Welfare-to-Work Reforms: Impact on Sole Parents

Ann Harding, Quoc Ngu Vu, Richard Percival and Gillian Beer

In recent years, the labour force participation rate of sole parents has been of growing concern in Australia and in some overseas countries. Wilson, Pech and Bates (1999:4), for example, showed that the labour force participation rates of sole parent mothers remained about 10 per cent lower than those of partnered mothers during the 1990s. While their analysis suggested a marginal increase in the labour force participation rates of both groups during the 1990s, it is clear that the pronounced increases in female labour force participation rates have been due primarily to growing participation by women without children. The labour force participation rates of sole parent fathers, while higher than for sole parent or partnered mothers, are still well below those of partnered fathers.

The creation of new longitudinal datasets has challenged the perception of mobility among the sole parent pensioner population. For example, Barrett (2001) analysed four years of longitudinal data and found that 18 per cent of recipients were ‘short-term’ and received Parenting Payment Single (PPS) for six months or less; 15 per cent remained on the program for the entire four years and 25 per cent experienced multiple episodes of Parenting Payment Single receipt, thus cycling on and off the program. Using similar data, Gregory and Klug (2003:21) found that, while it was difficult to be precise, ‘the average cumulative use of income support over the period for which parents have dependent children may be as much as 12 years’. They found that sole parents frequently cycle through different income support payments, moving from PPS to Parenting Payment Partnered and back again.

This has raised concerns that the current structure of Parenting Payment Single may be a ‘tender trap’, promoting long-term dependence on welfare and discouraging active participation in the labour market and the community (Saunders and Tsumori, 2003). Low labour force participation has adverse consequences both during the prime age years and later in life during retirement. Research by NATSEM and AMP, for example, has shown that the savings of many baby boomers are not sufficient to finance a comfortable retirement. The problem is particularly acute for baby boomer women and sole parents (Kelly and Harding, 2002; Kelly, Percival and Harding, 2002; Kelly, Farbotko and Harding, 2004). As a result, in Australia and New Zealand, ‘the direction of policy has moved towards promoting self-reliance through paid work’ (Goodger and Larose, 2004).

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2005:1). Bradbury (2003:18) notes that ‘many countries are turning to employment as the solution to child poverty’.

The emergence of labour force shortages in Australia has been an additional concern, accompanied by two key government reports suggesting lower rates of labour force participation and economic growth in the future due to population ageing (Treasury, 2002; Productivity Commission, 2005). Increasing labour force participation rates has thus moved very firmly onto the policy agenda.

With one in five marriages ending before 10 years (Kelly and Harding, 2005) another issue has been the growth in the number of sole parent families. In 2003, 543,000 or about 22 per cent of all families with children aged 0 to 17 years were sole parent families. This was up from 17 per cent in 1992. One-fifth of Australian children now live in sole parent families (ABS, 2004:6). As Bradbury (2003:34) notes, ‘having only one workforce-age parent available, whose employment is constrained by caring responsibilities, means that children living in lone-parent households are almost inevitably more likely to be poor’.

Internationally, Australia has relatively high child poverty levels, both for children generally and for children in sole parent households (p. 45). In the late 1990s, a national ABS survey found that 41 per cent of sole parent households reported high levels of financial stress — higher than for any of the other family types considered (McColl, Pietsch and Gatembry, 2002:12).

These issues are of particular concern to policy makers, with the development of the Federal Government’s National Agenda for Early Childhood reflecting research suggesting that adverse childhood experiences have a profound impact on the rest of a child’s life. Children experiencing multiple forms of social and economic disadvantage are more likely to have poor health and well-being. The adverse effects persist throughout their lives and include lower subsequent rates of educational and labour market achievement and a greater likelihood of becoming teenage parents and serving prison sentences (Poulton et al., 2002; UNICEF, 2000; Moore et al., 2002; Burgess and Propper, 1998).

Against this backdrop, in the May 2005 Budget the Federal Government announced a range of proposed welfare to work measures, including significant changes for sole parents, to take effect from 1 July 2006. Currently, sole parents with a qualifying child aged less than 16 years who meet various income and asset tests can receive PPS subject to the pension income test and payment rate rules. Sole parents in receipt of PPS prior to 1 July 2006 will continue to remain on that payment and be subject to the ‘pension’ income test (which is more generous than the ‘allowance’ income test), until their youngest child turns 16. However, new compulsory work obligations will be imposed on this group from the later of 1 July 2007 or when their youngest child turns six. These new obligations will be satisfied by working part time for a minimum of 15 hours a week or by searching for part-time work and participating in Job Network or other services.

There are more significant changes for sole parents applying for PPS after 1 July 2006. Sole parents with a child aged less than six years will still be eligible to receive PPS. However, as soon as their youngest child turns six, they will be transferred to Newstart Allowance (NSA) and be subject to an obligation to seek
part-time work of at least 15 hours per week. NSA provides a lower payment rate than PPS and has a much less generous income test. As a result, many sole parents will be facing large falls in income when their youngest child turns six and, for those whose youngest child is already aged six to 15 years, the returns from paid work will be much lower than currently.

The rest of the paper begins with an explanation of the likely new payment structures applying to sole parents in 2006-07. The likely falls in the disposable (after-income-tax) income of affected sole parents, relative to payments under the current program rules, are presented in the subsequent section. The next section examines the impact of the reforms on the effective marginal tax rates of affected sole parents. Conclusions are presented in the final section.

The Parenting Payment Single and Newstart Allowance Programs

As they depend upon future trends in average weekly earnings and the consumer price index, there is inevitable uncertainty about the exact payment rates for NSA and PPS that will apply in 2006-07. The following estimates are based on NATSEM’s latest projections of these indexes. The modelling is also based on current Government statements about the structure of income support after 1 July 2006 (Andrews, 2005a,b). However, at the time of writing this article, the legislation is yet to be introduced, so some of the programs and parameters used in the modelling may be changed.

PPS for sole parents with one child and no private income is expected to be about $257 a week on average in 2006-07 (Table 1). A crucial factor is the amount of private income that can be earned before the income support payment is reduced. In 2006-07, a sole parent with one child on PPS will be able to earn $76 a week without incurring a reduction in income support. For every dollar of income earned above this threshold, the support payment is reduced by 40 cents. Sole parents with a youngest child aged less than six years, applying for PPS after 1 July 2006, will be subject to this payment rate and income test.

Sole parents with a youngest child aged six years and over will be placed on NSA, which is expected to average $228 a week in 2006-07. This is $29 a week less than the PPS payment rate. In addition, they will be able to earn only $31 a week before their income support payment begins to be reduced. That is, their ‘free area’ will decline sharply relative to the current rules, by about $45 a week. The first $94 of private income above $31 a week will reduce their NSA by 50 cents for every dollar earned. Once they reach the second income test threshold of $125 a week, the reduction in their allowance increases to 60 cents for each additional dollar earned. In other words, once private income reaches $125 a week, they will keep only 40 cents of each additional dollar earned, until they reach the allowance ‘cut out point’.

The NSA income test is thus much more restrictive than the PPS income test, and this is reflected in the very different ‘cut out points’ shown in Table 1. Sole parents with one child on PPS will be able to earn up to around $718 per week before their income support cuts out. On the NSA their entitlement to income
support is extinguished with earnings of about $426 a week. This means that income support will cease at a much lower level of earnings for those subject to the new NSA test than for those on the existing PPS. For those with more than one child the difference will be even greater, as the ‘free area’ for PPS is increased by a further $12.30 per child per week for each child after the first, whereas the ‘free area’ under NSA does not vary with the number of children.

### Table 1: Summary of the Newstart Allowance and Parenting Payment

| Single Payments for Sole Parents with One Child, 2006-07<sup>a</sup> |
|---|---|---|
| Parenting Payment Single | Newstart Allowance | Difference |
| Payment rate for those with one child | $257 | $228<sup>b</sup> | $-29 |
| Amount of income that can be earned before payment is reduced | $76 | $31 | $-45 |
| Withdrawal rate for each $ of private income above this threshold | 40% | 50% | +10% |
| Second income test threshold | na | $125 |
| Withdrawal rate for each $ of private income above this threshold | 40% | 60% | +20% |
| Income support cuts out when private income reaches this point (cut-out point) | $718<sup>c</sup> | $426<sup>c</sup> | $292 |

Notes:  
<sup>a</sup> These are the estimated averaged payment rates and thresholds that will apply in 2006-07. The actual payment rates vary at various points throughout the financial year, in line with indexation arrangements. All figures rounded to nearest whole dollar.

<sup>b</sup> This includes $2.90 a week of Pharmaceutical Allowance (PA), which the government has said will also now be paid to NSA recipients who are sole parents.

<sup>c</sup> This includes the effect of the $2.90 a week of PA.

Source: Specially created version of STINMOD/05A

Sole parents receiving NSA will also be affected adversely by other, less obvious, factors. One is that pensioners (including PPS recipients) qualify for the Pensioner Tax Offset. The aim of the tax offset is to ensure that no tax is payable by a pensioner whose assessable income consists of the pension and around $144 a week of non-pension income. In 2006-07, some tax reduction will be received by PPS recipients whose taxable income is less than about $35,000. In contrast, the Beneficiary Tax Offset (which ensures no tax is payable by maximum rate allowance recipients with up to $31 a week of private income — and begins to be withdrawn when private income is above $31 a week) means some tax reduction will be received by sole parent NSA recipients whose taxable income is less than about $27,500. Thus, the reduction in income tax liabilities allowed is much greater for pensioners than for allowance recipients.

A second issue is the receipt of the Pensioner Concession Card (PCC). PPS recipients are automatically entitled to a PCC, which many organisations use as a
‘passport’ to a range of price discounts for services such as property charges and taxes, energy, water, transport, education, health, car registration, housing and recreation services. While such services are often provided by State and local governments, many private sector businesses also charge lower prices to PCC holders. Similarly, many doctors offer bulk billing to PCC holders, so that they do not have to pay any additional co-payment.

The Government has stated that sole parents shifted to NSA under the proposed arrangements will retain the right to a PCC. However, as Table 1 makes clear, eligibility for NSA for sole parents will cease at a much lower level of private income than eligibility for PPS. As a result, there is a wide range of private income of almost $300 a week over which sole parents formerly qualifying for the PCC apparently will not qualify under the new rules.

Most such sole parents will still receive a Health Care Card (HCC), via their receipt of maximum rate Family Tax Benefit Part A, but some concessions are provided by State and local governments and other organisations only to those with a PCC and not to those with a HCC. In Victoria, for example, PCC holders (but not HCC holders) qualify for a municipal rates concession of up to $160 a year and a transport accident charge concession of up to about $170 a year. Thus, the loss of these three items alone could reduce the effective income of some sole parents by some $6 a week. However, the value to sole parents of the HCC or the PCC has not been included in the following analysis of their disposable incomes.

**Impact of Proposed Changes on Disposable Incomes**

Figure 1 traces the impact upon the disposable incomes of sole parents whose youngest child is aged six to 15 years and who would qualify for PPS under the current rules but will qualify for NSA under the proposed rules. That is, it shows the impact upon those sole parents who commence receipt of income support after 1 July 2006. For simplicity, the figure shows the estimated averages for the entire 2006-07 year rather than the precise point in the year at which sole parents become eligible for the payments. ‘Disposable income’ means the income that sole parents have left in their pockets to spend each week, after the receipt of any income support or private income, the payment of income tax and Medicare levy (net of the various tax allowances such as the pensioner tax offset and the low income tax rebate). The figure does not take any account of any possible child care costs or rebates or the possible impact of rising private income levels on such factors as consequent increases in public housing rents. The value of the PCC is also not included.

As Figure 1 shows, disposable incomes of sole parents with one child aged six years and over are much lower under the proposed system than under the current system over a very broad range of private income. (‘Private income’ means income other than government cash transfers.) The loss sustained by a sole parent amounts to almost $100 a week when earnings are between about $200 and $450. As shown in Table 2, for example, the proposed reforms reduce the ‘take-home’ incomes of sole parents with one child and earnings of $200 a week from
$531 under the current system to $439 under the proposed system — a cut of $92 a week. This effectively represents a 17 per cent cut in the living standards of these sole parents and their children. It should perhaps be mentioned again that cuts of this magnitude will be experienced almost overnight by sole parents at these private income levels when their youngest child turns six.

**Figure 1: Disposable Income of Sole Parents with One Child 6 Years or Over Under Current and Proposed Systems, 2006-07**

At low levels of private income, the difference of about a $30 a week between the proposed and existing systems is due to the different maximum rates of pension and allowance. At the other end of the spectrum, above around $700 a week, there is no difference in the incomes of sole parents under the proposed and current systems because, beyond this point, they are not receiving any income support. Between these points, disposable incomes of sole parents are lower under the new system than under the current system, primarily because of the stricter income test applying to NSA but also because of the less favourable tax concessions for allowance recipients compared with pensioners.

Sole parents with two and three children have higher disposable incomes than those with one child, due to their receipt of additional Family Tax Benefit Part A payments. Under the new system, at most income ranges, those with two and three children will experience slightly higher losses than those with one child. This is due to a larger ‘free area’ per child of $12.30 per week allowed under the PPS income test. In contrast, the free area allowed under the allowance income test does not vary with the number of children. As a result, a sole parent with three children and $200 a week of earnings will be $99 a week worse off under the proposed system compared with the current system. This compares with a $92 a week loss for a sole parent with the same $200 of earnings but only one child.
Table 2: Impact of Proposed System on Disposable Incomes and EMTRs of Sole Parents: Various Levels of Earnings, 2006-07

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Note: Averaged 2006-07 payment levels used. All dollar figures rounded to nearest dollar. All EMTRs rounded to nearest one per cent. Time constraints prevented simulation of receipt by sole parent NSA recipients of PA. The PA has a particularly complicated income test and is non-taxable. To make a fair comparison between the current and proposed systems, PA was excluded from the calculations in both the current and proposed worlds. However, this exclusion makes little difference, as the payment is worth only $2.90 a week and is received by sole parents in both the current and proposed systems if they are in receipt of income support. Thus, the difference between the two systems is in most cases not affected by this exclusion. The PA has also been excluded in Figures 1 to 2.

For simplicity, in this Table and Figures 1 and 2, it is assumed that sole parents are not receiving child support. Child support is received in both the existing and proposed systems. It affects only Family Tax Benefit Part A entitlement, not income support payments, and makes no difference to the results.

* Figures may not subtract exactly due to rounding.

