

The Implications of Recent Changes to the Consumer Price Index for Monetary Policy and the Inflation Target

Introduction

Since 1993, the conduct of monetary policy in Australia has been based on an inflation target. Under this framework, the aim of policy is for underlying inflation to average 2 to 3 per cent per annum in the medium term. Underlying inflation can be measured in a number of ways but each of these measures shows that the target has been achieved so far in the 1990s (see Table 1).

The concept of underlying inflation has been used in order to avoid distortions

associated with the most common measure of inflation – the Consumer Price Index (CPI). The main distortion in the CPI as measured in the past was in its treatment of mortgage and consumer interest rates, which made it an unsuitable reference measure for monetary policy.

Recently announced changes to the CPI, however, particularly the different treatment of housing costs, will reduce substantially the problems in using the CPI to evaluate monetary policy, particularly if the evaluation is over a period of time rather than quarter to quarter. While short-term volatility in the CPI will remain an irritant, as with all economic statistics, the Bank's view is that the inflation

Table 1: Measures of Underlying Inflation ^(a)
Average annual rate; per cent

	1990–98	1993–98
Treasury underlying CPI	2.4	2.2
Private-sector goods and services	2.5	2.3
Median price change	2.3	2.0
Trimmed mean price change	2.5	2.1
Memo item:		
Consumer price index	2.1	2.1

(a) Measures of underlying inflation typically involve exclusion of certain types of prices, as in the case of the Treasury series and the measure of private-sector goods and services, or reducing the weight given to any extreme price movements, as in the case of the median and trimmed mean measures. For further details, see 'Measuring Underlying Inflation', *Reserve Bank of Australia Bulletin*, August 1994.

target should from now on be expressed in terms of the published CPI. This should offer improved recognition for the target with the general public, without requiring any operational change in the way policy is conducted. This article explains the considerations behind the earlier objections to the CPI, and why the recently announced changes will allow it to be used in future as a reference measure for monetary policy.

Earlier Problems with the CPI

Beginning in 1986, the Australian Bureau of Statistics incorporated mortgage interest charges into that component of the CPI which sought to measure changes in the cost of owner-occupied housing. This marked a departure from the previous practice, in which the cost of consuming the housing services provided by an owner-occupied dwelling had been proxied on a 'rental equivalence' basis. As of 1986, changes in the cost of servicing a mortgage were included in the CPI, computed using prevailing interest rates and a debt profile which was imputed from movements in house prices. Interest charges on financing the purchases of other consumer items were also included.

These changes caused problems in using the CPI as a reference measure for monetary policy. Ideally, for policy purposes a consumer price index should record movements in the prices of current consumption goods and services, not prices of assets or the costs of servicing debts which finance the acquisition of assets. Moreover, the inclusion of interest changes meant that some movements in the CPI were a mechanical result of movements in the monetary policy instrument, rather than reflecting genuine pressures in the economy: a rise in interest rates to contain inflationary pressures would initially increase the CPI. This could lead to an obvious problem if monetary policy were to be evaluated using such a measure of prices. Hence at the very least, any price index which was the subject of a target

for monetary policy needed to have these interest rate effects removed. In making such an adjustment, the Bank's practice was consistent with that in other countries with inflation targets such as New Zealand and the United Kingdom.

A further problem with the CPI has been volatility from quarter to quarter. A number of food items, for example, can be quite volatile because of temporary supply disturbances. These can affect quarterly results in such a way as to obscure temporarily the effects of the overall demand and supply balance in the economy, which tends to evolve more slowly.

Finally, the CPI contains a number of prices which are set or influenced by administrative decisions of governments – such as public transport fares, petrol, products containing tobacco and alcohol to name just a few. It is worth noting, however, that with the trend towards privatisation and corporatisation, pricing decisions are becoming increasingly commercial in some of these areas. Hence the case for exclusion of this class of price movements is weaker than it used to be.

