



RESERVE BANK
OF AUSTRALIA

**Submission to the
16th Series Review of the
Consumer Price Index**

MARCH 2010

Reserve Bank

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Introduction

The Reserve Bank welcomes the opportunity to comment on the issues identified in the 16th Series Review of the Consumer Price Index (CPI). The CPI is a key economic indicator and plays a central role in Australia's monetary policy framework. The timely provision of accurate inflation data is critical to ensuring the sound conduct of monetary policy. The main points made in this submission are as follows:

- There is a strong argument for the CPI to be produced on a monthly, rather than quarterly, basis, in line with other advanced economies.
- The methodology used to measure price changes in the deposit & loan facilities expenditure class, and the weight of this item in the CPI, should be reassessed. If improvements to the methodology are not feasible, this item should be removed from the CPI.
- The principal purpose of the CPI as a general measure of inflation faced by households, based on the 'acquisitions' approach, should be maintained.
- The Bank supports the ABS continuing to publish the existing range of analytical price indices, and sees a strong case for expanding the range of measures and adding a seasonally adjusted CPI.
- Expenditure weights in the CPI should be updated more frequently to reduce potential bias in the CPI, consistent with the practice in other advanced economies.

Compilation Frequency

The ABS has raised the issue of publishing the CPI on a monthly basis, rather than quarterly. Under the current arrangements in Australia, price data for many items are collected in each month of the quarter, but may not be published until as much as three months later (and only then as part of the quarterly average). The Bank is strongly of the view that a monthly CPI constitutes best practice, and that more frequent data on prices would assist in the assessment of inflation trends in the economy.

In terms of international practice, the International Monetary Fund Special Data Dissemination Standard calls for a monthly CPI. Australia and New Zealand are the only countries in the Organisation for Economic Co-operation and Development without an official monthly consumer price series. Furthermore, Australia is the only economy in the G-20 without an official monthly consumer price series.

Information on recent trends in inflation is an important input into the formulation of forecasts of inflation, which in turn are an important input into the decision about monetary policy. As noted above, in Australia, only four readings of the CPI are published each year, versus twelve in almost all comparable economies. More timely data would help provide an earlier indication of the trend in inflation, which is particularly important around turning points. It could also be helpful in distinguishing between signal and noise. In recent years there have been a couple of instances of quarterly readings for inflation that subsequently proved not to be representative of the general trend. The greater frequency of monthly

data is likely to allow earlier identification of situations where an observation is unrepresentative.¹

The ABS information paper outlines two main approaches to the compilation of a monthly CPI. The first would involve a full replication of the quarterly index on a monthly basis. The second suggests utilising existing price data (some of which are collected on a monthly basis) to estimate a monthly price index. Variations of these two main approaches could also be considered. The ABS notes that the costs of converting to a monthly cycle are likely to be 'considerable', though no cost estimates have been provided in the information paper.² The Bank's view is that these costs are likely to be small relative to the benefits of a monthly CPI, including in terms of the contribution to monetary policy. It is noteworthy that so many other countries have reached the judgement that it is important to have a monthly CPI.

The Deposit and Loan Facilities Price Index

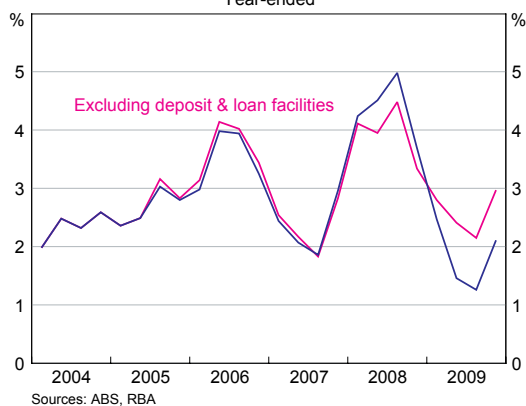
The deposit & loan facilities (D&L) index in the CPI attempts to measure the price of the financial intermediation service that financial institutions provide to households for deposit and loan facilities. The index estimates both the explicit fees on deposit and loan products, and also the indirect price charged through interest rate margins. Australia is the only country to include the indirect charges component in the CPI.