Source: Specially created version of STINMOD/05A

Impact of Proposed Changes on Effective Marginal Tax Rates

When announcing the Welfare to Work Budget changes, the Minister noted that ‘these changes are designed to assist, support and encourage parents to return to work when their children are old enough to go to school’ (Andrews, 2005a). The effective marginal tax rate faced by sole parents affects their workforce incentives.
An effective marginal tax rate (EMTR) measures how much of an additional dollar of earnings sole parents actually keep, after taking account of the various income tests associated with social security and family payments, the payment of income tax and the receipt of various tax allowances and rebates. An EMTR of 70 per cent means that the ‘disposable’ or ‘take-home’ income of a sole parent will increase by only 30 cents when earnings increase by $1.

The EMTRs graph shown in Figure 2 take no account of the possible increased costs associated with rising earnings, such as increased transport or child care costs. They also take no account of possible ‘knock on’ effects to programs or services not administered by the Federal Government, such as rent payments for public housing tenants or State and local government concessions. As a result, the EMTRs can probably be regarded as being somewhat lower than those sole parents will face in the real world. As explained above, this is because we have at this stage probably over-estimated how much of each additional dollar of earnings many sole parents will actually retain to improve their and their children’s welfare, primarily by taking no account of any increased costs associated with working.

**Figure 2: EMTRs Facing Sole Parents with One Child 6 Years or Over Under Current and Proposed Systems, 2006-07**

Source: Specially created version of STINMOD/05A. PA excluded from all calculations (see footnote to Table 2).

For sole parents with one child aged six years and over, the EMTRs faced at lower levels of private income (that is, earnings) are generally higher under the new system than under the existing system. Sole parents with weekly private incomes between around $31 and $76 a week face an EMTR of 65 per cent under the new system, compared with a zero EMTR under the current system. That is, for each additional dollar of earnings in this range, sole parents will keep only 35 cents under the new system, compared with 100 cents under the existing system.

Sole parents with one child with private incomes between $76 a week and $125 a week will also face substantially higher EMTRs under the proposed system.
— 65 per cent under the new system compared with only 40 per cent under the current system. That is, under the new system, sole parents with earnings in this range receive 25 cents less from each additional dollar of earnings than under the existing system.

Why do sole parents face a 65 per cent EMTR when their private income ranges between $31 and $125 a week under the proposed system (compared with either a 0 or 40 per cent EMTR under the current system)? This effect is due to ‘income test stacking’, with sole parents facing a 50 per cent EMTR due to the allowance income test plus a 15 per cent EMTR due to a combination of the effective withdrawal of the ‘allowance tax offset’ and the payment of income tax. The ‘pensioner tax offset’, in contrast, is withdrawn at the lesser rate of 12.5 per cent and only from a private income level which is almost five times higher than that for the beneficiary tax offset ($31 of private income per week for allowance recipients versus $144 of private income per week for sole parent pensioners). Thus, a less obvious implication of the proposed changes is that sole parents will be subject to the harsher allowance tax offset under the new system rather than the more generous pensioner tax offset which applies under the current system.

Private incomes between $125 a week and $171 a week are again subject to much higher EMTRs under the proposed system — 75 per cent under the new system compared with only 40 per cent under the existing system. Thus, relative to the proposed system, the current system allows sole parents to keep an extra 35 cents out of every additional dollar of income that they earn in this range. The particularly high EMTRs under the new system are due to the allowance withdrawal rate rising from 50 to 60 per cent, with this being stacked on top of the effective withdrawal of the allowance tax offset and the payment of income tax.

Under the NSA regime sole parents with a weekly income of just above $420 cease receiving any allowance and their EMTRs fall to those facing standard taxpayers. Their EMTRs of 34 per cent consist of the 30 per cent payable through the standard income tax schedules plus the 4 per cent withdrawal of the Low Income Tax Offset (LITO). Once the LITO withdrawal finishes, their EMTRs remain at 30 per cent until they start paying the Medicare levy, at $594 of private income. Where private incomes range from about $230 to just over $400, those sole parents under the existing system face marginally higher EMTRs than those under the proposed system, as sole parents under the existing system face one or more of the 40 per cent pension income test withdrawal, the 30 per cent tax rate, and the withdrawal of the LITO and the pensioner tax offset.

What do the higher EMTRs of sole parents with one child under the proposed regime mean in practical terms? Sole parents receiving NSA with private incomes ranging between $31 a week and $420 a week face EMTRs of 65 per cent or more. This is substantially higher than the top marginal income tax rate of 48.5 per cent (including Medicare levy) paid by the most affluent taxpayers in 2006-07 — that is, those whose taxable incomes exceed $125,000 a year. As shown below, the impact of these high EMTRs is to ensure that the financial benefits from work are very low for sole parents receiving NSA.
Proposed changes in industrial relations legislation make it difficult to predict the likely minimum wage in 2006-07. The recently announced minimum wage is $484 for a 38-hour week. Suppose we assume that by 2006-07 it will have risen slightly to $13 an hour. Suppose further that a sole parent with one child on NSA gets a 15-hour a week job that thus satisfies the proposed work obligations and for which the pay is $195 a week ($13 an hour multiplied by 15 hours). Under the current system, this sole parent will keep $144 of this $195, thus gaining a substantial increase in disposable income by moving from no paid work to 15 hours of paid work. Under the proposed system, this sole parent will experience only an $81 a week increase in take-home income. The Federal government will become the major beneficiary of the sole parent’s move to 15 hours of paid work a week and will get $114, via the reduced NSA and increased income tax.

The retention of an additional $81 a week by the sole parent after earnings rise to $195 a week assumes that the costs of work are zero. If additional transport, clothing, lunch and other costs were actually, say, $30 a week when moving from zero to 15 hours paid work a week, then the gains to this sole parent family would fall further to $51 a week.

In addition, as noted earlier, there may be ‘knock on’ effects to other income-tested programs. For example, using the 1996 Census data, Burke, Aspin and Short (2001) showed that 16 per cent of sole parent families lived in public housing. They also noted the work disincentives faced by public housing tenants, who lose 25 per cent of their earnings through increases in the rent that they have to pay (that is, there is an effective 25 per cent taper in the public housing rent rebate formulas). In the example above, therefore, a sole parent in public housing could lose a further $20 of the $81 increase in disposable income through the higher rent. Again, if the costs of work amounted to, say, $30 a week, then the net gain by the sole parent from 15 hours of work would fall to $31 a week. This is an effective pay rate of about $2 an hour.

Sole parents with two or three children

The results for sole parents with two or three children are very similar. The only key change is that under the existing pension income test, an additional $12.30 a week of earnings is disregarded for each additional child after the first. This slightly extends the zone of private income in which these sole parents face a zero EMTR, relative to sole parent pensioners with one child. In contrast, the point at which sole parents on NSA start facing EMTRs of 65 per cent does not vary with the number of children, remaining at $31 a week of private income. Sole parents with two or more children are therefore somewhat more disadvantaged than those with only one child by the proposed move from the pension to the allowance income test regime. The extent of relative disadvantage increases with the number of children: sole parent pensioners with five children can earn $125 a week of private income before facing the 40 per cent EMTR caused by the pension income test, whereas sole parent allowance recipients with five children can earn only $31
a week of private income before facing the 65 per cent EMTR caused by the allowance income test and increased taxes.

**Labour Market Issues**

As noted earlier, one of the concerns that the welfare to work changes are trying to address is the lower labour force participation rates of sole parents on welfare. Table 3 shows that in 2002-03, 59 per cent of partnered mothers with dependent children were working and 34 per cent were working part-time. Looking first at all sole parents, 49 per cent were working, with 24 per cent working part-time. However, looking only at the subset of sole parents who are receiving PPS, only 35 per cent are working, with 27 per cent of these being part-time. Thus, comparing sole parents receiving PPS with partnered mothers, the difference in their labour force participation rates is 24 per cent, with the big difference being the proportion working full-time. Since 1995-96 the gap between the labour force participation rates of partnered mothers and PPS recipients has narrowed, with the proportion of partnered mothers working falling by two percentage points and the proportion of PPS recipients with jobs increasing by six percentage points.

<table>
<thead>
<tr>
<th>Year</th>
<th>Work Full-time</th>
<th>Work Part-time</th>
<th>With Job – No Post-school Quals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995-96</td>
<td>28</td>
<td>33</td>
<td>25</td>
</tr>
<tr>
<td>2002-03</td>
<td>25</td>
<td>34</td>
<td>39</td>
</tr>
</tbody>
</table>

Source: Calculated from 2002-03 and 1995-96 ABS Survey of Income and Housing Costs confidentialised unit record files.

It is clearly more difficult to work full-time as a sole parent, when caring responsibilities cannot be shared with another parent. But there are also other important differences between partnered mothers and Parenting Payment Single recipients. Just over half of all PPS recipients in 2002-03 are not in the labour force and a striking 80 per cent of these have no post-school qualifications. In contrast, just under two-fifths of all partnered mothers are not in the labour force and 62 per cent of these have no post-school qualifications. Overall, 67 per cent of all PPS recipients have no post-school qualifications, compared with only 45 per cent of partnered mothers.

There is a clear link between qualifications and the likelihood of having a job with, for example, partnered mothers with bachelor degrees being twice as likely in 2002-03 as partnered mothers with no qualifications to hold a full-time job. This is partly linked to the financial rewards from paid work being greater for workers with additional educational qualifications, as they can command a higher
pay rate. Given that PPS recipients are much more likely than partnered mothers to have only school qualifications, it is probably unrealistic to expect the participation rates of the two groups to be the same.

As noted above, four-fifths of those PPS recipients who are not in the labour force and are thus the particular target of the proposed welfare to work changes do not have any post-school qualifications. The hourly wage rates received by those PPS recipients who do have a job provide us with some guide to the likely hourly wage rates that those currently out of the labour force will be likely to receive.

In 2002-03, of all those PPS recipients with children aged 0 to 14 years who reported wage and salary income, the overwhelming majority (77 per cent) received hourly wage rates between $10 and $20 an hour — with the average wage for those in this band being $14.70 an hour. These estimates are for 2002-03, so that wages could be expected to be higher by 2006-07. But, those PPS recipients who currently do have a job are better educated than those who don’t, so that the wage rates that the potential new entrants to paid work will command will probably be lower. Overall, the example given in the preceding section of the impact of the welfare to work changes on a sole parent working 15 hours for $13 an hour appears to be a reasonable approximation for what will happen to many PPS recipients who take up paid work after the proposed system is introduced.

Figure 3: Distribution of wage/salary earnings: Parenting Payment Single Recipients with Children 0 to 14 years, 2002-03

<table>
<thead>
<tr>
<th>Weekly wage and salary income</th>
<th>per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1-$50</td>
<td>4.4</td>
</tr>
<tr>
<td>$51-$100</td>
<td>6.6</td>
</tr>
<tr>
<td>$101-$150</td>
<td>10.5</td>
</tr>
<tr>
<td>$151-$200</td>
<td>9.7</td>
</tr>
<tr>
<td>$201-$250</td>
<td>9.6</td>
</tr>
<tr>
<td>$251-$300</td>
<td>9.7</td>
</tr>
<tr>
<td>$301-$350</td>
<td>10.9</td>
</tr>
<tr>
<td>$351-$400</td>
<td>7.8</td>
</tr>
<tr>
<td>$401-$450</td>
<td>7.9</td>
</tr>
<tr>
<td>$451-$500</td>
<td>5.7</td>
</tr>
<tr>
<td>$501-$550</td>
<td>3.5</td>
</tr>
<tr>
<td>$551-$600+</td>
<td></td>
</tr>
</tbody>
</table>

Note: The graph refers only to PPS recipients who have children aged 0 to 14 years and report more than $1 a week of wage and salary income.

Source: Calculated from 2002-03 ABS Survey of Income and Housing Costs confidentialised unit record files.

1 Estimates were derived from the 2002-03 ABS Survey of Income and Housing Costs confidentialised unit record file. As the ABS reports weekly hours worked in small bands only (for example, 6-7 hours), the bands’ midpoints were used to calculate hourly rates.
Figure 3 shows the current distribution of earnings of PPS recipients with children aged 0-14 years and with wage and salary income. Of this group, 34 per cent work 12-21 hours a week for those earnings and about one-fifth report wage and salary income of $150 or less a week. A further 10 per cent report earnings of between $150 and $200 a week. While many are no doubt working less than 15 hours a week, these are roughly the earnings zones in which much higher EMTRs will be faced under the proposed system. Overall, 67 per cent report earnings of less than $400 a week, roughly corresponding to the earnings range that will attract EMTRs of 65 per cent or more under the proposed system. Conversely, only one-third report earnings of more than $400 a week.

Conclusions

The Government’s proposed welfare to work reforms will not directly affect the distributional income or effective marginal tax rates (EMTRs) of those sole parents who are already in receipt of PPS on 1 July 2006 and who remain on that payment. Such sole parents will face new work obligations if their youngest child is aged six years or more, but they will not be placed on NSA until their youngest child reaches the age of 16 years.

However, sole parents who begin receiving income support after 1 July 2006 will be placed on PPS if their youngest child is aged less than six years — but on NSA if (or as soon as) their youngest child reaches the age of six years.

The NSA maximum payment rate is about $29 a week lower than that of PPS, resulting in an immediate loss of this amount of income for those transferred from PPS to NSA when their youngest child turns six. The NSA income test is also much less generous than the PPS income test and the tax treatment of allowance recipients is much less generous than the income tax treatment of pensioners. For sole parents with one child and around $230 per week of private earnings, who are transferred to NSA, the effect of these tests is that the losses in take-home income can be as high as $96.50 a week.

For example, a sole parent with one child who is working 15 hours a week for a pay rate of $13 an hour will have a take-home income each week of $437 under the NSA rules. In contrast, the same sole parent would take home $529 a week under the current PPS rules. This sole parent, with one child and earnings of $195 a week, will thus be $92 a week worse off under the proposed system than under the current system.

Under the proposed system, the Federal government will be the major beneficiary of such a sole parent moving from zero to 15 hours a week of paid work, with the sole parent keeping $81 a week of their $195 a week of earnings, and the government taking the other $114, via reduced NSA and increased income tax payments.

The maximum losses experienced by sole parents under the proposed system relative to the current system increase with the number of children. For example, for sole parents with five children, the maximum losses reach up to $107 a week for those with private incomes ranging from about $215 to $290 a week.
The related consequence of the more restrictive NSA income test and harsher income tax treatment is to create much higher effective marginal tax rates for sole parents than they face under the current PPS income test. Sole parents with one child aged 6 to 12 years will face EMTRs of 65 per cent or more over a broad band of private income ranging from $31 to about $229 a week under the proposed system. In contrast, under the current system, such sole parents face a zero EMTR for private incomes between $31 and $76 a week, and only a 40 per cent EMTR for private incomes between $76 and $171 a week. The effect of these income test and tax changes is thus to reduce the attractiveness of paid work to sole parents — and to reduce the amount of income that they have available to support themselves and their children after they undertake paid work.

