega and Rebei (2005), and Santacreu (2005).

Monetary policy has certainly worked in times past. In 1979 the Volcker Federal Reserve stopped world inflation in its tracks by moving to a money supply based policy rule and letting the federal funds rate go where it might (which it duly did, dragging up world interest rates with it)[4]. But that particular episode was a major discontinuity in the nature of an important policy rule – one could describe it as a policy shock, of the kind we should not look to see replicated too often. But recently in New Zealand, concern has been rising that current monetary policy settings are too tough and could precipitate a hard landing for the economy, as distinct from the softer landing that the Australians have evidently accomplished with a reputedly less rigorous approach to inflation targeting. So what has gone wrong – or was wrong in the first place – with our current understanding of monetary policy and the way it works?

It is certainly possible to argue that the models used to examine the effects of policy rules reflect prevailing orthodoxies that may not be well grounded in empirical findings or casual observation. For one thing, the influence of neoclassical economics is pervasive: Variations in aggregate supply are based only on unanticipated prices and unforeseen productivity shocks; demand depends primarily upon real wage rates; and people are remarkably perceptive and forward looking in their intertemporal decision making, though they may also cling to habit elements. This is a world in which economic decisions are driven above all by relative prices: real wages, domestic prices versus foreign prices, the exchange rate, and so on. The treatment of asset prices is rudimentary or indirect, e.g. via the demand and supply of real money balances or a single asset freely traded internationally and obeying classical parity conditions for interest and exchange rates. Aggregate demand, as such, does not play centre stage – in some versions not even a bit role, so in that sense the new orthodoxies owe little to Keynes, no matter that his influence persists in general economic commentary.

However, getting into arguments about schools of economic thought is a profitless exercise. Nor, at this juncture, is there much point revisiting issues about the precise settings for inflation targets, the specification of central bank reaction functions, or for that matter whether formal or hard-wired inflation targeting is preferable to informal. It might be more useful to look at what the various orthodoxies might have missed, especially in so far as this relates to recent developments in the local and global economies and in their financial technology. This issue here is not whether things have changed – they always have – but whether the changes are substantive enough to affect the conceptual models, mental or otherwise, that we use to understand how the economy responds to alternative policy rules and settings. Moreover, if the effect of the new economic environment is to negate monetary policy, then we need to know if this is in itself damaging, and if it is, then what additional policy instruments might be needed. It may be necessary to revisit the division of stabilisation policy as between the central bank and the government.

II International finance and local economics

Looking back at the New Zealand economy over the last 10 years or so, set against prior economic history, the originating stimuli have arguably not changed all that much. NZ is still primarily a commodity exporter, and world commodity prices remain an important driver of economic activity as a whole, operating via some familiar channels. The differences seem to lie more with sustainability and response. They concern the influence of asset prices in magnifying and sustaining general demand long past the originating stimulus, and the perverse effect of prudential arrangements designed to ensure the safety of the financial system. Also relevant is the effect of globalisation in sustaining the demand for credit and financing current account deficits, all without the older constraints on local saving and other self governing mechanisms. In a sense, the economy has become much less disciplined all round, and it shows in the diminished responsiveness to monetary policy, no matter that the

[4] Readers less chronologically endowed could try textbooks of applied macroeconomics, e.g. pp 267, 329 in Bowden (2005)

latter has itself responded to imperatives for change in accordance with new institutional arrangements such as real time gross settlement. In what follows we review some of the more important contributing reasons why this might be true.

Asset prices and real activity

Soaring asset prices[5] in OECD countries have been due to a number of factors: low interest rates, babyboomers with higher disposable incomes squirreling up wealth in advance of retirement, strong domestic economies with perceptions of employment and cash flow security, and other influences. The precise incidence and influences differ according to country, as does the duration of the boom phase. Asset prices are always a barometer of economic health or expectations. They also have their own causal impact on macroeconomic activity, but none more directly so than the housing market.

The hypothesis that higher house prices drive the building cycle and hence the economy as whole, is hardly new – the effect has been noted for many years in the literature on the building cycle. Particularly in recent years, however, owner occupied houses have become viewed as an essential investment medium, a medium that could be relied on to deliver substantial long term capital gains in the presence of locational economic rents and future scarcity. In the case of New Zealand, a lack of depth and confidence in the equity market, as well as favourable tax breaks, has seen owner occupied wealth become the principal source of wealth creation, exceeding the superannuation account or personal savings embodied in other assets. The cocktail circuit aside, house prices have become an object of everyday investor attention, and in this we are all investors. The same attitudes towards housing as an investment has also meant that market timing, investor confidence, fear and regret, the same behavioural imperatives as on the stock market, can create considerable price volatility, even if it is not quite so quick to respond as is the stock market.