For all these reasons, the Bank has preferred to gauge inflation pressures in the economy using a range of measures of 'core' or 'underlying' inflation, most of which are derived as subsets of the CPI basket. In expressing a numerical target for inflation from 1993, the Bank followed the same practice. The *Statement on the Conduct of Monetary Policy* issued by the Treasurer and the Governor in August 1996 also expressed the target in 'underlying' terms. While the Statement did not specify a particular measure of underlying inflation, it has become customary over recent years for the evaluation of monetary policy to be in terms of the so-called 'Treasury measure of underlying inflation', devised by the Commonwealth Treasury in the mid 1970s and published by the ABS as part of the CPI release. The main rationale for this was that this particular measure was the most widely known amongst economists and other observers, and it was produced by a body independent of the Reserve Bank.

In no sense did this focus on underlying inflation mean that monetary policy was ignoring important inflationary phenomena: over a reasonably long period, the average rates of change of the various underlying measures of inflation have usually been quite similar to those of the CPI. The usefulness of underlying series is simply that they give a more reliable signal, over periods of up to a year or two, of the overall inflationary trend than does the CPI.

Recent Changes to the CPI

The Statistician announced in November 1997 the results of the regular five-yearly review of the construction of the CPI. A number of changes were foreshadowed, including widening the scope of the index so as to be representative of the spending patterns of a much larger proportion of households, the inclusion of new products such as computers, and new services such as tertiary education and financial services.¹

The most important change from the Bank's perspective is the introduction of what is known as an 'acquisitions' approach to measuring prices, as opposed to the 'outlays' approach used earlier. The practical import of this change is that the cost of consuming housing services for owner-occupiers will no longer be measured by the outlays on servicing a mortgage, but by the cost of acquiring a new dwelling (excluding land).

The CPI will be published on the new basis for the first time towards the end of October. As is usually the case when the construction of the CPI is periodically adjusted, the ABS will splice the price movements measured on the new basis onto the index number series that has been generated historically, beginning in the September quarter 1998. Estimates of

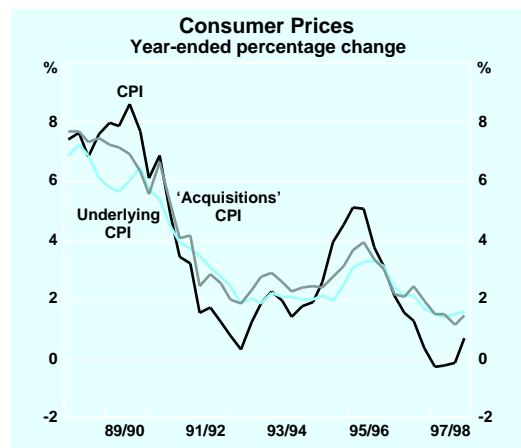
earlier price movements remain unchanged; historical CPI figures are never revised.

Implications for Monetary Policy and the Inflation Target

The changed treatment of interest charges removes a major obstacle to the use of the CPI in the evaluation of trends in inflation for the setting of monetary policy. The main argument in favour of pursuing a CPI target as opposed to one for an underlying series is its simplicity, given the CPI's much greater general public recognition and acceptance. An argument against would be the CPI's volatility and inclusion of administered prices.

In assessing these issues, it would be helpful to examine the behaviour of the new CPI and compare it with the underlying measure. There are no historical data available for the CPI compiled on the new basis, but a reasonable approximation can be obtained by substituting an index of prices of new dwellings for mortgage interest and consumer credit charges in the existing CPI.² The

Graph 1



1. For details, see the ABS Information Paper Cat. No. 6453.0, 'Outcome of the 13th Series Australian Consumer Price Index Review', 1997.
2. The ABS Project Home Price Index (ABS Cat. No. 6416.0) is used as the price measure for new dwelling purchases in this calculation and will be used in the construction of the *house purchase* expenditure class of the 13th Series CPI.