As the analysis of the current earnings of PPS recipients suggests, the majority of those sole parents who enter the labour market while receiving NSA appear likely to have earnings that will attract EMTRs of 65 per cent or more.

The need to increase the number of workers as our population ages and the long-term improvements in economic well-being that occur with ongoing workforce participation are some of the factors that lie behind the Federal Government’s proposed changes. Many policy analysts will not object to the goal of increasing the labour force participation of sole parents, although they may wish to debate specific aspects of the proposed policies, such as:

- whether the ‘age of youngest child’ that triggers the compulsory work requirements should be higher than six years;
- whether there should be special measures for those sole parents trying to raise large families by themselves; or
- whether there should be exemptions for sole parents raising disabled children.

However, perhaps of more concern is that our analysis suggests that sole parents will be required to undertake paid work while also being placed on an income support regime that will ensure that many receive minimal improvements in the financial position of their family from that paid work. In addition, the dramatic drop in income that will occur almost overnight for many sole parents when their youngest child turns six would seem likely to have an adverse effect on the wellbeing of the children, as well as their parents. While it is to be hoped that in the longer term many children will be living in sole parent families whose incomes are higher as a result of the expected increases in paid work, in the shorter term many children will be living in sole parent families whose incomes are much lower than under the current income support rules.

These concerns could be overcome by allowing sole parents to remain on the existing PPS, rather than transferring them to NSA when their youngest child turns six. Thus, the government’s key goal of encouraging sole parents to work could still be achieved via some form of paid work obligation, but sole parents could remain on an income support payment regime that ensured that they and their children were financially much better off after undertaking paid work.
While the particular focus of this paper has been sole parents, others on NSA also face the high effective marginal tax rates discussed in this paper. Indeed, the proposed NSA income test analysed in this paper is more liberal than the current NSA income test (which has a 70 cents in the dollar taper for each dollar of private income over $71 a week, versus a 60 cents in the dollar taper for each dollar of private income above $125 a week in the proposed system). Thus, the Government has responded to the continuing concerns about the impact of high effective marginal tax rates on work incentives by liberalising the income test for NSA recipients from 1 July 2006. Nonetheless, poverty traps remain an on-going issue for many income support recipients. However, until now sole parents have benefited from being placed on the more liberal ‘pension’ regime, in recognition of the longer-term responsibilities associated with being the primary and sole carer of children.

References


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Issues in Accrual Accounting and Budgeting by Government

Allan Barton

The adoption of accrual accounting and budgeting systems has been central to the program of Commonwealth Public Sector reforms over the past 20 years. The reforms are explained in publications such as Department of Finance (DOF, 1994a,b), National Commission of Audit (1996); Guthrie and Parker (1998); and Wanna, Kelly and Forster (2000). They were heralded with much praise and promise for improvements in the efficiency of resource management and effectiveness in policy delivery, and in enhanced transparency of information and accountability to Parliament and the public. However, while major improvements have been made in these matters, significant concerns remain about the new systems and they have created many problems.

The fundamental features of the new financial measurement systems and the problems they have created are reviewed in the paper. The problems arise from the scrapping of the former cash accounting and budgeting system (CABS) upon the introduction of accrual accounting, and secondly, from the simultaneous introduction of two distinctly different accrual accounting and budgeting systems (AABS) — the Australian Accounting Standards (AAS) system and the Government Finance Statistics (GFS) system. It is contended that:

- a CAB system should be reintroduced because it provided necessary information for the management of government fiscal policies and cash;
- only one AAB system should be used;
- the GFS system, as upgraded, should be the one adopted as it provides the information required by governments, and the AAS system should be discontinued as it has limited relevance to the environment of governments;
- the CAB system should be designed as an integral component of the AAB system.

This paper begins by briefly examining the role of accounting as a financial management information and reporting system in government, and the nature and roles of government so as to establish its financial information needs. I then examine the nature of each of the three accounting systems and the types of information provided by each, followed by my conclusions and recommendations. The paper is confined to the activities of the general government sector of the Commonwealth Government and to the information published in regular publications.
government financial statements. While it does not refer to state and territory governments, the same principles apply to them.

**Accounting as a Financial Management Information and Reporting System**

The purpose of an accounting system is to provide useful financial information. In the public sector context, accounting should be regarded as a financial management information and reporting system (FMIRS) for use of management, parliament and the public as the key stakeholders. The Australian Accounting Standards Board’s Statement of Accounting Concepts (SAC) states that it should report information useful for decision making in the use of resources, performance measurement and accountability purposes (SAC2, 1990: paras 43-45).

Information can be useful only if it satisfies certain criteria and is appropriate for the functions and roles of the accounting entity. These criteria comprise relevance, reliability, comparability and understandability, and are explained in SAC3 (1990: para 5). Relevant information must relate to the purposes for which it is to be used, that is, the decisions made, measurement and assessment of financial position and performance, and the fulfilment of accountability obligations. To be relevant and timely, it must be tailored to suit the operating environment of the entity and the concepts being measured. Reliable information requires that it represents faithfully the transactions, concepts and results of operations that it purports to represent and do so without bias or undue error. Comparable information requires the use of consistent accounting concepts and practices so that like information can be validly compared within and between statements, over time and between entities. Understandability means that users are readily able to comprehend what the information purports to mean. This requires that the presentation of information must not be obfuscated by irrelevant information, non-disclosure of key items, and inappropriate terminology, classification of items or accounting practices. The first three criteria for useful information are interrelated and they all impact on understandability. These criteria comprise the necessary conditions for the financial statements to present a ‘true and fair’ view of the financial results of an entity’s activities.

FMIRS can take a variety of forms according to the information required from them. They may encompass cash transactions only (cash based accounting) or all cash and accrual transactions (partial accrual accounting); they may include other accounting events, that is, non-transactions which affect income and wealth such as asset consumption charges (that is, full accrual accounting); they may adopt initial transaction prices of assets and liabilities (historic cost accounting) or their current market values as the basis of income and wealth measurement (current value accounting); and they may use the dollar measuring rod as a unit of exchange or as a unit of general purchasing power (real value systems). Finally, the systems can relate to the past and record actual transactions and events, or to expected future transactions and events.
The only financial report which can be prepared in the cash based accounting system is the Cash Flow Statement, and the only asset reported is the cash balance. Two financial statements can be prepared under partial accrual accounting – a cash flow statement and a summary of external transactions (both for cash and credit). Full accrual accounting systems are required to measure income and financial position in addition to the cash flow and all external transactions reports. These involve the measurements of all items of revenue and expense, and all assets and liabilities, and a matching of expenses against revenue to determine profit. As well, detailed management reports on segments of operations (products, departments etc) can be prepared in the system.

The nature and characteristics of these systems are explained in Barton (1984:Chaps 24-28). The information produced in each system differs, and the choice between them depends upon the type of information required. No one system can provide all the financial information possibly required.

Nature and Role of Government

The nature and role of government determine what information is required from the FMIRS. They establish the environment in which the accounting system is to operate and the purposes for which the information is to be used. In turn, these matters determine what and how the information is to be measured and reported.

The nature and role of government vary from nation to nation and over time. They can raise very important political issues which ultimately must be resolved by the citizens of a democratic nation. Governments typically undertake the following roles (see, for example, Stiglitz, 1999):

- provision of public goods and services to citizens
- provision of social welfare goods and services to citizens
- macro-economic management of the economy
- pursuit of intergenerational equity
- conservation of the nation’s heritage and natural environment
- management of government resources and liabilities.

The above activities of government determine its financial management information needs. The first five roles are the concern of government fiscal policies. They all involve the raising and expenditure of cash, and significant externalities. Accordingly, the Commonwealth Government (Budget Papers, 2001:8.2) sees the role of its General Government Sector (GGS) as the provision of ‘... public services that are mainly non-market in nature, and for the collective consumption of the community, or involve the transfer or redistribution of income. The services are largely funded through taxation and other compulsory levies.’ The resource and liability management role is primarily a departmental management responsibility. Fiscal policies are formulated for the nation and must be approved by parliament prior to their implementation. Resource and liability management is a micro-economic responsibility vested in departmental managers
implementing government policies as approved by parliament. Their good management is covered by statute, for example, *Financial Management and Accountability Act (FMA) 1997*, *Audit Act 1997* and the *Public Service Act 1999*.

**Major Issues and their Solution**

*Cessation of Cash Accounting and Budgeting Systems*

Cash Accounting and Budgeting Systems have been used by all Australian Governments since birth. The Department of Finance (1994:9) succinctly summarises the role of cash accounting in the Westminster system as:

> Historically, governments have operated on an annual cash basis because this is fundamental to the democratic constitutional safeguards which have been evolving since the days of King Charles I of England. The basic safeguard is that no monies shall be collected or spent except in ways and amounts approved by Parliament through budget appropriations.

These requirements are included in the Australian Constitution 1901 (Section 83) and in the FMA Act 1997. All policies involving cash transactions, both receipts and payments, must first be approved by Parliament prior to implementation. They must also pass through the Consolidated Revenue Fund (Section 81). Information on budget compliance must also be submitted to Parliament, and be audited (*Audit Act 1997*) to certify that Parliament’s wishes have been adhered to. Evidence of budget compliance is an integral part of the accountability process.

Notwithstanding the above requirements, as well as its essential role in fiscal policy determination and cash management, CABS was terminated without public warning upon the introduction of the AAS system of accrual accounting and budgeting in the May 1999 budget. Yet most of the literature supporting the adoption of accrual accounting by government stressed that CABS should be retained as part of the more comprehensive accrual accounting system. This included official reports (DOF, 1994a,b), reports of AARF which formulates draft accounting standards (Sutcliffe, Michallef and Parker, 1991; Micallef, Sutcliffe and Doughty, 1994), and articles by individual authors (Guthrie and Parker, 1998). For example, the National Commission of Audit (NCA, 1996:223) states:

> Thus, the short to medium term cash impact of the budget will continue to be important for macro-economic management purposes … accrual budgets would continue to provide this cash information.

As the preceding explanation of FMIRS indicates, there is no technical reason why cash flow reports prepared directly from cash transactions cannot be prepared daily in an accrual accounting system. Many corporations do so as the information is needed for efficient cash management. In government, it is needed
Cash is central to all government fiscal policies because it funds the resources required to provide all the goods and services to the community. Cash budgets provide parliament with information on the new resources required for allocation to departments and programs, and hence to citizens in the form of the types of goods and services discussed above; and secondly, on how they are to be funded through taxation and other measures. Provision of new resources involves government policy decisions and parliamentary approval.

Furthermore, cash is central to macro-economic management of the economy. All transactions affect the level of economic activity – production, sales and employment. The cash budget also impacts on financial markets and interest rates. Deficits must be funded through government borrowing, while surpluses add to the savings of the nation and are available to fund investment expenditure. Long term cash budgets extending over the economic cycle are also needed to determine whether current policies are compatible with the objective of intergenerational equity. A long term cash deficit indicates that, on current expectations, taxation receipts are inadequate to fund the budgeted provision of services.

CABS is also necessary for efficient cash management by government to ensure adequate liquidity throughout the year and to minimise borrowing costs. With annual cash operating budget inflows and outflows each exceeding $250,000m, the flow of cash through the Government is enormous by business standards. In addition there are significant capital transactions and loan repayments. Because there can be substantial fluctuations in daily cash flows, the Government must ensure it has sufficient cash on hand each day to meet its expenditures, and if a deficit is expected, it must arrange to borrow the money in advance through the sale of Treasury notes. Conversely it can invest temporary cash surpluses to redeem some Treasury notes. Rolling cash budgets must be prepared each day for efficient cash management.

Hence for fiscal policy purposes, efficient cash management, and budget legal compliance and accountability purposes, CABS is necessary, and the information must be available on a timely basis. This can be done where the information is compiled directly from cash transactions undertaken each day. Unfortunately the only cash flow statements (CFS) currently prepared are annual ones and these are of no use for cash management or intra-year macro-economic management purposes. Furthermore, the statements are prepared from each set of end-of-year accrual financial statements (GFS and AAS) by eliminating all the non-cash transactions and events from them. This is an inefficient process which takes about 3 months to accomplish. But by then, the information is too out of date for management use. As well, the information may not be fully reliable as would be expected from a cash flow statement purportedly reporting factual information on cash transactions. The cash balances from all activities calculated in each of the systems differ by not insignificant amounts. For example, for the 2005-06 budget, the GFS CFS reports an operating surplus of $12,198m, while the
AAS statement reports one of $15,583m (Budget Paper No. 1, Statement 9:6, and Statement 10:4), that is, a difference of $3,385m.

Hence, a major reform to the present FMIR systems must be the re-introduction of CABS to enable the regular preparation of cash flow statements directly from cash transactions. CABS can be readily incorporated into the accrual GFS system as a distinct reporting segment as both systems are based on recording transaction resource flows. Moreover, in excess of 80 per cent of the Government’s transactions involve immediate cash flows. Parliament requires cash budgets reporting to fulfil its legal responsibilities for approving all budget proposals; and they are required for fiscal policy determination, accountability for budget compliance, the Appropriation Bills and for cash management. The presentation of cash budgets should distinguish between current operating expenditures and capital expenditures on non-financial assets because it is an important distinction for interpretation of the budget’s effects on the economy and intergenerational equity, and for comparison with accrual budgets.

Adoption of two accrual accounting and budgeting systems

The case for adoption of accrual accounting and budgeting systems (AABS) is an overwhelming one. Without AABS, the government has no systematic records of its vast holdings of non-cash assets and portfolio of liabilities. As at 30 June, 2004, the General Government Sector of the Commonwealth Government had financial assets of $71,157m and non-financial assets of $72,778m (Consolidated Financial Statements:82, based on AAS). Conversely, it had liabilities for borrowings, staff superannuation and other obligations of $186,621m. This left a deficit in its net worth of $77,949m, offset by reserves of $35,263m (mainly asset revaluation), to yield a net equity of negative $42,686m.

There can be no effective management of such a vast portfolio of assets and liabilities without appropriate accounting records of them. Furthermore under CABS, management attention was concentrated on fiscal policy issues, cash budget compliance and cash management, and a refocusing of management attention to encompass all the non-financial assets and liabilities of the Government required ‘a cultural change’ (JCPA, 1995a). As a result, many assets were surplus to requirements, under-utilised or poorly maintained (ANAO, 1995-96). Likewise, burgeoning liabilities from budget deficits and unfunded superannuation commitments were largely ignored. As well, accrual accounting is needed for cost control of departmental operations and of programs for delivery of services to the public. This information is necessary for determining priorities in expenditure programs, and for facilitating better management of government resources and hence efficiency of operations. In brief, accrual accounting is required for the final resource management role of government.