The three I's integral to house price dynamics are incomes, interest rates, and immigration. All three have figured strongly in the NZ economic environment over the last five or six years. Incomes rose following the recovery in commodity prices, with the export sector as the vector into the rest of the economy. Interest rates were low and dropping in offshore comparators. As the economy picked up and longer-term confidence in the currency was restored, immigration added to the heat. In general investment expenditure theory, Tobin's Q holds that if the market value of a physical asset rises above its replacement value, then new units will be built and investment expenditure will be the visible manifestation. The application to investment in housing is more or less self evident. New housing units could also be taken to refer to alterations and additions[6].

Collectively, housing investment expenditure is now a substantial part of aggregate investment spending, and much of it is driven in the first instance by rising asset prices. More traditional forms of fixed investment have not been quite so prominent, indeed there have been claims that the structure of the NZ economy has changed in such a way that corporate sector has diminished in importance, not necessarily in terms of output or sales, but in the diminished amount of physical investment needed to support them. This probably reflects the

[5] References have appeared in recent months by policy makers to NZ house prices as a 'bubble'. One should not confuse high prices due to economic fundamentals from bubbles, which means dislocation from any reasonable valuation based on projected asset services or earnings. Fundamentals are perfectly capable of explaining current levels of house prices, high as they are.

[6] From the economic point of view it is less clear why alterations should be subject to the Q theory, for if the origin of the real value is the land, as the ultimate scarcity element, then the optimal investment strategy might be to separate the building and land elements by maintaining a basic structure on increasingly valuable land. One theory might be that because of transactions costs of all kinds in selling and buying, it is optimal to increase buildings value along with land value, for this levers up total value in a rising market. This would account for the fact the alterations and additions follow a bit later in the building cycle. Also relevant is that if incomes are seen as long term more stable, then people feel the readier to sink money into improvements.

rising importance of services as a GDP generator. It could also be a reference to changing industrial structure in favour of the new economy (e.g. creative or IT enterprises). One thing is apparent, that the ratio of residential construction to total private fixed investment has grown in NZ from about 15% in 1990 to 27% in 2004 and the trend shows no sign of abating. Its cyclical contribution may be disproportionately greater, and the figures that are available also support this.

Wealth, risk and consumption

The connection between wealth and consumption has also been known for many years. It operates not only as a purchasing power constraint or the lack of it, but appears in various alter egos, notably the lifecycle hypothesis and the target hypothesis. The lifecycle hypothesis has moved from the academic literature to popular finance: college students, even those who have not done economics, now commonly cite it as justification for holidays to Europe and such – basically spend now, pay much later. And it underpins the exponential growth in student debt. At the other end of the life table, wealth also appears in various versions of the target hypothesis. Babyboomers can spend more now, because rising asset values meet or exceed targets for post retirement income.

Risk plays something more than just a bit role in the consumption story, and it likewise appears in alternative alter egos. When people feel wealthier, their aversion to risk diminishes, and that is partly why they feel able to consume more. They could feel wealthier for the more obvious reason that their asset values have climbed, including their private superannuation funds as well as house and other investments. But it could also be that the value of their stake in government has risen and so have their expectations of future incomes or support as a consequence. In particular the apparent success (thus far) of the NZ National Superannuation Fund is seen as an underpinning of the ability of the state to support the current workforce after age 65. It is, in a sense, their own long-term investment fund, so there is strikingly little of the veil of government. One could think of this as freeing up the new wealth derived from their own private investments for current disposal in the form of consumption, or of real asset investment that also yields consumption, notable housing alterations and additions.

The flip side of ‘excessive’ consumption is ‘deficient’ saving. The adjectives are perhaps a little too Calvinistic, notwithstanding their common use by commentators and politicians. NZ has indeed been running a negative savings propensity out of current income, and in this we lead the world, worse even than our spendthrift neighbours in the old white colonial club, such as Australia, US and Canada (the Old Country – the UK – is itself less affected).To some extent, government and corporate saving have compensated for deficient private saving, reinforcing the earlier point about seeing through the veil of government. Aggregate saving, however, remains negative and this has to be financed offshore, creating liabilities to foreigners. So it is necessary to look at the issues of just how the boom in consumption and residential investment is being financed, and what exposures this creates.

The financial underpinning

Those of us who have been brought up on Marshallian textbook economics have been taught that there are two arms to the demand and supply of (in this case) credit and both have a non zero slope. Shifting one or other of the demand and supply curves will cause the equilibrating rate of interest to change. Demand increases could indeed draw forth additional supply but only in the longer run, so that in the short run the price – here the rate of interest – would rise to dampen demand. But in recent times, the forces of globalisation and financial technology have short-circuited such a control mechanism for consumer and residential spending. So have recent developments in prudential supervision of the banking system, more or less as an unintended consequence.