Although there may be good theoretical reasons to include the price of financial services in the CPI, practical implementation of the D&L index has proven difficult since its introduction in 2005, particularly in the measurement of household interest margins. The Bank has a number of concerns with the current D&L index, including: the degree

of volatility and correlation with the Bank's policy interest rate; the sampling methodology underlying the estimation of household interest margins; and its large weight in the CPI. Overall, the Bank's view is that the methodology used to construct the deposit & loan facilities expenditure class, and its weight in the CPI, should be reassessed. If improvements to the methodology are not feasible, this item should be removed from the CPI.

The D&L index has a current effective weight of around 4 per cent in the CPI, making it the fourth largest item. Accordingly, the large movements in the D&L index in recent years have had a significant effect on the overall CPI. For example, the D&L index rose by 16 per cent over the year to September 2008, adding almost $\frac{3}{4}$ percentage point to CPI inflation, partly reflecting a one-off correction of earlier errors in the calculation of this component (Graph 1). More recently, the D&L index fell by 15 per cent over 2009, subtracting $\frac{3}{4}$ percentage point from CPI inflation. Aside from movements in automotive fuel, such substantial contributions or subtractions from a single item are quite unusual; however, unlike movements in automotive fuel, the drivers of movements in the D&L index are not easily identified or understood.

Graph 1
Consumer Price Inflation
Year-ended



1 While a monthly CPI series may prove to be more volatile than the current quarterly one, evidence from other countries indicates that it is possible to significantly reduce this volatility through the use of measures of underlying inflation, including trimmed-mean measures.

2 The cost of shifting to a monthly compilation frequency was discussed as part of the 13th Series CPI Review in 1997. Given advances in technology and data availability, it seems possible that the costs may have fallen since then, at least in real terms.

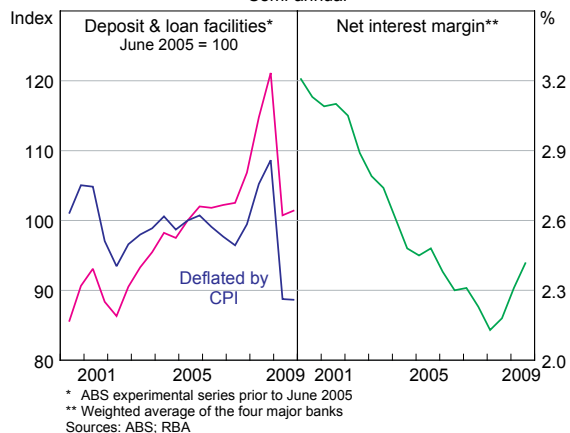
Indeed, longer-run trends in the D&L index differ noticeably from broader measures of bank margins, such as the net interest margin (Graph 2).³

A significant concern is that much of the movement in the D&L index appears to be due to the positive correlation between changes in the D&L index and changes in the cash rate, and that this correlation may be exaggerated by the methodology that appears to be used by the ABS (Graph 3).⁴

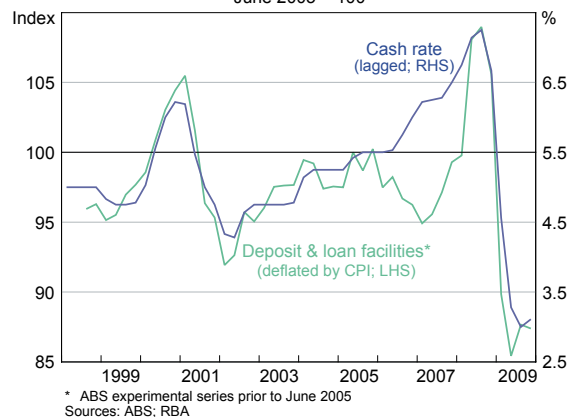
Analysis at the Bank suggests that the volatility in the D&L index and the related positive correlation with the cash rate are largely driven by the interest margins component. To construct the D&L index, interest margins are calculated for a sample of specific household deposit and loan products, relative to a single reference rate for each sampled institution.⁵ This methodology can result in estimates of negative margins (relative to the reference rate) for certain products – most likely fixed-rate deposit or loan products – which implies a negative ‘price’. Analysis by Bank staff using RBA data shows that the ABS D&L index can be replicated reasonably well by constructing an interest margin series that excludes fixed-rate products from the sample of products (but not from the reference rate). However, this can increase volatility and exaggerate the relationship between the D&L index and the cash rate, in addition to making the D&L index less representative of the price of the services it is attempting to capture.