Given the undeniable potential for accrual accounting to yield substantial efficiency benefits, the major issue concerning its adoption is not whether it should be adopted, but which system of AABS should be adopted. The Government in fact adopted two very different systems of accrual accounting – the
Government Finance Statistics (GFS) standard of the IMF and the Australian Accounting Standards (AAS) system formulated by the Australian Accounting Standards Board (AASB). AAS are the professional accounting standards developed for and used by business. Almost the whole package of AAS and the Statements of Accounting Concepts (SACs) apply to the public sector. However the ones of major relevance comprise AAS29, Financial Reporting by Government Departments (1996), AAS31, Financial Reporting by Government (1996) and the SACs (1990). Table 1 below illustrates the figures produced under each system for the 2005-2006 Commonwealth Budget.

Table 1: Comparison of AAS and GFS Budgets 2005-2006

<table>
<thead>
<tr>
<th></th>
<th>AAS31</th>
<th>GFS</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating Statements</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Revenues</td>
<td>217,869</td>
<td>252,511</td>
<td>34,642</td>
</tr>
<tr>
<td>Total Expenses</td>
<td>209,074</td>
<td>243,521</td>
<td>34,447</td>
</tr>
<tr>
<td>Net Operating Results</td>
<td>$8,794</td>
<td>$8,990</td>
<td>$196</td>
</tr>
<tr>
<td><strong>Balance Sheets</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial Assets</td>
<td>87,554</td>
<td>130,507</td>
<td>42,953</td>
</tr>
<tr>
<td>Non-Financial Assets</td>
<td>75,751</td>
<td>42,397</td>
<td>-33,354</td>
</tr>
<tr>
<td>Total Assets</td>
<td>$163,305</td>
<td>$172,904</td>
<td>$9,599</td>
</tr>
<tr>
<td>Liabilities</td>
<td>$197,885</td>
<td>$198,327</td>
<td>$442</td>
</tr>
<tr>
<td>Net Worth</td>
<td>$-34,579</td>
<td>$-25,423</td>
<td>$9,156</td>
</tr>
<tr>
<td><strong>Cash Flow Statements</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash operating surplus</td>
<td>15,583</td>
<td>12,198</td>
<td>-3,385</td>
</tr>
<tr>
<td>Net purchase of assets</td>
<td>14,802</td>
<td>11,547</td>
<td>-3,255</td>
</tr>
<tr>
<td>Net debt repayment</td>
<td>1,420</td>
<td>1,291</td>
<td>-129</td>
</tr>
<tr>
<td>Net reduction in cash</td>
<td>$639</td>
<td>$639</td>
<td>-</td>
</tr>
</tbody>
</table>


As is evident, the figures produced by each system are substantially different (except, fortunately, for the closing cash balance change). This is a most unsatisfactory situation. It confuses Parliament, permits of ‘cherry picking’ by ministers and parliamentarians selecting the figures which better suit their arguments, and leads to questions as to what is ‘the truth’ — which set of budget figures should Parliament approve; how much tax revenue does the Government expect to collect; what are the total costs of running Government activities; what is the real budget balance; what are the values of the Government’s assets and liabilities; and so on? No company would be allowed to publish two sets of financial statements, yet the Government does so. Furthermore, the cash appropriation bills which Parliament must approve have little obvious relationship
with either set of accrual budgets. This is no way to run the complex business of government. Parliament is dissatisfied with the situation and the JCPAA (2002) held an inquiry into the problems. However the Committee remained confused and was unable to resolve it. The Government acknowledges the problem and a senior Treasury committee (the Heads of Treasury Accounting and Reporting Advisory Committee — HOTARAC) was charged with developing a set of changes for the consideration of the AASB to harmonise them into a single accounting system suitable for the needs of government at both the macro and micro levels (Challen and Jeffery, 2003).

The AAB system based on the GFS standards was introduced in 1993 for the General Government Sector (GGS) for both budget and outcome statements. However, its use was confined to the macro level for fiscal policy management and the statements were not published; it was not applied at the departmental level for resource management purposes. It was used by Treasury in conjunction with CABS until 1999, when CABS was discontinued upon the introduction of the AAS accrual budgets. At the same time, the direct recording of cash transactions was abolished with the scrapping of the cash transactions recording system. Also in 1999, the GFS budgets were published for the first time, and in 2000, the outcome statements for GGS (as appendices to the consolidated whole-of-government reports).

Accrual accounting based on AAS was introduced progressively by departments from about 1990, and the first departmental outcome statements were produced in 1993. The first set of draft consolidated financial statements for the whole-of-government were completed in 1995. AAS budget statements were introduced for both departments and the GGS in 1999, and CABS was discontinued. Thus since 1999, both AABS budget and outcome statements have been published, though the budgets are for the GGS only and the audited outcome statements for the whole-of-government only.

The AAS budgets are the ones formally presented to Parliament for approval and the consolidated outcome statements for the whole-of-government are audited by the Auditor General. These are requirements of the Charter of Budget Honesty Act, 1998. But this should not be interpreted to imply that the AAS statements are of superior quality to the GFS statements. There are some major anomalies and limitations in the AAS standards when applied to the public sector, and some of these are examined below (see also Barton, 2003). A major anomaly of relevance at this stage of the examination concerns the accounting and reporting entity. While each department is an entity under AAS29, only the whole-of-government is an accounting and reporting entity under AAS31. Hence the GGS is not regarded as an entity under AAS, notwithstanding that the AAS budget is confined to the GGS and requires parliamentary approval. As a result, there are no outcome financial statements for the GGS subject to audit, and the budget statements cannot be readily matched against the outcome statements for users to analyse the differences. Yet budget/outcome comparisons are required for good management and accountability purposes. This confusing subject is examined in Challen and
Jeffrey (2005). Both sets of AAB systems are explained and examined below to isolate the causes of the differences between them.

**Government Finance Statistics — Accrual Accounting and Budgeting System**

The GFS system (IMF 2001) was developed specifically for the public sector to accommodate the special nature and role of the GGS and for assessing its economic impact on the nation, that is, for macro fiscal policy purposes. It was not intended to cover the micro departmental resource management function of government.

The system is based on IMF economic measurement standards used for the measurement of Gross Domestic Product of nations and its components, and is integrated with the UN System of National Accounts. The system enables relevant and reliable measurements of GDP to be made which are internationally comparable. It is an economic measurement system based on economic concepts throughout and uses a rigorous, analytical approach. It is based on double entry recording, a sharp distinction between stocks and flows of resources, and current market prices of all assets and liabilities (primarily buying prices for non-financial assets and realizable prices for financial assets and liabilities).

A sharp distinction is made between stocks and flows of resources in the system because of their differing economic effects. Resource flows directly affect production, sales and employment and enter into the GDP; as well they affect the stocks of resources (that is, assets, liabilities and net assets or wealth). Changes in resources can also arise from some non-transaction events such as changes in market prices, discovery of new mineral deposits and the growth of forests.

Two types of resource flows are distinguished: transactions and other economic flows. **Transactions** represent resource flows that come about as a result of mutually agreed interactions between the government and external parties. Under accrual accounting, these flows are recognised as and when they occur. Transactions are classified into exchange transactions which involve the purchase and sale of items; and taxes and transfers (such as social welfare payments) which provide goods, services or cash to or from the government without receiving something in return. **Internal asset consumption**, for example, depreciation of non-financial assets and inventory consumption, is recognised along with transaction resource flows as it reduces resources even though it does not involve a market transaction. These resource flows are summarised in a **Statement of Government Operations**, and they all impact on the stock of assets and liabilities shown in the balance sheet.

**Other economic flows** represent changes to stocks that do not result from transactions or from internal asset consumption. They arise from price movements and abnormal events. They often arise passively without any active decision making being involved. **Valuation changes** in stocks of resources arise from price changes in individual assets and liabilities. They are holding gains and losses which do not alter the physical stock of resources. All assets and liabilities
are revalued at current market prices prevailing at the end of each year, and holding gains and losses are then recognised. Abnormal items include damage caused by natural disasters (earthquakes, bushfires, floods, etc), discovery of new mineral resources, and growth of forests etc. However they are excluded from normal operating resource flows because (for most items) they are irregular and largely unpredictable, and are therefore not amendable to normal macro-economic management policies. The valuation changes and abnormal items are summarised in a Statement of Other Economic Flows. They are recorded directly as balance sheet changes and do not enter into the Statement of Government Operations. Finally, all stocks of resources and liabilities at the end of the year are summarised (at current market values) in the balance sheet.

The Statement of Government Operations shows that (Revenue less Expenses) equals Net Operating Balance = (Nonfinancial asset transactions and net lending/borrowing) = (Financial asset transactions – liability transactions). The net operating balance flows through to transactions in assets and liabilities, and ultimately the balance sheet. The statement provides the government with some important economic magnitudes – net operating balance; gross and net capital formation by government; and net lending/borrowing which in turn is represented by the increase in financial assets/liabilities. The net operating balance indicates the ongoing sustainability of government operations. Gross and net capital formation show government investment expenditure on additional physical assets which are important generators of economic growth, and on provision of community facilities. Net lending/borrowing measures the extent to which the government is either placing resources for use by other sectors of the economy or utilizing their savings. It indicates the financial impact of the government on the rest of the economy.

The Statement of Other Economic Flows presents the influences on government Net Worth that are not the result of government transactions and asset consumption. Rather, they result from price changes in assets and liabilities (resulting in holding gains and losses) and from special events (natural disasters, new mineral discoveries and so on). These items are recorded directly in Net Worth and do not pass through the Statement of Government Operations.

The closing Balance Sheet presents the stock of assets and liabilities and shows the government’s Net Worth. Change in Net Worth helps assess the sustainability of government operations. Declining net worth (consequent upon a running down of asset stocks or increasing liabilities as a result of net operating deficits) can indicate the non-sustainability of present fiscal policies. All the above statements are illustrated in the GFS Manual (2001:37, Figure 4.1)

In addition, a Cash Flow Statement is prepared and presented in the usual format of operating, investing and financing transactions. However, since 1999, the information in the statement is derived by adding back all non-cash items in the three main financial statements to determine the cash flows, rather than recording them directly from cash transactions as had occurred up to 1999. The unreliability of this method is obvious from the divergence in calculations based on each of the accrual accounting systems in Table 1.
The GFS system based on accrual accounting is obviously a much superior information system to CABS because it reports on all assets, liabilities and operating costs, as well as on cash flows (when properly applied). It is a comprehensive FMIRS which is tailored to provide governments with appropriate information required for the good fiscal management of their economies. It can satisfy all the requirements for quality information specified in SAC3 of relevance, reliability with representational faithfulness, comparability and understandability. The information provided is relevant for the five major areas of fiscal policy management. All the reasons for the use of CABS for fiscal policy purposes apply equally to the GFS system. However in principle GFS is preferable because the recording of transactions as they occur matches the timing of the resource flows. But it should be noted that for the vast majority of government operating transactions, the time difference between the two is not significant, and that over 80 per cent of Commonwealth Government expenditures are cash transfers. By designing the GFS system to report simultaneously on cash and accrual transactions, the benefits of both systems can be obtained – GFS information for fiscal policy management and CABS for cash management and parliamentary cash appropriations. Furthermore, the information produced from the GFS system is closely linked to the other macroeconomic statistical systems including the national accounts, balance of payments and all the monetary and financial statistics produced by the government. All these important economic statistical systems are thereby integrated and mutually consistent.

Finally, it should be noted that the GFS system has been confined to date to the GGS for macroeconomic management purposes. It has not been applied at the departmental level for the management of resources and liabilities, and for operating cost management of departments and programs. This has been the preserve of the AAS AABS system. However, the GFS system can be readily extended and applied at the departmental level. In my opinion, it would provide better information for departmental management purposes and avoid many of the limitations of the AAS system as applied to government. It readily satisfies the SAC3 requirements for quality information. The GFS system applied at the micro level is essentially the Current Cost Accounting (CCA) system based on physical capital maintenance. This system is explained in Barton (1984:Chaps 24, 26) and in AASB (1983). Thus the GFS system could be used as a comprehensive FMIRS for the GGS for both macro and micro-economic management.

While the treatment of most transactions is very similar in the GFS and AAS systems, there are some significant differences with respect to the recognition and measurement of accounting events, asset and liability revaluations, expenditure on defence equipment, the treatment of the Goods and Services Tax, classification of items, concept of surplus, and the GGS as an accounting entity. These differences materially affect the financial statements. The differences are listed in Budget Paper No. 1, 2005-06 (8.10-13) and a reconciliation of the amounts for the two sets of budgets is provided. They are currently under review by HOTARAC and the AASB for the systems harmonisation project.
Australian Accounting Standards — Accrual Accounting and Budgeting System

Australian Accounting Standards (AAS) were originally formulated by the AASB for business entities and subsequently applied, with some minor modifications, to the public sector. The standards developed specifically for the public sector (AAS29 and AAS31, 1996) adopt the same principles as the business standards and make allowances only for some different administrative arrangements in government. They are used throughout all government departments (as required by AAS29). Financial statements are prepared for each department and a consolidated set of financial statements is prepared for whole-of-government (as per AAS31) which includes financial and business enterprises. However, as indicated earlier, no outcome financial statements are prepared for the GGS. They are all subject to audit by the ANAO. AAS are heavily influenced by US and IASB standards because of the need to harmonise accounting standards in a world of global business. Moreover the IASB standards replaced the Australian standards 1 January 2005 under the Corporate Law Economic Reform Package.

The focus of AAS is on the preparation of information on accounting transactions and events to be included in General Purpose Financial Reports (GPFRs) for those stakeholders who have limited access to information about the entity. The objectives of GPFRs are stated as the provision of information useful to users for resource use decision making and evaluation, and for accountability purposes (SAC2, 1990: paras 43-45). The main financial reports produced are a statement of financial performance (formerly the profit and loss statement), a statement of financial position (formerly the balance sheet), and a cash flow statement. They are mainly similar in presentation to their GFS counterparts.

The AASB has adopted the principle that the same accounting standards should apply across all areas of economic activity, that is, be sector neutral (McGregor, 1999: 3). Only minor variations in some procedures are allowed for specific industry characteristics. The public sector is treated as just another industry having some different characteristics to the norm, and the only major variation allowed is for departments to distinguish between ‘administered items’ (for example, transfer payments made according to legislation), and items controlled by departmental management. The Board does not accept that there are fundamental differences between the public and private sectors arising from the collective and/or social welfare roles of government versus the individual pursuit of profit by business firms.

Being designed for business activities, the focus of AAS is on the measurement of profit and financial position and on the reporting of this information in GPFRs to external investors and creditors. A balance sheet approach is used for the analysis of all transactions and events, in contrast to the resource flows and stocks approach used in the GFS system. The definition of assets forms the basis for all other definitions. Assets are defined as ‘… future economic benefits controlled by the entity as a result of past transactions or other
events,’ and control is defined as ‘… the capacity of the entity to benefit from the asset’ (SAC4, 1990:para 14).