Item 1 is the recourse to offshore borrowing in the form of Euromarkets. Banks are no longer constrained by the supply of domestic liquidity. They can raise finance in whatever currency appeals at the time, on the grounds of cost advantage or market opportunity, and swap them to NZ dollars. Or they can take advantage of origination by foreign issuers. In a typical transaction, Quebec Hydro, the World Bank, or some other corporate borrower might raise funds in NZD eurobonds or uridashis, relying on the higher NZ interest rates to create investor appetite among yield-conscious Belgian dentists or Japanese housewives. A NZ bank might do the same in US dollars, a market where they are better known, perhaps, or if they think their treasury can pick up a few basis points on the resulting swap. The two then swap to the preferred currency via a cross currency interest rate swap (e.g. Bowden and Zhu 2005 for the mechanics). The current NZ spending boom has been largely financed in this way. From 2002-3 the number and amount of eurokiwi issues have soared, as has the proportion of M3 funding due to overseas residents[7]. Non-bank financial institution – credit unions, finance companies and the like - have been surfing on the resulting wash of local liquidity. In the meantime, the need to refinance the offshore issues (commonly 2-3 years for uridashis and 5 years for eurokiwi) is looming that little bit closer.

Item 2 is the effect of Basle II, the revised banking regime due to come into operation in 2007. The table shows how bank capital requirements will change as between the two regimes. Home mortgages will drop from the current 50% weighting to 35%, which looks only 15%, until one remembers the dollar value, for banks now have the lion's share of mortgage lending. One would hardly expect such an impact to pass unforeseen by the banks themselves, and they have been jockeying to preserve and acquire market share well in advance of the official timetable. Bank margins on mortgages have been slashed and required down payments down sized, with even stories of 100% loan to value ratios.

	Basle I	Basle II
Governments and central banks	0%	0% - 150%
Banking	20%	20% - 150%
Corporate	100%	20 - 150%
Small and medium enterprises	100%	varies
Retail	100%	75%
Mortgage (housing)	50%	35%

Item 3 is the effect of financial technology. Such an aspect was earlier noted in the context of cross currency swaps. It appears also in the form of the vanilla interest rate swaps that are used to construct fixed rate home mortgages. The latter is now the predominant form of lending in NZ, protecting the homeowner against the effect of floating interest rate rises, an issue discussed further in section III. The rise of home equity linked financing is yet another example of what is in effect financial technology. In the extreme form of this lending, namely 'reverse annuity mortgages', homeowners on limited incomes can finance their ongoing consumption needs by giving up a share of value in the eventual sale of their house, a form of long term option written by them in favour of a lending institution. A recent ad run by a consumer finance company on NZ TV features a man of about 65 wheeling a barrow load of bricks down to his friendly neighbourhood car yard[8]. However, home equity linked financing

[7] Drage et al (2005) is a well illustrated and illuminating discussion of recent developments in the eurokiwi market, and their importance for the local economy; see also Bowden and Zhu (2005).

[8] The institution has written an option on the value of the house at sale; hence one should expect to find quite a high implicit interest rate on this form of borrowing. There won't be too many bricks left in the barrow at the end.

can also be written in the form of revolving credit with a variable drawdown and repayment facility, all secured by the value of the house.

Items such as the above can be viewed as resulting from the globalisation of financial markets. Use of the euromarket overcomes the autarchic limitations of a small home capital market, and in so doing effectively provides a widow's cruse of funding that removes the self-governing effect of local interest rate rises (see below). Basle II is an international response to global systemic risk. And home equity loans or similar retail financing devices appear to have originated in the UK (to take advantage of soaring house prices) and spread by imitation elsewhere. The net effect of all this is to diminish the power of the local central bank in controlling the aggregate supply of credit.

Some exchange rate consequences

Inflated spending always has an exchange rate consequence of one kind or another, generally indirect, but our present concern is with matters of proximal cause, or the mechanism. Exchange rates are like any other price, in this case the price of one currency in terms of another, so things boil down to supply and demand for the local currency, encompassing things like export and import transactions, remittances of one kind or another, and capital account transactions. In recent times much attention has been paid to the capital account, notably because some countries, notably the old colonials, have experienced strong exchange rates along with heavy trade and/or current account deficits. As a matter of portfolio choice, this means that investors are willing to accumulate assets in the deficit countries. And of these asset flows, most attention has been devoted to short and intermediate term debt liabilities as exchange rate drivers.