In its submission to the 13th Series CPI Review, the Bank supported the inclusion of financial services

Graph 2
Measures of Financial Intermediation Charges
Semi-annual



Graph 3
Deposit & Loan Facilities Price Index
June 2005 = 100



3 There are differences in coverage between the D&L index and net interest margins measures – the D&L index only covers a subset of the assets and liabilities that are included in the net interest margin, and also includes bank fees – but it seems unlikely that these can fully explain the significant differences in trends in the two series. The D&L series deflated by the CPI is most relevant for comparison, given that the construction of the D&L index includes the lagged (and smoothed) CPI.

4 The cash rate is lagged in the graph to be consistent with the construction of the D&L index, which is a quarterly average of a three-month moving average with a one month lag.

5 The reference rate used in the calculation of the D&L index is the mid-point of intermediated borrowing and lending rates, and is regarded as a ‘market-clearing rate’, or the rate ‘that would have been struck if depositors dealt with borrowers directly’ (ABS 2008). Estimates of the index are not independent of the choice of reference rate.

in the CPI using a D&L-type index. While some concern about the potential volatility of the index was noted, the Bank’s submission recommended a lower weight than was implemented (one reason provided was, to the extent that the purchase of a house might be considered an investment activity, home loans should not be considered a relevant financial service in the CPI). Further, detailed aspects of the implemented sampling methodology, such as the exclusion of products that could be affected by negative estimated margins, were not envisaged at the time.

Aside from these practical issues, there are also broader conceptual issues that need to be considered. The methodology used to estimate the amount paid as an interest margin is based on the calculation of financial intermediation services indirectly measured (FISIM) in the 1993 System of National Accounts (SNA93). SNA93 recommends that ‘the value of services provided by means of interest-rate margins be valued as the product of the balance on the account multiplied by the difference between the interest rate payable or receivable and a reference rate of interest’. The Bank notes that the conceptual basis of FISIM is presently being debated by statistical agencies (including the ABS) and academics around the world, in part reflecting issues raised by the changes in the financial services sector flowing from the financial crisis.⁶ The Bank has not yet formed a view on the merits of some of the alternative views and would welcome discussion among the members of the Review Group. However, the Bank notes that some of the proposed alternative conceptual frameworks would suggest that some proportion of the gap between deposit and lending rates should not be included in a measure of D&L, thereby implying a smaller weight for this item in the CPI. More broadly, it is possible that there could potentially be major changes to the current SNA methodology, which would have ramifications for the calculation of the D&L index. While these issues are beyond the scope of this submission, the RBA supports the work of the ABS in scrutinising the concept of FISIM.

In summary, the methodology used to construct the deposit & loan facilities expenditure class, and its weight in the CPI, should be reassessed. If improvements to the methodology are not feasible, the index should be removed from the CPI, or at least the interest margins component removed.

Principal Purpose

As outlined in the ABS Information Paper, there are three broad conceptual approaches to the measurement of a CPI:

- The *acquisitions* approach defines the basket of goods and services as consisting of all those consumer goods and services actually acquired by households during the base period, and is considered the most appropriate when measuring household inflation.
- The *outlays* approach defines the basket in terms of the actual amounts paid out by households during the base period to gain access to consumer goods and services, and can be used to determine changes in the purchasing power of money incomes.
- The *cost-of-use* approach defines the basket as consisting of all those consumer goods and services actually consumed in the base period, regardless of when they were acquired or paid for, and is considered most appropriate when assessing changes in living standards.

The Bank strongly supports the continuation of the ‘acquisitions’ approach, with the current CPI providing a general measure of household inflation. While the practical differences between the acquisitions and outlays approaches are limited for most areas of household consumption, there are important differences with regards to the measurement of owner-occupied housing costs and financial services, particularly relating to the inclusion of interest charges. For example, under the outlays approach, the value of the outlays made to purchase a home includes interest charges. As outlined in the Bank’s submission to the 13th Series Review, the inclusion of interest charges in the CPI is problematic for both conceptual and practical reasons. The main conceptual issue is that interest charges represent a relative price (that of consumption in the future as opposed to the present), rather than the current price of a good or service. Reflecting this, the Bank does not support the inclusion of interest charges in a measure of

⁶ For background, see for example, Colangelo, Mink and Inklaar (2008), Basu, Inklaar and Wang (2008), and Fixler and Reinsdorf (2006).

the general rate of inflation faced by households.⁷ Indeed, the treatment of interest charges was a key reason for the change in the conceptual basis from the outlays to acquisitions approach, coinciding with the introduction of the 13th Series CPI in 1998.