However, the standards are subject to some major limitations, even for the business sector. For example, there is no consistent financial measurement \textit{system} in the standards because no basis of asset valuation is prescribed, and there are no concepts of profit (as distinct from a measurement rule) and capital maintenance prescribed. Assets and liabilities may be valued on a range of bases. This affects the measure of profit (through asset consumption charges and inclusion of some types of holding gains/losses directly in profit), and the stated financial position. Profit is defined to be the increase in net assets for the period (other than those arising from changes in direct owners’ investment). Hence some unrealised holding gains (for example, an increase in the replacement cost of public roads and drains) may be treated as profit, even though the government is not ‘better off’ as the ‘gains’ are not realisable and the assets are not revenue generating.

But furthermore, some of the standards lack relevance for the public sector. For example:

- The role of accountability is more fundamental to government reporting than to business reporting (Mulgan, 2000). Democratic governments are accountable to citizens for all their activities. This requires that parliament and the public are kept fully informed of government policies and activities. Parliament can demand full access to specific information (subject to security and commercial in confidence considerations). Hence the distinction between general purpose financial reporting and management reporting in the public sector is not a sharp one. Government budgets and departmental reports are public documents unlike their business counterparts, which are for internal management use only.
- The definition of assets as future economic benefits where those benefits flow to the government as owner does not fit the bulk of non-financial government assets. Rather, they are acquired by governments to provide mainly non-cash services to citizens — health, education, defence, cultural services and so on.
- The definitions of the related concepts of revenue, expense, liabilities and equity, are not specifically appropriate for the public sector as they are based on an inappropriate definition of assets. For example, governments raise most of their revenue from taxation and not from user charges for goods and services provided to citizens, that is, sales transactions.
- Government departments are cost centres, not revenue generating profit centres concerned with the sale of goods and services. Departments are administrative arms of government whose function is to implement government policies in the provision of public goods and social welfare benefits, and they are primarily funded from budget appropriations (that is, taxes) to do so.
- Presentation of the operating statement as a Statement of Financial Performance is misleading. Financial results can be enhanced through raising taxes or curtailing services. This cannot be construed as being similar to
businesses enhancing financial performance by increasing profits through raising sales revenue and by operating more efficiently. The statement as portrayed lacks representational faithfulness and is liable to be misunderstood.

- Presentation of the assets and liabilities of governments as Statements of Financial Position is likewise misleading. Most government non-financial assets are not revenue generating ones as are commercial assets. Moreover, at the departmental level, departments own no assets and have no liabilities; they are whole-of-government ones. Finally, if the negative net equity of whole-of-government were judged by business standards, the Government is bankrupt and should not be allowed to continue operating. However, governments do not need contributed capital as raised by companies to fund their fixed assets -- rather they have sovereign taxation powers and they only need to raise taxation revenue as and when required. Taxation powers are, rightly, not included in government balance sheets. The title of financial position is inappropriate and the statement would be better termed as one of assets and liabilities. It merely lists the assets and liabilities of the government without implying it provides a full measure of the financial position of the government.

These deficiencies of the AAS system for the public sector largely result from the failure to adapt the business accounting standards to the environment of government, the influence of business lobby groups pushing their own self-interest agendas on the standard setters (particularly in the US), and the ideological belief that business standards should be applied to the public sector so that the standards can be sector-neutral.

**Conclusions**

The present system of accounting in the Australian Government is untenable with the presentation of two sets of accrual budget statements and outcome financial statements which show very different results for all components; the absence of CABS which is needed for fiscal policy purposes, appropriation bills and good cash management, and the non recognition of the GGS as a financial reporting entity. In principle, the solutions are obvious ones — the reintroduction of CABS as a subset of AABS for the direct recording and timely reporting of cash transactions; harmonisation of the sound features of AAS and GFS into one combined, robust accrual accounting FMIRS system which is based on the GFS model and is relevant for the public sector; and the recognition of the GGS as a financial reporting entity.

The Government recognises the problem and consideration is currently being given to the reintroduction of CABS using the direct method as a component of AABS. The Heads of Treasury Committee is currently analysing the two AAB systems and making recommendations for changes in each in order to harmonise them wherever possible. Their recommendations are currently being considered.
by the AASB. Notwithstanding the many differences between the two systems, it should be acknowledged that there are also substantial overlaps between them and most of the accounting standards concerning transactions recognition and recording can be readily applied to the public sector; the differences primarily concern their reporting in the financial statements. The major deficiencies in AAS arising from their lack of sufficient conceptual and analytical rigour, consistency in the use of standards and the relevance of the standards to the public sector, can be overcome if there is the will to do so. Similarly there are some deficiencies in the GFS system which need to be remedied, such as the expensing of all expenditures on new military equipment. Making appropriate changes to each system would enable harmonisation of the systems and the use of one comprehensive accrual and cash FMIRS which provides relevant, reliable, comparable and understandable information on government activities for decision making, management control and accountability purposes. The prospective benefits from harmonisation are substantial.

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Fiscal Risk in ASEAN

Tony Makin

A unique characteristic of the ASEAN economies most badly damaged by the Asian financial crisis of 1997-98 (Indonesia, the Philippines, Malaysia and Thailand — the ASEAN-4) was that fiscal policies and public debt levels had been relatively sound leading up to the crisis (see, among others, Makin, 1999 and Eichengreen, 2002). The origins of crises of this kind are usually deep-seated, related and the result of a momentum that has developed over time, although the specific events precipitating each crisis usually differ.

In ASEAN, the underlying causes were excessive international borrowing by domestic banks for unproductive projects, overvalued exchange rates and poor corporate governance. Before the crisis, implicit bank guarantees created widespread moral hazard and pegged exchange rate regimes encouraged foreign currency borrowing on the presumption that central banks were covering exchange rate risk. None of these factors however was directly related to the fiscal sector.

This contrasts with other severe financial crises experienced over the past decade by transition economies in Europe, such as Bulgaria, the Czech Republic, Russia and Ukraine, and by other emerging economies in Latin America, such as Argentina, Brazil, Ecuador and Mexico, where fiscal problems were indeed the root causes of the financial crises (see Hemming, Kell and Schimmelfennig, 2003). Most of these countries had primary (non-interest) fiscal deficits, or declining primary surpluses, and high public debt levels in the years immediately preceding their crises. Specific determinants of fiscal vulnerability were excessive off-budget spending, implicit liabilities, low tax ratios, widespread tax exemptions and expensive bail-outs of state banks.

Within the ASEAN-4 fiscal balances measured as a proportion of GDP worsened markedly after the original Asian crisis of 1997-98. This subsequently converted pre-crisis budget surpluses into deficits that were high by the standards of developed economies. In turn, these deficits created hefty levels of public debt and high budget deficits and debt raise numerous macroeconomic risks for economies at their stage of development.

For instance, excessive government borrowing crowds out domestic investment spending, limiting capital accumulation and economic growth through higher domestic interest rates. An escalating stock of public debt also increases the probability of default, compounding interest rate pressures via a risk premium demanded by international creditors. Governments facing uncontrollable interest servicing costs driven by rising public debt are therefore tempted either to default outright, which subsequently makes further government borrowing on reasonable terms very difficult, or to monetise public debt, thereby generating higher inflation.

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Outright default or large scale monetisation of public debt can spark capital flight, causing financial collapse. Indeed, capital flight may occur the moment investors judge the risk of default or monetisation has become too high. Moreover, domestic and foreign funds may abruptly exit if investors decide that investment and economic growth are being unduly stifled by a fiscally-induced interest risk premium.

Mindful of such risks, this paper examines key features of fiscal activity in the ASEAN-4 economies since the Asian crisis. The next section highlights trends in public expenditure, revenue, deficits and debt escalation before and after the original crisis. Principles of public debt sustainability are subsequently advanced and applied to recent data. Fiscal policy options for containing public debt levels are then canvassed, before concluding that fiscal vulnerability has displaced financial sector weakness as a major source of crisis risk in the region.

**Fiscal Activity in the ASEAN-4**

Public sector size varies within the ASEAN-4 whose combined GDP now exceeds $US 500 million for a population over 370 million. Revenue raising efforts in the region are generally low by advanced economy standards, falling below the OECD average of well over thirty per cent. For Indonesia, the Philippines and Thailand, consolidated central government revenue is under twenty per cent of respective GDP’s with Malaysia’s revenue share being somewhat higher.

The accompanying charts compare average revenue and expenditure shares of ASEAN-4 central governments relative to GDP before the crisis (1992-1996), with shares during and after the crisis (1997-2003). Interestingly, revenue to GDP ratios fell in all economies post-crisis, due in part to falls in customs revenue as international trade was progressively liberalised throughout the region.

On the other side of the public accounts, central government expenditure as a share of GDP significantly increased across the region, although relatively less so in the Philippines, the economy least affected by the Asian crisis. In the Philippines however, the change in the public spending to GDP ratio masks a rise in current expenditure offset by a relative fall in capital expenditure.

The combination of lower central government revenue and higher central government expenditure shares post-crisis manifested in bigger budget deficits for these economies, as illustrated in the next chart. Most notably, since 2000 Malaysia and the Philippines have persistently posted deficits between four to six per cent of GDP.

Public debt to income ratios of these economies have accordingly risen well above pre-crisis levels and well exceed the average public debt to income ratio of advanced economies of around 25 per cent (IMF, 2003). The pre-crisis public debt stocks of ASEAN-4 members reflected historically different economic and financial experiences. For instance, the macroeconomic impact of the 1997-98 currency crisis was relatively small for the Philippines from which it emerged without the severe recessions that occurred elsewhere in the region.
Figure 1: ASEAN-4: Revenue and Expenditure Shares 1992-1996

Pre-Crisis Revenue and Expenditure

Source: Based on data from International Monetary Fund, International Financial Statistics and IMF-Singapore Training Institute.

Figure 2: ASEAN-4 Revenue and Expenditure Shares 1997-2003

Post-Crisis Revenue and Expenditure

Source: Based on data from International Monetary Fund, International Financial Statistics and IMF-Singapore Training Institute.
Yet the Philippines entered that crisis with the legacy of already high public debt stemming from an earlier serious fiscally induced crisis in 1985-86. Indonesia also experienced a potentially serious debt crisis in the mid-1980’s when oil prices slumped. It weathered that period quite effectively but finished it with a high debt level.

Post-Asian crisis public debt levels grew strongly in the ASEAN-4 for numerous reasons. First, the massive currency depreciations during the crisis itself substantially raised the domestic currency value of foreign currency denominated debt. Second, governments deployed fiscal policy as a post-crisis countercyclical measure to boost domestic demand in the context of a global economic slowdown. However, the expansionary response across the region was tempered somewhat by IMF programs and the innate conservatism of ASEAN-4 finance ministers.

Third, accelerated domestic financial liberalisation facilitated issuance of public debt instruments in home markets over this time (IMF, 2003b). Finally, there was very significant ‘socialisation’ of private debt. In particular, when ASEAN-4 financial systems experienced balance sheet distress after their currencies collapsed, there was substantial recapitalisation of commercial banks, the fiscal cost of which was either recorded explicitly in the budget accounts or recorded off-budget through the quasi-fiscal activities of central banks or other government agencies.

In the aftermath of the crisis, sixty six banks were closed and a further thirty five financial institutions were nationalised, mostly in Indonesia (Brixi and Schick, 2002). Across the region, official deposit insurance schemes to protect bank depositors’ funds either did not exist pre-crisis or were inadequate. Hence, during the crisis the public sectors of ASEAN-4 economies subsumed significant...
bank liabilities arising from implicit guarantees to protect depositors and other creditors, as well as foreign exchange debt of some corporations.

As a result, consolidated public debt (inclusive of the debt of all tiers of government and public enterprises) to GDP ratios rose to historically high levels, as shown in Figure 4. This was especially high for Indonesia and the Philippines near 80 per cent of GDP.

**Figure 4: Consolidated Net Public Debt to GDP of ASEAN-4**

![Figure 4: Consolidated Net Public Debt to GDP of ASEAN-4](image)

Source: IMF Singapore Training Institute

Despite reform efforts in the area, deposit insurance schemes in crisis-affected economies have still not been adopted uniformly throughout the region due to concerns about the incidence and size of insurance premiums to be levied and extent of depositor coverage such schemes provide (Demirguc-Kunt and Kane, 2002).

Since the crisis the individual fiscal experiences of ASEAN-4 economies have of course differed. For instance, in the Philippines political log-jams reflecting the influence of powerful vested interests have blocked congressional approval to raise so-called ‘sin taxes.’ These taxes are pegged at nominal amounts without any rise in rates. In Indonesia, by contrast, fiscal deficits have been reduced significantly, although political factors have prevented expenditure reduction, particularly to the huge petroleum subsidy which costs more than the entire development budget. Meanwhile, Malaysia has at times run quite high budget deficits, yet within an economy that posts high, partly compulsory, saving.

**Ascertaining Fiscal Sustainability**

A fiscal stance is ultimately not sustainable if it leads to an ever-increasing ratio of debt to income through time. To ascertain fiscal sustainability, it is necessary to estimate whether this ratio will rise, fall or remain stable in the immediate period ahead. Since the primary budget balance (the conventional fiscal balance less interest payments) determines the rate at which new debt accumulates or old debt
can be retired, it plays the central role in assessing fiscal sustainability. The fiscal authorities can directly control primary budget balances through discretionary fiscal measures affecting public expenditure and revenue items.

A given fiscal stance is unsustainable if public debt to income exceeds a level financial markets will tolerate, although economic theory is unable to specify precisely what this limit is (see Aiyagari and McGrattan, 1998). It also varies from country to country, given levels of economic development and the underlying strength of financial systems.

Nonetheless, in light of rising public debt, fiscal authorities need to decide whether merely stabilizing, or reducing public debt is the critical policy objective. Having decided on a specific public debt to GDP ratio, it is then necessary to estimate what primary balance to national income ratio will ensure the target is met within an agreed time frame.

A useful macroeconomic accounting equation that indicates whether public debt is automatically increasing or decreasing is

$$\Delta d = \left[ \frac{i - g}{1 + g} \right] d_{t-1} - pb.$$  \hspace{1cm} (1)

This standard equation shows that the public debt to income ratio ($d$) falls (rises), the lower (higher) the effective interest rate ($i$), the higher (lower) the rate of economic growth ($g$) and the higher (lower) the primary (or non-interest) surplus ($pb$).