Market commentary commonly focuses on the inflow or outflow of short term hot money in response to rises in very short term interest rates (the OCR, bank call rates, or even bank bill). Of course, it is absurd to think of hedge funds and other currency speculators, who drive the hot money trade, as being concerned about a few basis points per annum on interest rates, with a risk exposure many times higher than that. They are after the shorter term exchange rate expectations that have become associated with OCR rises and the expectations of further rises in the future. The OCR itself is viewed as an indirect index of common expectations as to the future course of the currency[9]. Or they might seek a safe parking spot when other currencies are in trouble, while earning a few extra percentage points in the meantime. Hedge or parking operations by exporters or importers also respond to interest rate differentials and currency expectations.

From about 2003, however, the explosion of eurokiwi offerings created another channel of influence and another maturity band of policy concern. When a eurokiwi or uridashi issue goes off, the effect in one way or another is to create a net demand for the NZ dollar. Influences of this kind are less associated with OCR movements and more with intermediate maturity interest rates. Correspondingly, the exchange rate expectations are those for the longer run, not just the coming months, encompassing what is likely to happen upon maturity of the issue in 3-5 years time.

III The channels of monetary policy

Changes of the above kind create fresh problems for monetary policy, many of them arising from the loss of local controllability associated with the globalised economy. These and other control issues are the subject of the present section, including an issue as to whether the problems might not in fact be self correcting.

[9] In the language of hidden Markov processes or Kalman filters, common market expectations are missing data. But the market can implicitly come to agree that the OCR is a proxy for the missing data. Thus if the OCR is expected to keep on rising, then the expected exchange rate is assumed to do likewise.

Monetary policy can be considered to act via two channels, often run together in considering effects, but nevertheless different in their incidence. The first is via the cost of credit and the second is via the cost of capital. The cost of credit is a way of controlling the volume of credit, via a pricing system rather than the old method of quantity rationing, though it may be noted that Basle type prudential requirements are indirectly a quantity effect. The cost of capital is the benchmark for a firm's investment projects, and it is also a benchmark return for the value of shares to investors, and hence shareholder wealth; similarly for houses, farms, and other kinds of capital assets. In theory, therefore, monetary policy has several channels by which it can impact on both investment and consumption spending. After discussing these we will move on to the residual channel, namely the effect on the currency.

The cost of credit

Credit can span all sorts of maturities. Very short dated credit is associated with working capital for firms, consumer revolving credit (e.g. credit card rates), bridging finance, and similar temporary accommodation. Up until quite recent times, most home mortgage loans were written as floating rate; in terms of their 'reset period', they were effectively of short duration, no matter that the legal maturity might be 20 years or so. The Reserve Bank's main operating instrument, namely the operating cash rate, impacts most directly on the short end of the maturity spectrum.

On the other hand, the maturity spectrum of much of our debt has now lengthened, in terms of its economic duration[10]. Many home mortgages are now written as fixed rate with a reset period of two years or longer. And home equity linked consumer finance piggybacks off home mortgages. The trend represents an adaptation to low interest rate regimes, locking them in against the prospect of future rate rises in the meantime. The interest rate swaps that underpin these mortgages respond to the yield curve at 2-3 years or longer. Likewise the supply of funds used to write the mortgages, e.g. eurobond and uridashi financing, will respond more to the intermediate band[11] of the NZ yield curve. So ultimately it is how offshore bond investors react to events in NZ that determines the required rate on NZ bonds. The best indication of an impact on bank lending, or lack of it, is via the swap rates for those maturities. Figure 1 shows the historical comparison. The lower graphs are of the swap spread, which is the difference between the government bond rate and the swap rate. The swap spread is commonly used as measure of the incremental demand for fixed rate mortgages[12]; note the rising spread over the last two years.

The problem arises because the intermediate zone has demonstrated a mind of its own, almost independently of what the central bank gets up to with the OCR. Successive changes in the latter have had induced strikingly little effect in this regard; see figure 1. The only way to rationalise things is to claim that in May 03, the market saw what was going to happen to spot interest rates, a year before the central bank did. But even if so (which seems rather far fetched), the OCR hikes had been well anticipated and had little further effect once they occurred. It is almost as though, one way or another, the market for housing credit has inoculated itself against the OCR.

[10] Economic duration is taken here in the sense of eg Fisher Weil duration, a measure either of the PV-weighted coupon and principal flows, or of the sensitivity of the capital value to parallel shifts in the term structure.

[11] What we would call an intermediate, say 2-5 years, would be considered the shorter end by most other countries. Thus 'intermediate' in the UK corresponds to terms of up to 15 years.

[12] The banks receives fixed rate from homeowners and offer receive to the swaps market. The higher the latter amount, the greater the spread, other things being equal.