Table 2: Consumer Prices

	Standard deviation Per cent					
	Average rate of increase Per cent per annum		Quarterly movements		Annual movements	
	Since 1990	Since 1993	Since 1990	Since 1993	Since 1990	Since 1993
CPI	2.1	2.1	0.62	0.49	2.06	1.65
'Acquisitions' CPI	2.6	2.4	0.50	0.28	1.34	0.73
Treasury underlying CPI	2.4	2.2	0.31	0.22	1.25	0.57

resulting series – labelled 'acquisitions' CPI – is shown in Graph 1, along with the Treasury underlying series and the existing 'headline' CPI. Since 1990, the average rates of inflation as measured by these series are each between 2 and 3 per cent, as shown in Table 2. The effect of changes in interest rates is clear in the graph: the published CPI rose faster than the other measures (both of which exclude interest charges) when interest rates were rising in 1988–89 and 1994, and rose more slowly than the other measures when interest rates were falling in 1990–93 and 1996–97. The average rate of increase in the CPI since 1990 has been slightly below that of the other two series, because there has been a net decline in interest rates over that period. If anything, therefore, the published CPI has probably slightly *understated* the rate of inflation on average over the past seven or eight years.

Comparing the 'acquisitions' CPI with the Treasury underlying series, movements are quite similar. Its short-term volatility is only slightly higher, as measured by the standard deviation of quarterly and annual changes, but is still well below that of the CPI, demonstrating that much of the observed volatility in the CPI was induced by the inclusion of interest rates. It is noteworthy that since 1993, the volatility of all these measures of inflation is noticeably lower than for the whole period since 1990, suggesting that in the most recent five years, low inflation has also been more stable inflation.

The 'acquisitions' CPI also records, over this particular period, a slightly higher rate of inflation on average – by two or three tenths of a percentage point per year – than the underlying series. The reason for this is that prices for certain items excluded from the underlying series have recorded higher rates of increase than the average over the period. Two items, tobacco and health, account for the bulk of this difference. In the case of tobacco this reflects in part indirect tax increases, particularly in the 1993/94 budget.

The appropriate treatment of these sorts of prices for monetary policy purposes is a matter for judgment. On the one hand, price increases arising directly from taxation decisions by governments do not normally constitute, in themselves, a reason for monetary policy to change. Hence isolating their effect on the CPI is important for monetary policy. On the other hand, complete exclusion of *all* movements in the prices of such goods, including those not due to tax or other government initiatives, may throw away genuine information. It is also noteworthy that rises in the cost of health care and some other services are quite a persistent trend in many countries. It may partly reflect the difficulty of measuring improved quality standards but, at least to some extent, is likely to be genuine 'inflation'. If monetary policy is to control inflation in general terms, such price increases should form part of the information set that is taken into account.

Overall, however, the medium-term trends in the 'acquisitions' CPI and the Treasury

underlying measure are quite similar. While the short-term volatility of the 'acquisitions' CPI is slightly higher, that is not a particularly serious problem for a targeting framework focused on the medium term. In retrospect, it is unlikely that the conduct of policy would have needed to be altered had the focus of the target been the 'acquisitions' CPI rather than underlying inflation. If the historical behaviour of this 'acquisitions' CPI is a reasonable guide to the characteristics of the new published CPI, the latter should be quite satisfactory as the focus of the medium-term inflation target.

On balance, therefore, the Bank's judgment at this time is that the inflation target – 2–3 per cent on average over the medium term – could in future be seen as referring to the published CPI, rather than a particular underlying series. The Treasurer has agreed that such an approach is consistent with the intent of the *Statement on the Conduct of Monetary Policy* of August 1996.

Conclusion

Recent changes to the construction of the CPI – specifically changes to the treatment of interest charges – remove a major obstacle to its use for the purposes of evaluating monetary

policy over time. As a result, the target for monetary policy can now be presented simply as maintaining an average rate of inflation, as measured by *the CPI*, of 2–3 per cent over the medium term. The advantage of this formulation is that it is simpler. It also encompasses the earlier specification of the target in underlying terms, since achieving such a rate of increase for the CPI will almost certainly mean achieving something very similar for the underlying measure as well. Indeed, this sort of inflation performance, on either measure, has been achieved over the past seven years.

The published CPI is still likely to be somewhat more volatile than various measures of core or underlying inflation, over short periods. The Bank will still analyse underlying inflation measures, for the purposes of assessing the overall trend in inflation, and will refer to such measures in its regular reports on the economy and monetary policy. It will make clear, wherever feasible, the extent to which it judges the CPI is being affected by temporary fluctuations in prices, or factors such as tax and administrative decisions of government, and will also state the way in which monetary policy decisions are treating such impacts.

There are no particular implications of this change to the target formulation for the short-term path of interest rates. ∞