To stabilise public debt to national income, the left side of the above equation must equal zero. Hence, the primary budget balance required for stabilizing the debt ratio is

$$pb = \left[ \frac{i - g}{1 + g} \right] d_{t-1}.$$  \hspace{1cm} (2)

If the effective interest paid on public debt exceeds the growth rate, a primary surplus is required for debt stabilisation, whereas a primary deficit is possible if the growth rate exceeds the effective interest rate. If a primary surplus is necessary, its size rises directly with the magnitude of the initial debt to income ratio. Hence, the higher is the initial debt stock, the more difficult it is to stabilise the debt to income ratio and the higher this ratio, the greater is the fiscal effort required.

This perspective assumes no ‘seigniorage’ which occurs when budget deficits are money financed by the central bank. Seigniorage arises because governments have monopoly power to supply paper money whose printing cost is negligible. Through direct central bank funding of budget deficits, governments can use this power to acquire goods and services. Hence, it becomes an additional source of ‘revenue’. Economic growth permits limited seigniorage without inflationary consequences if real money demand is growing along with real output.

However, the more important is money financing of deficits, the higher the ‘inflation tax’ has to be, as inflation reduces holdings of real money balances (the ‘tax base’). Estimates suggest the maximum rate of seigniorage that is possible before money financing generates unwelcome inflationary pressures is between 1-
Fiscal Risk in ASEAN

2 per cent of GDP (see Fischer and Easterly 1990). Excessive money financing is highly inflationary and, for this reason, is prohibited in many countries.

Rising public debt levels can also potentially affect the household spending behaviour of households. In this context the Ricardian equivalence proposition is noteworthy. This proposition relates to a substitution between tax and bond finance holding public spending fixed. It implies that if households are forward-looking, they could expect that higher future taxes will be necessary to repay public debt on maturity and hence would reduce consumption in anticipation of future tax obligations just as if the tax increase occurred in the present. Hence, substitution between tax and bond finance would have no real effects. Empirical evidence suggests, however, that Ricardian equivalence is of limited relevance to emerging economies (Bernheim, 1987).

How Sustainable is ASEAN-4 Public Debt?

Using recent data on budget imbalances, public debt levels, GDP and effective interest rates, it is possible to assess the sustainability of ASEAN-4 public debt levels. Specifically, the fiscal effort required to stabilise public debt levels in accordance with equation (2) can be gauged for each ASEAN-4 economy by combining recent data on debt to income ratios with effective interest rates on public debt and economic growth rates.

The effective interest rate is simply the ratio of public debt interest paid as a proportion of the total stock of public debt measured in domestic currency. It is sensitive to exchange rate movements as part of the stock of public debt of ASEAN-4 economies is denominated in foreign currency. Currency depreciations raise the effective rate, whereas appreciations lower it. Moreover, unless inflation is perfectly anticipated over the life of the nominal bonds on issue, the measure of the effective interest rate misses capital gains and losses on bonds.

Past public debt, budget deficit and interest data for the central government sectors of ASEAN-4 economies are available from Government Finance Statistics (IMF) and national accounts data from International Financial Statistics (IMF). Combining recent data yields values for central government primary (or non-interest) balances as a proportion of GDP that stabilise public debt levels. The hypothetical primary fiscal balances that stabilise debt may then be compared to actual primary balances. Recall that whenever actual values exceed the necessary stabilising values, public debt ratios must be falling, whereas if actual values are less than stabilizing values, public debt ratios must be rising.

Table 1, based on central government data only, provides estimates for 2004 of the central government primary balances that satisfy the stabilisation requirement specified in equation (2). These estimates can then be compared in the table with estimates of actual primary balances run by ASEAN-4 central governments. What the data show is that for each ASEAN-4 economy, the primary balance required to stabilise debt was smaller than the baseline primary balance.
Hence, the data show that given recent macroeconomic conditions, public debt levels for Indonesia, Malaysia the Philippines and Thailand were not automatically escalating due to unstable debt dynamics.

Table 1: Debt Stabilisation and Primary Budget Balances, 2003-2004

<table>
<thead>
<tr>
<th></th>
<th>Debt/GDP</th>
<th>Effective Interest Rate</th>
<th>Growth Rate</th>
<th>Stabilising Primary Balance</th>
<th>Estimated Primary Balance</th>
</tr>
</thead>
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<tr>
<td>Indonesia</td>
<td>80.5</td>
<td>10.3</td>
<td>10.9</td>
<td>-0.4</td>
<td>3.8</td>
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<td>9.0</td>
<td>-2.0</td>
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<td>7.8</td>
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<td>-0.5</td>
<td>0.9</td>
</tr>
<tr>
<td>Thailand</td>
<td>27.4</td>
<td>4.0</td>
<td>8.9</td>
<td>-1.4</td>
<td>5.4</td>
</tr>
</tbody>
</table>

Source: Based on data sourced from IMF, International Financial Statistics, Government Finance Statistics (various), Bank Negara and IMF Singapore Training Institute

The above empirical analysis may of course be further refined by re-estimating stabilizing values using ranges for the key independent variables. Such sensitivity analysis would be necessary if the latest data was not considered representative of values expected over the medium term, although this is presently not the case.

Furthermore, it should be noted that the estimates of stabilising balances do not account for the debt of relevant provincial and local governments, public enterprises, or the outstanding off-budget debt of central banks that has arisen for the purpose of re-capitalising financial institutions in the wake of the Asian crisis. Hence, the above stabilising primary balances probably underestimate the fiscal effort required, although seigniorage, which has to be estimated separately using econometric techniques, would counterbalance the omission of the non-central government sector.

According to the above analysis, recent primary balances are preventing further escalation of ASEAN-4 public debt to income ratios. These levels of public debt and their associated interest servicing costs are still too high in light of the recommended 25 per cent debt to GDP limit advocated for emerging economies by the IMF (2003). Hence, merely stabilising public debt levels around recent peaks is not enough to lower fiscal risk in the region sufficiently.

In general, emerging economies have a higher risk of default and hence lower sustainable limits for public debt than advanced economies because their economies are more prone to natural disasters and terms of trade shocks, their financial markets are more volatile, credit histories are poorer and financial institutions are weaker. Moreover, in emerging economies without well established bank deposit insurance schemes, large contingent claims on the public sector further threaten sustainability through implicit blanket guarantees on bank deposits.

Half of recent debt defaults of emerging economies occurred at public debt levels below the 60 per cent limit set for European Union (EU) members. Based
on previous fiscal crises in other emerging economies, a much lower debt to income limit for ASEAN economies of possibly half the EU limit may therefore be appropriate. ASEAN-4 economies are all well above such limits at present. The Philippines and Indonesia in particular, with public debt to GDP ratios of 80 per cent or more on a consolidated basis therefore need to exert substantially more fiscal effort to lower their public debt ratios substantially over the medium term.

**Fiscal Policy Options**

In sum, although the above analysis suggests that central government public debt ratios are not automatically growing under current macroeconomic conditions, the problem remains that existing debt levels currently well exceed prudent limits. Given the scale of public indebtedness, ASEAN-4 governments in general therefore need even larger primary surpluses than those recorded over recent years to minimise the risk of a fiscal-induced crisis.

Mounting theoretical and empirical evidence suggests that reduced budget deficits accelerate economic growth when public debt is too high and that reduced budget deficits may actually be expansionary. (See for instance Giavazzi, Japelli and Pagano, 2000). This is contrary to conventional Keynesian tenets about the stimulatory impact of higher government spending on aggregate demand and hence national income.

Lower budget deficits can of course be achieved through public expenditure restraint, improved revenue-raising or both. In theory, if fiscal consolidation occurs through reduced government consumption spending, other things equal, domestic saving would rise, domestic interest rates and any risk premium would fall and asset prices would strengthen. Lower interest rates stimulate private investment and consumption directly, by lowering the cost of financing them, and indirectly through wealth effects arising from higher asset prices.

However, there is likely to be less scope for fiscal adjustment of this kind on the expenditure side of ASEAN-4 budgets than in advanced economies, given a large non-discretionary element for essential services. Moreover, an expansionary effect is unlikely if public expenditure reduction impinges on capital items dedicated to growth-enhancing infrastructure development. Basic economic infrastructure is highly capital intensive and long-lived and includes roads, railways, ports and airports, as well as provision of electric power, gas, telecommunications, sanitation and water.

If based on cost-benefit evaluations, this spending can lift labour productivity and multifactor productivity, encouraging more private investment (see Munnel, 1992). Hence, an economy’s infrastructure and the services it generates can be central to overall economic performance and living standards. In this regard, considerable long term finance for infrastructure is available from international institutions at highly concessional rates for the poorer ASEAN members. In Indonesia’s case however, due to strong nationalist views held within the government development banks have been operating below their lending targets.
A broader definition of infrastructure could also include spending on essential social services such as education and health care which potentially raise the productive value of an economy’s stock of human capital. Hence, in the case of the ASEAN-4, rather than curtailing public spending that assists development and growth, increasing public revenue merits greater attention.

Revenue shares in the region are generally low by international standards and have actually fallen in the Philippines and Thailand post-crisis. The main remedial fiscal focus could therefore be on broadening revenue bases through new tax policies and administrative reforms.

Specifically, this could result in a wider application of value-added taxes and increased income taxes with fewer exemptions, formidable tax administration problems notwithstanding, including those related to corruption and tax avoidance. Of course, raising extra revenue imposes additional direct and indirect economic costs, but such costs are likely to be significantly less than the macroeconomic costs and further fiscal outlays that would accompany another financial crisis and recession.

Adopting explicit fiscal rules defined in terms of one or more fiscal flow or stock variables would also impose greater discipline. For instance, ASEAN fiscal authorities could announce explicit debt to income targets to be met over the medium term, akin to inflation targeting regimes now constraining the central banks of the Philippines and Thailand. Having achieved sustainable debt levels, upper limits could then be set for budget deficits, such as those that have governed fiscal policy in the European Union.

A rule could also decree that current public spending always be covered by revenue and that borrowing only be allowed for capital spending (the so-called ‘golden rule’). Such measures would safeguard policy credibility in the region and counter the tendency of governments to accumulate debt that future generations will have to repay.

**Conclusion**

Operating with financial systems substantially restructured in the wake of the Asian crisis, Thailand, Malaysia, Indonesia and the Philippines in the main display greatly renewed economic vigour. However, public debt levels in these economies considerably exceed pre-Asian crisis levels due to persistently large fiscal deficits and the legacy of bank re-capitalisation measures. The vulnerability to financial crisis stemming from investor reaction to the commercial practices adopted by ASEAN financial institutions may have lessened, but has been supplemented by fiscal risk.

With internationally integrated financial markets, domestic and foreign investors need only anticipate future debt monetisation or default for immediate capital flight to spark a liquidity crisis in the domestic financial systems, necessitating stringent fiscal consolidation. In this way, high public debt has directly contributed to financial crises in emerging economies in central Europe and Latin America over the past decade.
ASEAN-4 public debt levels are still high by the standards of most advanced economies and unexpected rises in world interest rates or sharp currency depreciations in the region would severely test public debt sustainability. It may of course be argued that the crisis within ASEAN (and South Korea) of the late 1990’s itself could have been triggered by foreign investors foreseeing the more recent fiscal deficits rather than the deficits being the response to the crisis. The evidence suggests however that the plunge in demand for ASEAN assets was mainly due to domestic and foreign investors losing confidence in the ability of the corporate sector to service loans and in the capacity of the banking system to finance deposit outflows.

Central and provincial governments in the ASEAN-4 could also further strengthen institutions and processes governing the conduct of fiscal policy by enacting fiscal responsibility laws as permanent institutional strategies for ensuring fiscal discipline and enhancing the predictability, credibility, and transparency of fiscal policy. Such laws, which have proven successful in New Zealand (Fiscal Responsibility Act 1994), Australia (Charter of Budget Honesty Act 1998), the United Kingdom (Code for Fiscal Stability, 1998), and more recently in Brazil, exemplify best fiscal practice internationally.

To sum up, large post crisis fiscal deficits and financial sector restructuring have substantially raised public debt levels in Indonesia, Malaysia, Thailand and the Philippines. Fiscal vulnerability has therefore displaced financial sector weakness as a key source of crisis risk, especially for the Philippines and Indonesia. Achieving significantly higher primary surpluses in these economies would lower the risk of another regional financial crisis rearing up in a different guise.

References


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Taxing Capital Protected Equity Products

Christine Brown and Kevin Davis

Capital Protected Equity Products (CPEPs), described in detail in the following section, have become a popular financial product in Australia in recent years. They package together, for retail investors, a loan for stock market investment and protection against exposure to losses in the capital value of that investment. The investor incurs costs reflecting interest on the loan, ‘facility’ fees, and protection costs (typically aggregated and described as interest costs), and has the benefit of share ownership financed by borrowing and protection against capital loss. One reason for the popularity of such products has been the opportunity they provide to invest in shares paying franked dividends, while claiming interest expenses on the funds borrowed as tax deductions.

Because the costs of the CPEP are not separately identified, CPEPs have provided (despite the efforts of the Australian Tax Office) the opportunity for investors to exploit inconsistencies in the tax treatment of complex financial products arising from differences in the tax treatment of ordinary income (and expenses) and capital gains (and losses). A Federal Court of Australia (2002) ruling in Firth v Commissioner of Taxation meant that all of the costs of a CPEP to the investor could be treated as an expense for tax purposes, despite some part of that cost being, in effect, a capital item.

In April 2003, the Federal Government announced that an interim approach would be put in place for the tax treatment of CPEPs, pending an amendment to the law (Australian Treasurer, 2003). Details of the interim approach were announced in May 2003 (Assistant Australian Treasurer, 2003). At the time of writing (mid 2005) consultations between public sector officials and the finance industry on a replacement approach were underway.

This paper contributes to the public debate on the appropriate tax treatment of such products (see Boadway and Keen, 2003 for a general analysis of alternative taxation treatments of complex financial instruments). It is argued that finance theory (and the basic structure of Australian tax law) implies the following:

• The ‘quoted’ interest, or total, cost of a CPEP should be split into: (a) a ‘pure’ interest component; (b) a ‘facility’ cost for marketing and operating costs and profit of the CPEP provider; and (c) a payment for capital protection.

• The tax treatment of the three components should be as follows: ‘pure’ interest cost should be deductible by an investor as an expense;

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facility costs could be treated as a deductible expense or a capital cost; and payment for capital protection should be treated as a capital transaction and dealt with under the capital gains provisions.

- The allocation of the total cost of a CPEP charged by the provider between the three components involves calculating one component as a residual item. Either the cost of capital protection (component c) can be derived by subtracting estimates of a (the pure interest cost) and b (the facility cost) from the total cost, or component b can be derived by subtracting estimates of a and c from the total cost of the CPEP. Since finance theory enables more accurate estimates to be made of components a and c than can be made of component b, the latter approach is recommended.