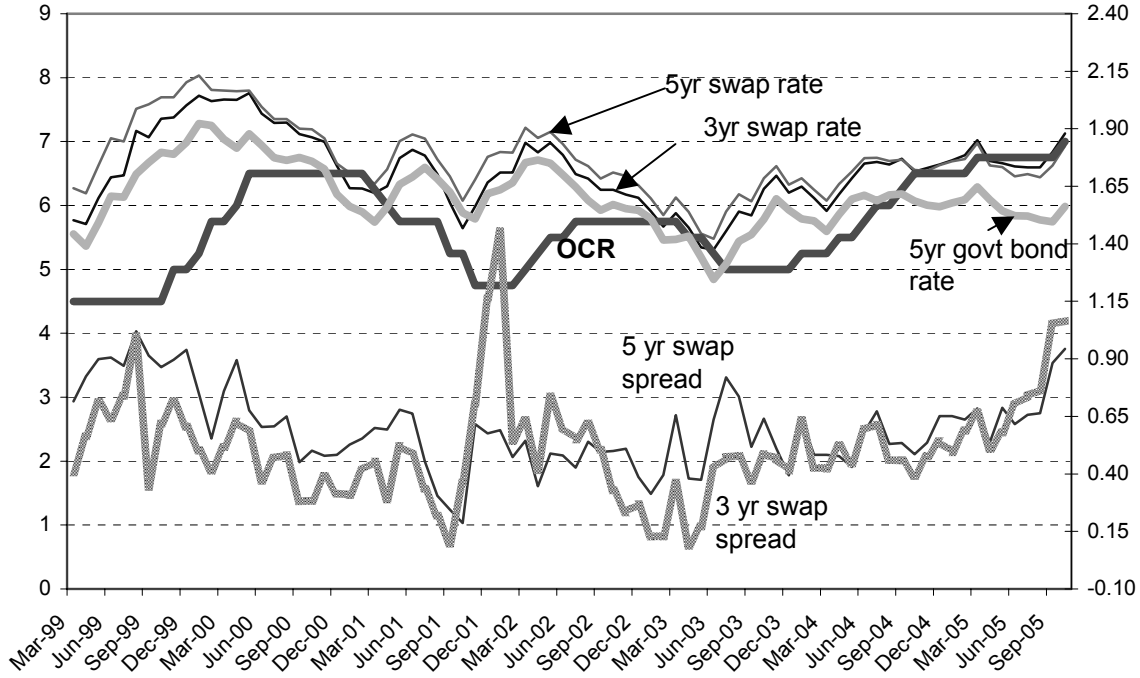

Figure 1: Comparative interest rates: OCR versus the swap rates

Expectations, or 'biased risk', play a crucial role in determining both interest rates and exchange rates. Our bond rates in Europe are higher than comparator rates over there, the reason being that they have possibly adverse NZD movements built into them. And normally, longer term interest rates are significantly higher than short term. The most realistic way to rationalise current NZ 3-5 year rates being so close to, or even less than, current spot rates, is to say that expectations are for a future fall in the spot rate. The two sets of expectations – for the exchange rate and the future spot rate – look roughly consistent with each other.

One way that the RBNZ could raise the inter-run interest rate is to enhance expectations of a future currency fall, which means they are signalling a future easing of the OCR. But that would be sending a message of comfort to local residents who want to finance their consumption off shorter interest rates: "don't worry, we'll ease before too long". The judicious use of expectations can indeed be regarded as an independent instrument for the central bank, noted in the NZ context by Bowden (2004). If so, it is an interesting convergence of terms, for expectations, regarded as instrumental variables in their own right, fulfil an independent role in helping to identify parameters of econometric systems (Bowden and Turkington 1988). But as this example shows, there are some acute limitations to using expectations as an independent instrument for monetary control, an issue we return to later.

Alternatively, the RBNZ could think of operating on the inter-run interest rate by means of more direct actions. As a variant on its spot intervention powers (see below), the bank could operate via long-term currency forwards. Just from the arbitrage relationships involved, selling currency forwards out to 3 years or so would theoretically have the effect of lowering the NZD spot rate and/or raising the NZ 3 year interest rate (as the 3 year zero coupon rate). But this would happen only if the selling was done on a rather large scale. The Bank's short-end OCR instrument is an effective form of leverage that arises naturally out of the process of real time gross settlement market clearing (e.g. Bowden and Zhu 2005, ch3). But the RBNZ does not have a natural comparative advantage at the longer end; that would need both a lot

more capital[13] and *los cojones sobre la mesa*[14], for it would be up against some powerful protagonists. The problem more generally is that the market for NZ government bonds is no longer just local, so it is unclear that the RBNZ would have the economic clout necessary for such operations.

