

Box 4: Real Interest Rates

The real interest rate is a concept which takes account of the fact that inflation in prices reduces the effective cost of borrowing and the return to lending. Measures of real interest rates typically deduct an inflation component from some 'nominal' interest rate.

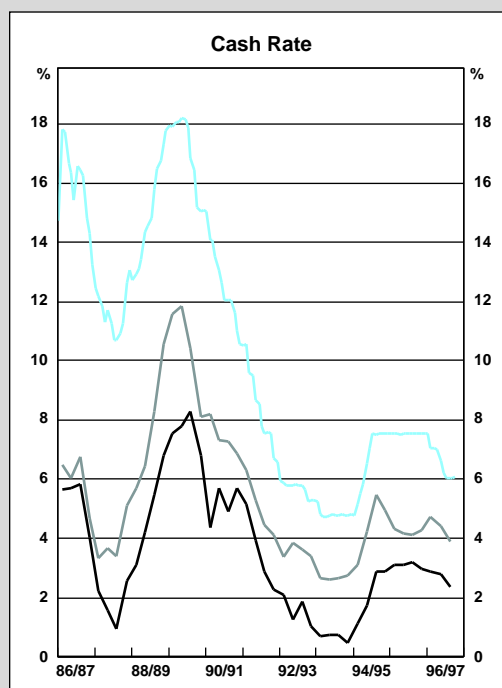
There is no unique way of calculating a real interest rate because different borrowers pay different real costs of borrowing, depending on the term and degree of risk of the loan. In addition, borrowing and lending are *forward-looking* decisions: borrowers are making judgments about their future capacity to service debt, while lenders are making decisions about future returns. Computations of real interest rates should really be made by deducting an *expectation* of *future*, rather than past, inflation from the relevant nominal interest rate.

Because these expectations are hard to measure, past inflation is often used in

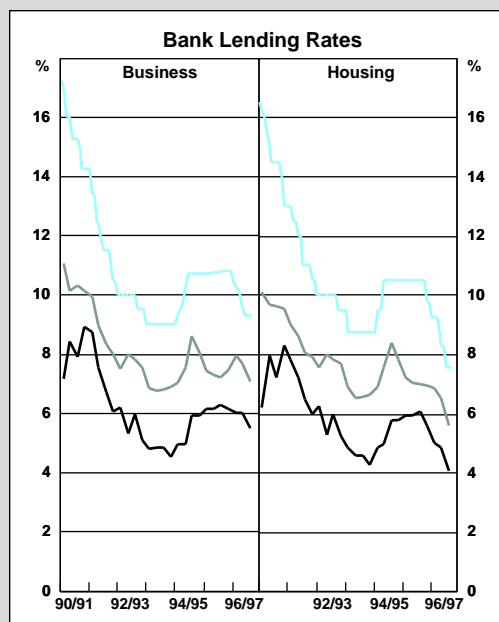
practice as a proxy for expected inflation, but it is important to remember that this may not be accurate. For example, with a cash rate of 6 per cent at end April, and underlying inflation at 2.1 per cent, the real cash rate estimated this way is 3.9 per cent. Surveys, however, show that businesses and consumers expect a higher rate of inflation – typically in the range of 3 to 4 per cent – which would imply a correspondingly lower estimate of the real cash rate – about 2 to 3 per cent. These differences point to the difficulty of making fine judgments about the level of real interest rates at a given point in time.

Proxies for real interest rates can be more useful over long periods, particularly where there are pronounced differences in the prevailing inflation rate and large movements in nominal interest rates and inflation expectations. Graph 1 illustrates the nominal cash rate and two measures of the 'real' cash rate over a decade – one using the past year's underlying inflation to proxy expected

Graph 1



Graph 2



— Nominal — Real based on past inflation — Real based on survey expectations

inflation and the other using consumers' expectations as recorded in the Melbourne Institute survey. The much lower nominal interest rate structure prevailing in Australia in the 1990s reflects, in part, the large decline in inflation since the late 1980s. But real cash rates are also considerably lower now than in the 1980s. On either measure of real cash rates shown here, they are well below the average of the second half of the 1980s; they have declined since their most recent peak in 1995, but remain above the low point reached in 1993/94.

Although the real cash rate can be a useful summary measure of monetary policy, rates on offer from banks and other intermediaries are more relevant for borrowing decisions of businesses and individuals. Graph 2 shows nominal and real measures of banks' business lending and mortgage rates. The compression of bank margins in recent years means that, unlike the cash rate, real bank rates on business loans are close to their cyclical troughs in 1993 while real mortgage rates are below their previous troughs.

Comparisons are often made of real interest rates across countries. Such comparisons, which typically use actual past inflation as a proxy for expected inflation, currently show Australia as having relatively high real interest rates. Table 1 illustrates.

Australian real short rates are higher than in most of the major economies. There are, however, two things to keep in mind when drawing this comparison.

The first is that the differences in real interest rates reflect differences in current macroeconomic conditions. In continental Europe, Canada and Japan, economies have been characterised by very low rates of both economic growth and inflation (driven importantly by very low rates of wages growth). Their monetary policy is set in a more expansionary way to reflect this situation, and their real interest rates, accordingly, are lower than those in Australia.

The second difficulty is that while using recent actual inflation, rather than

Table 1: Real Interest Rates ^(a)

	Short-term Based on past year's underlying inflation	10-year bond Based on average inflation rate over the past five years
New Zealand	5.5	6.1
<i>Australia</i>	3.9	5.6
Italy	4.5	3.7
United Kingdom	3.4	5.0
United States	3.1	4.1
Average	2.8	4.3
France	2.3	4.0
Germany	1.5	3.4
Canada	1.3	5.3
Japan	0.0	1.7

(a) April average

inflationary expectations, to construct an approximation of real interest rates might be reasonably accurate for countries with a long history of low inflation, it is less accurate for Australia and may therefore lead to an overstatement of real interest rates in Australia.

The longer-term inflation track record is important in the bond market, where the central bank has no direct impact on the level of interest rates. Using actual inflation over the past five years as a proxy for longer-term inflation expectations, Australian real rates are relatively high in international terms. Other English-speaking countries with a long-term history of high inflation – such as Canada, the UK and New Zealand – also have long-term real interest rates higher than the average. These 'real' interest rates probably still embody some inflation premium. Even though Australia's average inflation performance over the past five years has been superior to those of the traditional low-inflation countries, international markets still require compensation for inflation uncertainty, because of Australia's longer-term history. It takes a long time to build up low-inflation credibility. ✎