- The ‘pure’ interest cost should equal a risk free interest rate (or one reflecting the CPEP provider’s credit rating) if the facility provides 100 per cent capital protection. (As explained later, in this case ‘default risk’ is equivalent to the market risk associated with the protection component and should not be double counted.) As the level of capital protection declines below 100 per cent, the ‘pure’ interest cost should allow for an increasing ‘credit spread’ to reflect default risk faced by the CPEP provider. However, the credit spread should be significantly less than that for unsecured personal lending.

- The ‘capital protection’ component of any CPEP cost can be calculated directly and easily (albeit subject to some margin of estimation error), using generally accepted principles of finance theory. The size of this component cost will depend upon the level and period of protection as well as upon characteristics of the share portfolio involved. It will thus be different for different CPEPs. Since it is inconceivable that any provider of CPEPs would not have estimated the cost of such capital protection, there seems little reason not to use such estimates directly (subject to some verification process) in allocating the total cost of the CPEP between its components. Indeed, it might be argued, on investor protection grounds, that investors in such products should be informed in the product prospectus about the market value of capital protection inherent in the product.

- The interim approach currently used by the ATO to allocate total costs of a CPEP between interest expense and capital protection costs underestimates the protection cost component. The degree of underestimation is substantial and means that CPEPs receive favourable tax treatment.

The paper is structured as follows. The next section provides an overview of the characteristics of CPEPs. The correspondence between the non-recourse loan feature of CPEPs and put options is established in the following section. This enables an analysis of how to calculate the ‘pure’ interest rate appropriate to CPEPs in the third section. We then consider the fundamentals of the tax treatment of CPEPs and the fifth section examines the interim approach adopted by the Australian Government since 2003. The final section considers complications for tax treatment arising from legal and practical considerations and concludes with recommendations for policy.
Capital Protected Equity Products: An Overview

CPEPs are of two broad types. One group of products are exchange traded products such as Instalment Warrants. These involve the investor outlaying funds (a first instalment) perhaps equal to around 50 per cent of the underlying share price to purchase the warrant. The underlying share is purchased and held in trust for the investor by the warrant issuer using the first instalment and loan funds provided by the warrant issuer. By repaying the loan amount (and interest) by making the second instalment, the investor gets clear title to the share. If the share value is less than the second instalment amount, the investor can put the share to the warrant issuer for an amount equal to the second instalment amount, thereby avoiding losses greater than the amount of the first instalment. Over the life of the warrant, the investor receives the dividends paid on the share.

The second group of products, which are the focus of this paper, are schemes offered by banks (or other financiers). They provide an investor with a facility to borrow money, for a specified time such as 3 years, to be invested in a specified share portfolio and incorporate features which protect the investor against a fall in the market value of those shares. Generally, the protection arises because the facilities are marketed as involving a loan with ‘no-recourse’ or ‘limited-recourse’. In such loans the bank has no claim against an individual that defaults on repayment. However, the bank has security in the form of a mortgage on the share portfolio in the event of default by the borrower. Thus, if the value of the share portfolio is below the loan amount outstanding at the maturity of the loan agreement, the borrower can default on the loan and surrender the shares to the bank. If the value of the share portfolio is above the loan amount outstanding, the borrower will repay the loan and have benefited from the higher share value. Typically, such facilities involve ‘interest only’ repayments, such that no capital payments are made prior to maturity, when the loan amount to be repaid equals the amount initially lent. Wetspac’s PEL Plus is an example of such a product (see also ATO, 2005a,b).

Table 1 illustrates the cash flows (exclusive of tax considerations and dividends received on the shares) for an investor using such a product, where the specified interest rate on the loan is \( r \) per cent p.a. The amount borrowed at date 0 (and initial share portfolio value) is \( S_0 \), and the term is three years. In this hypothetical example, there are no other fees or charges, and interest is paid annually in advance. (Interest in advance is typical, and means that the effective annual interest rate is much higher). The table shows the date 3 contingent cash flows which depend upon whether the share portfolio value at that date (\( S_3 \)) is above or below the initial value (\( S_0 \)).

As can be seen from Table 1, the investor makes ‘interest payments’ over the term of the loan, and in return has no exposure to a decline in the share portfolio value below \( S_0 \), but benefits if the share portfolio value increases above \( S_0 \). It is

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also implicit in Table 1 that the bank suffers a loss at date 3 of \((S_0 - S_3)\) if the investor defaults, and that exposure will not be taken on by the bank without some compensation. In this example, that compensation comes from a loan interest rate \((r)\) higher than the ‘usual’ interest rate required to compensate for customer default risk. The interest rate thus incorporates something akin to an insurance premium (for protection against declines in the share portfolio value) as well as a ‘pure’ borrowing cost. In practice, as discussed later, the bank will calculate that implicit insurance premium by reference to the costs it incurs in removing the exposure to loss by transactions in financial markets (such as purchasing a put option over the share portfolio). It should also be noted that the interest rate (and any explicit fees) charged by the bank will need to cover operating costs associated with providing the product, and will involve a profit margin which will depend upon the degree of competition and nature of customer demand in this market.

Table 1: Hypothetical Protected Equity Loan Product: Cash flows

<table>
<thead>
<tr>
<th>Year 0</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loan principal</td>
<td>( + S_0 )</td>
<td>( - rS_0 )</td>
<td>( - rS_0 )</td>
</tr>
<tr>
<td>Interest</td>
<td>( - rS_0 )</td>
<td>( - rS_0 )</td>
<td>( - rS_0 )</td>
</tr>
<tr>
<td>Share Portfolio</td>
<td>( - S_0 )</td>
<td>( 0 )</td>
<td>( S_3 )</td>
</tr>
<tr>
<td>Net cash flow</td>
<td>( - rS_0 )</td>
<td>( - rS_0 )</td>
<td>( - rS_0 )</td>
</tr>
</tbody>
</table>

There are many potential variants on such a structure, including the possibility of some up front fees and charges and some initial contribution to the purchase price of the share portfolio by the investor, such that the loan amount is for less than \(S_0\). (This is the case in an Instalment Warrant). In some cases, such as Westpac’s PEL Plus, capital protection may apply individually to each share in the portfolio, rather than at the aggregate level.

It is also possible that the facility is structured to provide only partial ‘protection’ to the portfolio. For example, a bank may lend the borrower the full purchase price \(S_0\), provide capital protection at a lower level \(S^* < S_0\), and have recourse to the borrower for a repayment amount up to some value \(S_0 - S^*\).

Non-recourse loans and put options

Capital protected equity products, such as described above, involve use of limited or non-recourse loans secured by the share portfolio. While the bank has no claim on the defaulting borrower (unlike the case of a ‘full recourse’ loan), it has a mortgage over, and recoups, the share portfolio in the event of default. Although legal interpretations may (unfortunately) differ, from a finance perspective this type of arrangement is equivalent to one based on the investor having received a put option over the share portfolio from the bank. Such an option gives the investor the right (but not the obligation) to sell (put) the share portfolio to the
bank at some future date for an amount (the exercise price) specified in the option contract regardless of the market value of the portfolio at that future date.

Ignoring, temporarily, the interest payments involved, the example described in Table 1 is equivalent to an investor having received a ‘full recourse’ loan (with interest paid in advance) to purchase the share portfolio, and obtained an option to put that portfolio to the bank at date 3 at an exercise price of $S_0$. If the portfolio value is below $S_0$ at date 3, such an investor will exercise the option, selling the shares to the bank for $S_0$ and use these proceeds to repay the loan. If the portfolio value is above $S_0$, the investor will not exercise the option and will repay the loan for a net gain of $S_3 - S_0$. The cash flows at date 3 (and all prior dates) are thus exactly the same as in the case of the ‘no recourse’ loan.

Interpreting the CPEP as a ‘full recourse’ loan and receipt of a put option implies that the investor makes ‘pure’ interest payments on the loan plus a payment for the put option received, which together correspond to the interest charged in the ‘non-recourse’ loan approach. The relative magnitude of these two implicit components can thus be determined.

Consider first the ‘pure’ interest component. From the bank’s perspective, the loan is secured by the share portfolio, and by the put option held by the investor. (Note that for the loan officer determining an appropriate interest rate, it does not matter whether the put option was granted by the same bank or another institution of equal credit rating). Assuming no risk of the writer of the put option defaulting on the obligation, this implies that the minimum value of the security is $S_0$ (the strike price of the put option). There is thus no credit (default) risk associated with the loan principal (and default risk on interest payments is removed by their payment in advance). The ‘pure’ interest rate charged on the loan should thus be the risk free rate of interest (or reflect the credit rating of the bank granting the put option to the investor if there is some risk that that bank will not honour its obligation).

The remainder of the ‘interest payments’ should equate to the value of the put option granted by the bank. Technically, the present value of the stream of interest payments in excess of the ‘pure’ interest amount, should equal the fair value of the option — which can be calculated using theoretical models of option prices such as the Black-Scholes (1973) formula. In practice, banks can be expected to charge more than the ‘pure’ interest rate plus fair value of the option. How much more will depend upon the competitiveness of the market for CPEPs, and the impediments to investors replicating such facilities by direct transactions in stock and options markets.

In the limited recourse case, where a bank has recourse to the borrower up to some amount $S_0 - S^*$ the bank is exposed to credit risk arising from the possibility of non-payment of this amount. In this case, the interest charged on the facility effectively consists of three components: ‘pure’ interest on a risk free loan of $S^*$; ‘pure’ interest on a risky loan of $(S_0 - S^*)$; and the value of the put option granted.
Deriving the appropriate loan interest rate

The relationship between the appropriate interest rate to charge on the non-recourse loan and the put option value can be derived using an approach similar to Merton (1974). Consider the simple case where the investor promises to repay $F in one year in return for funds received now (date 0) to buy a share portfolio with value $S$ and a put option with exercise price $K$ and value of $P$. Thus $SF = (S+P)(1+r)$ since $F$ incorporates interest on deferred payment for the put option as well as loan interest. Adopting the standard CPEP approach of quoting an interest rate (incorporating all costs) of $r_q$ on a borrowed amount of $S$ such that $F = S(1+r_q)$ it is easy to see that:

$$\frac{(1+r_q)}{(1+r)} = \frac{S + P}{S}$$ (1)

It is thus clear that $r_q$ incorporates the value of the put option. Based on well known option pricing relationships the effect of various parameters on the relationship between $r_q$ and the ‘pure’ interest rate ($r$) can be derived. If $K$ exceeds $F$ such that the borrower will always make repayments, then the pure interest rate in equation 1 should be the risk free interest rate. The quoted rate of interest will be higher relative to the ‘pure’ rate of interest for higher protection levels ($K$), more volatile stocks, and long term facilities.

What are the consequences for the ‘pure’ interest rate when the option exercise price $K$ is less than the promised repayment of $F$, such that there is some default risk associated with the facility? First, it is clear that there is no default risk on $SK$ of the promised repayment, which can be raised by exercising the put option. The default risk associated with the remaining $S(F-K)$ of the promised repayment can only be assessed by considering the joint eventuality that the share portfolio value is below $F$ and that the borrower defaults.

A worst-case scenario (from the bank’s perspective) is to assume that the borrower defaults with certainty when the share portfolio value is between $K$ and $F$. In this case the payoff to the bank on the risky loan amount of $S(F-K)$ is as shown in Figure 1. If the share portfolio value at maturity, $S_T$, is greater than $F$ then the bank recoups the full amount. When $K < S_T < F$ the borrower defaults and the bank recoups $S_T - K$, and for $S_T < K$ the bank recoups 0.

Technically, the payoff shown in Figure 1 is equivalent to that generated by purchase of a call option on the underlying stock with an exercise price of $K$ plus sale of a call option with an exercise price of $F$. The amount advanced to the borrower for the loan with the risky payoff depicted in Figure 1 should just equal the cost of obtaining the identical payoff by transactions in the two call options. Consequently, it is possible to use option pricing theory to calculate the amount the lender would be willing to advance for promised repayment $F-K$ and the corresponding implied interest rate $R$. Table 2 gives solutions for $R$ for a range of protection levels, $x = K/F$, where $x$ is the proportion of the promised repayment $F$ protected by a put option with strike price $K$. It also shows the quoted interest rate on the facility ($r_q$) which is a weighted average of $R$ charged on the unprotected part and the risk free rate ($r$) charged on the protected part. Table 2 assumes a risk
free interest rate level of 5 per cent, share price volatility of 30 per cent, time to maturity of 3 years and a dividend yield on the share of 4.5 per cent p.a.

Figure 1: Payoff on ‘Full Recourse’ Loan Component of $(F – K)$

![Payoff diagram](image)

Table 2 is interpreted in the following way using the entries in the first column as an example. Assume the promised repayment is $100,000. The bank’s fair interest charge on the 30 per cent of the total loan that is unsecured is 26 per cent. The weighted average interest rate for this facility (with 70 per cent of the portfolio value protected) is 11 per cent, assuming that the risk-free rate is the appropriate rate for the promised repayment of $70,000 (protected by the put with strike $K = $70,000).

<table>
<thead>
<tr>
<th>x = $F/K$</th>
<th>0.70</th>
<th>0.75</th>
<th>0.80</th>
<th>0.85</th>
<th>0.90</th>
<th>0.95</th>
<th>0.99</th>
</tr>
</thead>
<tbody>
<tr>
<td>R: interest rate on $(F – K)$</td>
<td>0.26</td>
<td>0.27</td>
<td>0.29</td>
<td>0.30</td>
<td>0.32</td>
<td>0.33</td>
<td>0.35</td>
</tr>
<tr>
<td>$r_q$: Weighted average interest rate</td>
<td>0.11</td>
<td>0.11</td>
<td>0.10</td>
<td>0.09</td>
<td>0.08</td>
<td>0.06</td>
<td>0.05</td>
</tr>
</tbody>
</table>

Assumptions: Risk-free rate $r = 5$ per cent, volatility $\sigma = 30$ per cent, time to maturity $T = 3$ years, dividend yield $d = 4.5$ per cent.

$R$ is calculated using $C(S, K, \sigma, r, T, d) - C(S, F, r, \sigma, T, d) = (F – K)e^{-RT}$ where $C(.)$ represents the price of a call option.

Several comments are in order:

- We calculate the average weighted ‘pure’ interest rate for the full loan assuming that the ‘pure’ interest rate charged on the loan of $SK$ (covered by the put option) is the risk-free rate.
• The ‘pure’ interest rates on the loan $\$(F – K)\$ appear high, but the average weighted ‘pure’ interest rates on the total loan $\$F\$ are considerably lower, because the non-recourse portion is relatively high.