The cost of capital

When the spot rate interest rate rises, it increases the opportunity cost of holding equities and other forms of wealth. At first sight, this might seem a bit odd, for it might be thought that it is the inter-run rates, not the OCR, that feed more into the corporate cost of capital. But share traders often have shorter horizons, and the option exists to divest shares and rollover the proceeds in bank CD's if it is felt that high short rates are here to stay. So for this reason alone, the local market does not like higher rates, even at the short end[15]. Note once more the inconsistency with the expectations theory of the NZ term structure, for the above trader expectations of persistent high short rates are not built into two or three year interest rates.

In addition, if higher cash rates have the effect of a stronger Kiwi dollar, then an incentive exists for offshore investors to offload NZ dollar assets bought at a time when the currency was weaker. The currency return becomes the icing on the cake of high capital gains. This has the effect of lowering NZ share values[16].

On the other hand, share prices have in the past proved remarkably resilient in the face of high interest rates, provided expectations about corporate earnings are not adversely impacted. Only if the OCR increases are thought to impact directly on corporate earnings and cash flows will be there be much of an impact. So the cost of capital channel can itself be reliant on the cost of credit channel, or else on the exchange rate effect on corporate earnings.

The exchange rate channel

Whatever the efficiency of the more direct channels, experience has shown that the exchange rate is impacted by restrictive monetary policy. Rising cash rates induce an inflow of hot money, provided only that expectations remain for high or higher rates in the immediate future to sustain exit values for the NZ dollar. And the very circumstances that induce restrictive monetary policy are those that create a demand for offshore financing, and hence exchange rate support from this source as well, in the form of proceeds from offshore debt issues.

A higher exchange rate for the Kiwi dollar impacts directly upon corporate profitability, and it does so unequally as between importers, local industries that are import competing, and exporters. It is the latter two that are more capital and labour intensive than the importer, and hence aggregate expenditure will fall as the Kiwi strengthens past critical profitability points[17]. Higher currency values can also produce expenditure substitution in favour of

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[13] From time to time central banks do enter the government bond market, a recent example being the US Federal Reserve which in early 2003 announced that it would be buying 10 year US treasury bonds. The aim was to drive down the interest rate in this band to forestall an apparent soft spot in the economy. The Fed open market committee signalled in advance that they were going to do this, which had its intended effect of bringing in other market players such as fund managers, with the net result that the relevant interest rates did fall. Unfortunately the Fed shortly afterwards changed its mind, leading to much hostility from those who had bought bonds in anticipation.

[14] A popular Castilian expression for courage and commitment, probably impossible to accomplish physically.

[15] It might also be pointed out that higher cash rates make for a difficult operating environment e.g. for working capital, and might therefore have some second order value effects.

[16] Revised market expectations re the OCR support of the NZ dollar associated asset sales by foreigners caused a sharp drop in the NZSX50 in early Dec.2005.

[17] Exporters can and do protect themselves against the threat of a high NZD by selling their foreign currency receipts forward, or less commonly, buying options on the Kiwi. The effect of this is

imports, which is again a depressant effect. On the other hand, some forms of expenditure take the form of a bundle comprising locally produced nontradables and also imports. Fitting out a house is a good example, with Italian tiles laid by local tradesmen. This can produce a perverse complementarity effect whereby a higher Kiwi dollar can add to domestic demand.

IV Can the monetary instrument hit the right target?

Reviewing the above incidence and channels, it is hard to avoid the conclusion that the most effective, indeed arguably the only effective one, is probably the exchange rate channel. It is also the one that should be least preferred by the central bank itself, because of the damage it does to the export sector, especially the new economy. There is indeed a case in current circumstances that it might be better not to continue to hike the OCR, on the buckshot principle that it might hit something useful on the expenditure front, but simply to wait and let the asset price ~ expenditure cycle takes its natural course, much as it has happened across the Tasman in Australia. This might also send a signal to offshore bond investors that they should not expect a stronger currency to be supported into the future, and by doing so, raise intermediate run interest rates. In other words, doing nothing on the OCR, or even letting it go a few points, might tilt the yield curve back upwards, doing the damage precisely where it needs to be done.

There is also case that if monetary tightening is to occur via the OCR, it should be done with more of bang than a series of nudges (see also Bowden (2004)). A problem with the incrementalist approach is that it sustains expectations of further rate rises, which turn sustain further strengthening of the currency over a longer period of time. An upfront bang sends a strong signal about credit for domestic reception, and likely induces a short run exchange rate rise, but it also allows a bit of scope for letting offshore lenders think that there is future scope for easing, and hence a risk that the currency will decline. That would make them less happy to accept prevailing NZ interest rates at the 2-5 year part of the curve.