Regarding the other two approaches, the ABS already produces a number of analytical indices based on the outlays approach, specifically designed to measure changes in living costs of different groups in the community, and the Bank supports this approach. The ABS has previously assessed that the cost-of-use approach does not satisfy the basic needs of a CPI under Australian conditions, and would engender significant practical difficulties (such as computing 'imputed rent' for owner-occupier households). The Bank concurs with this assessment.

Analytical Series

The Bank supports the publication of a range of analytical price series by the ABS, while maintaining the current 'acquisitions-based' CPI as the headline inflation measure.

In terms of the current analytical series, the Bank strongly supports the continued publication of the statistical measures (the 15 per cent trimmed-mean and weighted-median rates of inflation) by the ABS. These measures are important inputs into the analysis and forecasting of inflation, and are relied upon by the general community, including economists and financial market participants. Recent analysis by the Bank outlines the use of additional statistical measures in the assessment and forecasting of inflation, including the trimmed mean and weighted median based on city-level data (as opposed to measures based on aggregated nationwide data) and a trimmed-mean inflation measure calculated using the year-ended distribution of price changes.⁸ There is significant user interest in these measures. The Bank recommends that these additional three series also be published by the ABS as analytical price series.

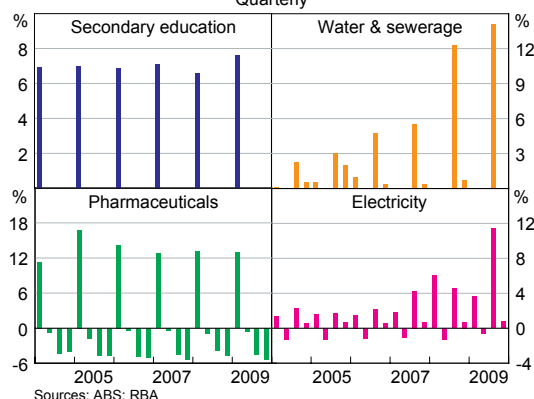
7 It is noteworthy that in some countries where interest charges are included in the CPI, they are omitted from the CPI measure targeted by the central bank; this was the case in the 1990s in Australia.

8 See Richards and Rosewall (2010).

The Bank also supports the continued publication of some exclusion-based measures and analytical sub-components of the CPI, including the tradable/non-tradable classification. The 16th Series Review presents a good opportunity to review the classification of items used in some measures, notably the tradable and non-tradable measures.

Further, the Bank recommends the publication of a seasonally adjusted CPI in the analytical series section of the CPI release. Previous Bank research has shown that there is significant seasonality in a substantial proportion of CPI items and that there are benefits from using seasonally adjusted data in calculating the 15 per cent trimmed-mean and weighted-median measures of inflation.⁹ For example, secondary education prices typically increase strongly in the March quarter of each year, while measured pharmaceuticals prices increase strongly in the March quarter before falling towards the end of the calendar year, due to the operation of the Pharmaceutical Benefits Scheme (Graph 4). As noted by the ABS, the issue of seasonal adjustment will be particularly relevant if there is a shift towards a monthly CPI release. Seasonally adjusted price indices are currently produced by statistical agencies in other countries, including the United States, Canada, Japan, Germany and France.

Graph 4
Consumer Price Inflation by Item
Quarterly



9 See Roberts (2005).

Maintaining the Relevance of the CPI

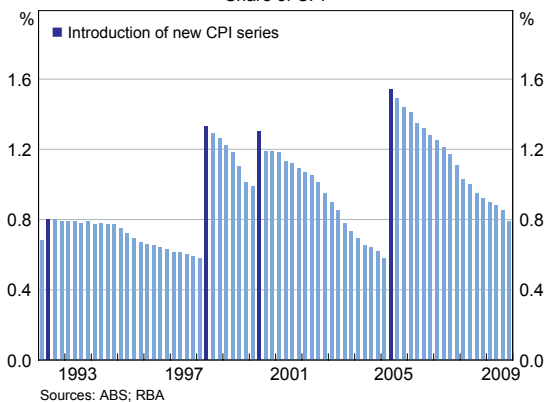
Frequency of re-weighting

The CPI is a Laspeyres index, which measures changes over time in the price of a fixed basket of goods and services (where the weights are fixed in the base period). The use of fixed base weights can result in an upward bias in the measure of price inflation faced by households, as changes in household spending patterns are not captured. The most effective way to reduce this bias is to regularly update the base-period expenditure share weights used in the construction of the index.