Other forms of monetary policy

Over the past twenty years, the general thrust of NZ financial management has been to replace direct controls or quantitative limits with the kind of systems that might emerge from the fully informed and self interested operation of a freely functioning market economy. Realistically, there are limits to such an ideal, and that is why we have prudential regulations of one kind or another. Even here, however, the aim has been to leave case by case decisions as far as possible in the hands of the economic agent concerned. Thus under the Basle regime, there is nothing in principle to stop a bank lending 100% of asset valuation on a mortgage, provided it applies the right amount of its own capital to home mortgages as an asset class.

From time to time, however, one sees suggestions that direct controls are required that depart from the above market principles. Thus in early 2004 the RBNZ announced an interventionist currency policy option, under which it could step in and sell the Kiwi if it rose much above what was perceived as fundamental value (a limit of USD70c was mentioned at the time). One suspects that some of the widespread selling of the Kiwi upon the 8 December 2005 OCR hike of 0.25% may have stemmed from the Bank's own currency intervention team. And their jawboning may have helped even prior, although official jawboning just by itself is not always very effective.

Likewise, quantity controls have been mooted in the case of home mortgages and other forms of lending, e.g. loan to valuation limits. There is nothing too unusual about having such rules. The U.S., for example, has a fairly well defined 'common understanding' set of criteria for

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generally to delay the impact of spot currency rises and some NZ corporates have profited from this in recent times. However most hedges of this kind extend only out to 1-3 years, so a time of reckoning does come.

home lending, followed by most reputable lending institutions[18]. They could be viewed as common prudence and the RBNZ should be free to impose them if this is thought the best way to ensure systemic safety. What is 'new' about the latest suggestions is that rules of this kind would add an extraneous function to the prudential one, namely the use for economic stabilisation, according to which settings such as the loan to value ratio could vary in response to macroeconomic states. This might not be inconsistent with the prudential function, for example if loan to valuation ratios were tightened in a boom housing market as matter of the increased possibility of default. But the primary motive in that case would be the safety of the financial system, and not the imperative to put a lid on inflation. As to whether direct controls would work is any open question. To have any real impact, they would have to be draconian in scale and scope, or else have unusual leverage of some kind. Direct controls of one kind or another were generally effective (economic efficiency consequences aside) during the Muldoon years and prior to that. But that was then, while financial globalisation and technology are now. One suspects that whatever the controls, ingenious lenders or borrowers will find a way to circumvent them.

In the meantime, the RBNZ could consider what might be done to ensure a more diffused impact on the yield curve as whole. This would mean that changes in the OCR could be relied on to impact more fully on fixed term lending. The way to do that is to ensure that expectations of future spot rates (remaining high) are properly reflected in the swap curve further out. There is some comfort on the horizon in this aspect, for in recent times market liquidity for forward rate agreements (FRA's) has reportedly[19] been extending out in maturity to 2 years. FRA pricing is based primarily on expected future spot rates. Government debt management could also do its bit to help in spreading the impact of OCR rises further out along the yield curve (see section V).

Overall, the task for the Reserve Bank is to create the right expectations and make them stick. They would like to boost expectations of future spot interest rates, in order to embody them further along in the yield curve, and hence restrain aggregate spending. Yet they also want to keep a lid in the Kiwi dollar, in order to avoid structural damage to the economy.

V Fiscal complementarity

The idea that fiscal policy should be consistent with monetary policy is chiefly remembered for the historical episodes when it has not been, so that the government and central bank are on opposite tacks. There is an uneasy feeling that this state of affairs might have been developing in New Zealand, with a new coalition government committed to its election spending promises while the RBNZ has been signalling monetary stringency because of

[18] US home lending typically operates off benchmarked credit criteria, of which the two most important are the loan to value ratio and the loan service ratio. The usual maximum loan: valuation ratio is 80%, though the borrower can have more if he or she takes out mortgage repayment insurance. Many institutions will accept, and indeed advertise, loan to valuation ratios as much as 95%. In other words, the borrower need raise as little as 5% of his own equity, provided the credit is enhanced, of course at the expense of the borrower. The loan service ratio measures the monthly repayment and other loan costs (e.g. mortgage insurance premiums) against the borrower's income. A rule of thumb is 25-30% of the monthly gross income; it may be inclusive or other credit costs to bring it to 40% or so as total credit interest and repayments. Prudential ratios of this kind correspond to the debt covenants of corporate lending. Paradoxically, having home mortgage debt can improve consumer finances. The need to keep the major lender happy keeps the lid on credit card debt and other forms of less monitored borrowing.

[19] Source is discussions with ex swap guru Dawn Lorimer, director of the VIAF programme at Victoria University of Wellington.

inflation concerns. This kind of consistency[20] is really just referring to the need for one side to talk to the other. One could call it passive complementarity.

Active complementarity would arise when the government sees a need to strengthen the central bank's hand by using fiscal stabilisation measures. This would signal a return to a more interventionist fiscal policy than has been characteristic of recent years. In view of the deadweight transactions or political costs from periodically changing tax rates, it might be better to seek policies that are automatically self governing with respect to the cycle, more or less as a matter of system design. Sequestration of personal account superannuation schemes fall into this category, requiring employers to withhold threshold proportions of salary and wages in the form of locked in super contributions. Stamp duty or capital gains taxes could also be used as an automatic governor. For instance, a capital gains tax could be levied on the sale of a house at a rate that cut in above the historical return on government bonds over the holding period. It would be necessary to study the incidence as between the buyer and seller in a rising versus a falling market, how it might affect savings behaviour, and other macroeconomic issues. Needless to say, it would not be a popular move.

In addition, the government does have its own status as one of the three arms of aggregate saving, so if personal saving is judged to be periodically deficient, the government should move to compensate. Of course, it does just that when good times produce cash surpluses, so the aim would be to refrain from spending those surpluses. The trick is to do it on a systematised and well understood basis. In this respect, the National Superannuation Fund has proved an inspired form of political inoculation against populist pressures to spend or cut taxes at the wrong time, just as we suspected it might be. But as earlier pointed out, the downside is that it has possibly impacted adversely on private sector saving.

It is possible to think of further variations to enhance the stabilisation role. For instance, the government could adopt an active programme of asset accumulation in good times, in its own right as distinct from the National Super Fund (NSF). There is nothing too much new about this, except the scale on which it would be done. The government would use surpluses to build up offshore assets at a time when the NZD is also going to be strong. When the cycle turns down, these could be repatriated, with the proceeds then passed through to the NSF to invest in public infrastructure bonds newly issued to finance public works. The government has endowed ownership of its prior surpluses to the NSF, effectively embodied as infrastructure bonds, at a time of its own choosing. This would also diminish the pressure on the government to continue to fund the NSF with cash contributions at a time when the economy can ill afford it.

Less radically, the government could help to assure complementarity between its own financial policies and those of the central bank. Older readers accustomed to chronic state sector budget deficits will recall that the 'crowding out effect' refers to the competing demands for debt between government and the private sector, and the adverse effect on interest rates and investment stemming from this. But it is possible to stand the effect on its head, and think of running the crowding out effect as a policy tool. According to this idea, the treasury's debt management office would from time to time issue new debt in just the same maturity bands as the fixed rate mortgages, hoping to drive up interest rates in that band at the same time as the RBNZ squeezes the cash rate. Their combined effect could distribute monetary tightness further along the yield curve.

[20] Not to be confused with time inconsistency, though that might arise as a consequence when one or other of the policy makers finds it cannot keep bargains because of actions of the other. Is there a theory paper here?

VI Concluding remarks

Over the last ten years or so, the odd blip aside, the NZ economy shared the good fortune of other OECD countries that it was able to combine reasonable growth with low overall price pressures. Much of the credit goes to the Chinese and other Asian economies. The western economies were able to tap into the apparently limitless supply of Far East labour, at exchange rates that were supported by the desire of the Asian central banks to accumulate US dollar and euro reserves. Technical advances slashed the prices of many household items, and switched expenditure to electronic gadgets that shared technology- driven price cuts. Competitive forces were beneficial in sectors like travel to counterbalance their perverse effect in non tradables such as household energy supply. The cornucopia of supply meant an absence of inflationary pressures, which in turn implied low interest rates, at a time when the western economies were experiencing their own technology driven expansions. It was good times all round, not least for central bank governors, for inflation control policies were hardly put to the test.

It remains an issue as to just how much right now we do have to worry about inflation. Technically we should be concerned about the possible coincidence of a falling exchange rate and strong internal demand, for then we would have import and non tradable prices both moving upwards. In practice, however, asset price booms can slow by themselves, just as a matter of momentum. People who wanted to buy houses have now bought them, and life moves on to the next new thing. One suspects that things will happen this way in NZ, just as they have in Australia.

However, the current episode does highlight some shortcomings, against the time when effective policy may well be needed. Excessive reliance has been place on monetary policy by itself; and the policy instrument set is only a singleton, namely the OCR, which is just saying that the monetary policy is itself too narrowly based. Certainly, the OCR can remain the linchpin of policy, but we need to find ways of supplementing and reinforcing its impact. Also needed is a sound understanding of how expectations work, and how to manage them, together with limitations to their effectiveness. Second guessing the markets to determine equilibria to expectational games is a subtle and difficult exercise. And finally one needs a perspective that the academic literature is not all that good at providing, namely as to just what economic and financial developments are going on out there and how they are going to impact on policy rules and their outcomes.

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