The ABS has moved to less frequent re-basing of the CPI, reflecting a reduction in the frequency of the Household Expenditure Survey (HES). The current six-yearly re-basing of the CPI is outside the International Labour Organization recommendation of at least once every five years, and significantly less frequent than most other advanced economies. Re-basing the CPI every six years is not sufficiently frequent to capture economically significant changes in the consumption basket. For example, the (quality-adjusted) price of audio, visual and computing (AVC) equipment has fallen persistently relative to other goods and services over recent years, and as a result, the effective weight (or influence) of AVC equipment in the CPI has diminished considerably since 2005 (Graph 5). This is unlikely to be consistent with current household spending patterns.

The Bank recommends that the expenditure weights in the CPI be updated more frequently than once every six years. Ideally, this would occur by conducting the HES at a higher frequency, as is the case in most other advanced economies. If the frequency of the HES is not increased, the Bank recommends that alternative techniques be investigated. As noted by the ABS, one alternative may be to re-weight using additional sources of data between HES cycles. Data sources may include existing ABS publications such as the national accounts, or new sources such as 'scanner' data, discussed below.

Graph 5
Effective Weight of AVC Equipment
Share of CPI



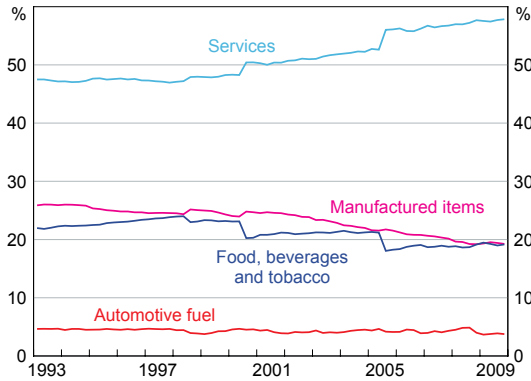
Measurement of prices

The ABS has invited comment on the priority that should be afforded to improving the measurement of services prices. In the Bank's view, this should remain a high priority, particularly given that the share of services in the CPI is likely to continue to increase over time as household incomes increase; since 1993, this share has increased by around 10 percentage points, reflecting the increase in demand for services as well as the inclusion of new items in the CPI (Graph 6). The accurate measurement of services prices presents a number of challenges relative to goods prices. One example of the difficulties is financial services, where the true 'price' is not directly observed (as discussed above). Another example is 'bundled' communication packages, which can make it difficult to precisely measure the price of the component services (such as internet and mobile phone services).

The Bank also supports ABS efforts to improve measurement using alternative data sources. Statistical agencies in many countries are increasingly using 'scanner' data (retail purchase information including price, brand, product size and amount purchased, gathered electronically at the point of purchase) in the compilation of their national CPIs. There are several potential benefits from this approach,

Graph 6
CPI Categories

Effective share of total CPI, per cent



Sources: ABS; RBA

including the volume of price observations available to the statistician and the ability to accurately track changes in household expenditure patterns. The high frequency of data would also facilitate the introduction of a monthly CPI. ❖

References

Australian Bureau of Statistics (2009), 'Issues to be considered during the 16th Series Australian Consumer Price Index Review', ABS Cat No 6468.0.

Australian Bureau of Statistics (2008), 'Deposit & Loan Facilities in the CPI', Consumer Price Index, ABS Cat No 6401.0, June 2008, pp 34–36.

Basu S, Inklaar R and Wang J (2008), 'The Value of Risk: Measuring the Service Output of U.S. Commercial Banks', Federal Reserve Bank of Boston Working Paper No 08-4.

Colangelo A, Mink R and Inklaar R (2008), 'An Enhanced Methodology of Compiling Financial Intermediation Services Indirectly Measured (FISIM)', presented at the OECD Working Party on National Accounts, Paris, 14–16 October 2008.

Fixler D and Reinsdorf M (2006), 'Computing Real Bank Services', presented at the NBER Conference on Research on Income and Wealth, Summer Institute, 17–19 July, 2006.

Richards A and Rosewall T (2010), 'Measures of Underlying Inflation', RBA *Bulletin*, March, pp 7–12.

Roberts I (2005), 'Underlying Inflation: Concepts, Measurement and Performance', RBA Research Discussion Paper No 2005-05.