• The interest rates given in the table provide an upper bound because we have assumed that the borrower defaults with probability 1 when $K < S_T < F$. Assuming a more appropriate probability of default significantly reduces these figures. For a probability of default of $0 < p < 1$, the interest rate charged on the full-recourse loan — of $\$(F – K)\$ — should be close to the weighted average of the risk free rate and the figure derived in Table 2 and given by $R^* = pR + (1 – p)r$. Taking the case of a protection level of 70 per cent ($x = 0.7$) from Table 2, and a probability of default of $p = 0.2$, gives $R^* = 0.2(0.26) + 0.8(0.05) = 0.092$. The weighted average interest rate for the full loan of $F$ then becomes $0.7(0.05) + 0.3(0.092) = 0.0626$ (6.26 per cent) rather than the figure of 0.11 shown in the first column of Table 2.

Taxation and Capital Protected Equity Products

The tax treatment of CPEPs in Australia has been complicated by the Federal Court ruling in 2002 (Firth v Commissioner of Taxation) that if no separate identification or valuation of the capital protection is made, the quoted interest is to be regarded as a deductible borrowing expense. Such a view ignores the functional equivalence between a share purchase facility involving a limited recourse loan and one involving a full recourse loan and put option.

This would be of little practical import if CPEPs were for terms of less than one year (such that there was no necessity to distinguish between capital gains and other forms of income for tax purposes) or if gains and losses on option positions held for more than one year were not treated under the capital gains tax provisions of the Tax Act. Neither of these conditions applies. CPEPs are generally for terms longer than one year. Under Australian tax law, the purchase price of an option is treated as a capital expense and the gain or loss on sale, exercise, or expiry of the option is treated as a capital gain or loss.

This tax treatment of options is open to question, since it is possible to interpret the option as equivalent to purchase of insurance against risk of changes in the price of the underlying item. It could thus be argued, for example, that the investor is hedging the risk associated with earning assessable income in the form of dividends on the shares purchased. Adopting this position would lead to amortising (according to some formula) the option premium paid over the life of the option to derive a stream of deductible expenses. If that approach were adopted, the necessity of dividing the quoted interest rate on a CPEP into ‘pure’ interest rate and option premium components would be unnecessary. (See Bradford (1997) for a more fundamental problem with the tax treatment of options arising from different tax treatment of the replicating portfolio.)

That, however, is not the case. Consequently, the Federal Court judgement would lead to a situation where the quoted interest is treated as a deductible expense whereas it is, in principle, a combination of a smaller interest amount
(which should be a deductible expense) and the purchase price of a put option (which is treated under Australian tax law as a capital transaction).

It is possible to demonstrate the anomaly in the tax treatment of CPEPs relative to that of their components arising from the Federal Court judgement using a simple example. Consider the situation where at date 0 an individual has purchased shares for price $S_0$ and a put option (with exercise price $S_0$) for price $P_0$ and expiry at date $T$. This component of the CPEP is often referred to as a ‘protective put’. Table 3 illustrates the capital gains tax consequences (assuming for simplicity that the shares are sold at date $T$).

<table>
<thead>
<tr>
<th></th>
<th>( S_T &lt; S_0 )</th>
<th>( S_T &gt; S_0 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Put option worth</td>
<td>( S_0 - S_T ) and is</td>
<td>Put option expires worthless</td>
</tr>
<tr>
<td></td>
<td>exercised</td>
<td></td>
</tr>
<tr>
<td>Capital gain on shares</td>
<td>( S_T - S_0 &lt; 0 )</td>
<td>( S_T - S_0 &gt; 0 )</td>
</tr>
<tr>
<td>Capital gain on put</td>
<td>( S_0 - S_T - P_0 )</td>
<td>( -P_0 )</td>
</tr>
<tr>
<td>Net Capital Gain</td>
<td>( -P_0 )</td>
<td>( S_T - S_0 - P_0 )</td>
</tr>
</tbody>
</table>

Note: Shares and put option purchase at date 0 for $S_0$ and $P_0$ respectively. Option expiry and share sale (for $S_T$) at date $T$.

As the last row of Table 3 indicates, this is equivalent to the option premium being deducted from capital gains on the shares, which are assumed to be zero if $S_T < S_0$, because of the protection element.

The Federal Court judgement implies allocating the put option cost ($P_0$) as an expense over the period 0 to $T$ rather than it being deducted from capital gains at date $T$ as implied in the last row of Table 3. (The capital gains on the facility would under this approach be 0 if $S_T < S_0$ (because of the protection element) and $S_T - S_0$ if $S_T > S_0$). This treatment is advantageous for the taxpayer because it involves forgoing the tax benefits of a capital loss of $P_0$ at date $T$ but receiving the tax benefits of an expense of $P_0$ over the period 0 to $T$. There is thus a present value effect (from bringing forward tax deductions) as well as the benefit from converting capital losses into expenses which are subject to a different tax treatment. (Only 50 per cent of net capital gains are included in assessable income).

To illustrate the anomaly in the tax treatment arising as a result of the Federal Court judgement, consider a simple one-period example. Let the price of the put option implied in the CPEP be $P$, and the investor’s marginal tax rate be $t$. Also assume for simplicity that the ‘pure’ interest rate is zero. This assumption does not change the nature of the conclusions, but underestimates the benefit arising to the investor because it ignores the present valuing effect. Assume that 50 percent of the capital gain on the asset is taxed at the investor’s marginal rate and that capital losses are immediately off-set against capital gains and 50 percent of the net capital gain taxed.
The Federal Court approach implies that the tax deduction for the protection cost is \( tp \). The Protective Put approach implies that the tax deduction is \( 0.5(tP) \) so that the treatment implied by the Federal Court judgement is advantageous for the taxpayer. Incorporating non-zero ‘pure’ interest charges would not affect the result as they have the same tax consequences under both approaches.

For the parameter values given in Table 2 the up-front cost of a three year put is 17 percent of the loan amount (that is, \( P/S = 0.17 \)) when complete capital protection is provided —such that the strike price on the put \( (K) \) equals the loan amount \( (S) \). The tax savings for the individual are given approximately by \( 0.5(tP) = 0.5(t)(0.17S) \). For a $100,000 loan and an individual on the top marginal tax rate \( (t = 0.47) \), the tax savings are $4026. If the timing differences are also considered (with tax deductions for expenses occurring earlier than for capital losses) the present value of the tax savings is even greater.

**Government Response to Federal Court Judgement**

Prior to the Federal Court judgement, the Australian Tax Office had adopted an approach regarding the tax treatment of CPEPs outlined in Australian Tax Office Media Release Nat 99/26 which stated:

ATO View On Capital Protected Products: The Tax Office will disallow a proportion of tax deductions for interest claimed by taxpayers who use capital protected equity loan products to purchase shares, Tax Commissioner Michael Carmody said today.

Subsequently, particular interest rate values were specified as allowable interest expense, with the remainder of the ‘quoted’ interest rate effectively treated as a put option premium and a capital item. The details are set out in ATO (2001).

Commencing 18 May 2001, the previously agreed benchmark interest rate will no longer govern the amount of interest that a taxpayer will be permitted to claim in respect of capital protected equity products … .

… For products with an agreed separately identifiable put option, the maximum deductible amount would be the lower of the Reserve Bank Bulletin Indicator Lending Rates for personal unsecured loans or 80 per cent of the total amount charged on 3 year products or 85 per cent of the amount charged on 5 year products. In the 3 year products, 80 per cent of the total interest charged would be deductible and 20 per cent would not be deductible, whilst in the 5 year products, 85 per cent of the total interest rate charged would be deductible and 15 per cent would not. The undeductible portion attributable to the put option would form the cost base of an asset for CGT purposes.

On 16 April 2003, the Federal Treasurer announced that the *Income Tax Assessment Act 1997* would be amended to resolve the problems raised by the
Federal Court decision (Australian Treasurer, 2003; ATO, 2003). Some part of the cost of any CPEP would be regarded as an interest expense and some part as payment for the protection component. An interim approach, involving an apportionment as outlined above by the ATO has been in place since that time.

The ATO approximation to the apportionment of interest and capital protection expenses can be used to calculate and compare the implied value of the put option component with option pricing model values for various crucial parameter values. Table 5 shows the combinations of K (protection level) and \( \sigma \) (volatility) which give equality between a modified Black-Scholes model valuation and the ATO approximation for the put value for assumed values of \( r = 5 \) per cent or 8 per cent, a dividend yield of 4.5 per cent (hence the use of the modified Black-Scholes model), and time to maturity of \( T = 3 \) or 5. For example, for a protection level given by \( K/S = 0.85 \) and a risk free interest rate of 5 per cent, a volatility of 16 per cent (14 per cent) is consistent with the ATO approximation for a 3 year (5 year) facility.

<table>
<thead>
<tr>
<th>Panel A: ( r = 5% )</th>
<th>Protection level (K/S)</th>
<th>0.70</th>
<th>0.75</th>
<th>0.80</th>
<th>0.85</th>
<th>0.90</th>
<th>0.95</th>
<th>0.99</th>
<th>1.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volatility (3 year facility)</td>
<td>0.25</td>
<td>0.22</td>
<td>0.19</td>
<td>0.16</td>
<td>0.13</td>
<td>0.10</td>
<td>0.07</td>
<td>0.07</td>
<td></td>
</tr>
<tr>
<td>Volatility (5 year facility)</td>
<td>0.22</td>
<td>0.19</td>
<td>0.16</td>
<td>0.14</td>
<td>0.12</td>
<td>0.09</td>
<td>0.07</td>
<td>0.07</td>
<td></td>
</tr>
<tr>
<td>Panel B: ( r = 8% )</td>
<td>Protection level (K/S)</td>
<td>0.70</td>
<td>0.75</td>
<td>0.80</td>
<td>0.85</td>
<td>0.90</td>
<td>0.95</td>
<td>0.99</td>
<td>1.00</td>
</tr>
<tr>
<td>Volatility (3 year facility)</td>
<td>0.35</td>
<td>0.31</td>
<td>0.28</td>
<td>0.25</td>
<td>0.21</td>
<td>0.19</td>
<td>0.16</td>
<td>0.15</td>
<td></td>
</tr>
<tr>
<td>Volatility (5 year facility)</td>
<td>0.32</td>
<td>0.29</td>
<td>0.26</td>
<td>0.24</td>
<td>0.21</td>
<td>0.19</td>
<td>0.17</td>
<td>0.17</td>
<td></td>
</tr>
</tbody>
</table>

For a low interest rate environment (\( r = 5 \) per cent) and 100 per cent protection of the share portfolio (\( K/S = 1 \)) the volatilities that render the ATO approximation consistent with the Black-Scholes prices are too low at 7 per cent. Most individual share price volatilities for the types of stocks for which CPEPs are available are in the range of 15 to 40 per cent. This result implies that the put component value given by the approximation is too low and correspondingly the interest component too high. This will be advantageous to the taxpayer.

As the market interest rate rises, the volatilities that bring consistency between the ATO approximation and the Black-Scholes formula rise, as the figures in panel B illustrate. For a risk free interest rate (\( r \)) of 12 per cent, the share price volatilities that render the ATO approximation equal to the Black-Scholes model prices are around the much more realistic level of 30 per cent.

To illustrate the magnitude of the tax benefit to the investor from the ATO approach, consider a 5-year $100,000 facility with 100 per cent protection on a portfolio with volatility of \( \sigma = 30 \) per cent, and a dividend yield of 4.5 per cent. If the risk free interest rate (\( r \)) is 5 per cent, the up-front value for the put option is 17.13 per cent of the value of the share portfolio, or $17,130. The tax office
approximation values the put option component of the facility at $3,820. The earlier analysis of the Federal Court decision found that the benefit from treating put option costs (P) as a deductible expense rather than a capital cost is 0.5tP. The ATO approximation thus results in a benefit of lower tax to the (highest marginal rate, t = 0.47) taxpayer of around 0.5(0.47)(17,130–3,280) = $3129. If the timing effect is taken into account, the benefits are even higher.

**Conclusions and Policy Recommendations**

The preceding analysis has identified a number of issues relevant for determining the appropriate tax treatment of CPEPs. Fundamental to this analysis is the decomposition of a CPEP into component parts consisting of a loan, a share portfolio purchase, and a capital protection feature. Costs to the investor can be decomposed into a ‘pure’ interest cost of the borrowing, purchase cost of the protection feature, and a ‘service’ cost which reflects the CPEP provider’s operating costs and profit margin.

A decomposition of the costs charged by the CPEP provider to the investor into those component costs can be done by use of finance theory. Standard techniques are available for calculating the value of the protection feature using techniques such as option pricing theory, and it can be expected that any provider of a CPEP undertakes such a valuation using option pricing modelling as part of their product analysis and pricing. Subject to approval of the assumptions and model used, there would appear to be no reason not to use the provider estimates of the value of the protection facility for tax purposes. A broad range of acceptable assumptions and models could be listed by the ATO for use by CPEP providers in calculating the protection component cost for investor tax purposes thus avoiding a need for specific product rulings in most cases.

Investors need such information for taxation purposes and for informed decision making should be aware of the market value of the protection component. Hence it would seem appropriate that such information should be contained in product disclosure documents. One complication which arises here is that such calculations of option prices are based on an assumption of no transactions costs and ability to replicate the option by transactions in the underlying instrument. While such estimates reflect the cost of providing such an option by a wholesale financier (such that sale at that price gives a net present value of zero), they can significantly underestimate the value of such an option to a retail investor, who cannot replicate the option. While market competition may drive the price explicitly or implicitly charged to retail investors down towards the wholesale ‘fair market value’, it is likely that the price charged to investors makes sale of the option a positive NPV transaction for the provider.

As shown earlier, the appropriate ‘pure’ interest rate to charge for a CPEP is a risk free interest rate (or one equivalent to the cost of debt financing by the provider) if the protection level is set at the initial share portfolio value (100 per cent protection). In such cases, ‘default’ by the borrower on the non-recourse loan is equivalent to exercise of the put option, for which an appropriate charge has
been included in the total costs. The ‘default risk’ is in fact the ‘market risk’ borne by the CPEP provider via the option component for which a charge is implicitly already levied.

A protection level of less than 100 per cent could arise in two ways. The first is where the investor has contributed some own funds towards purchase of the share portfolio and the protection level is set equal to the amount lent by the CPEP provider. (Instalment warrants are an example of this type of arrangement). In this case, the appropriate ‘pure interest rate’ is again the risk free rate, for the same reasons as outlined above. The second possibility is that the loan amount is higher than the protection level set. Here the CPEP provider does face some real default risk, but only on that part of the loan in excess of the protection level. It is possible to estimate the appropriate credit spread on that part of the loan and thus the appropriate ‘pure interest rate’ for the total loan, although it depends upon both the probability of the investor defaulting and characteristics of the share portfolio and protection level. Realistic assumptions indicate that the appropriate ‘pure interest rate’ is significantly less than the rate appropriate for unsecured personal loans.

It is the third component of the total charges to investors for CPEPs which is perhaps the most difficult to isolate and estimate. Total charges must cover operating costs and a profit rate as well as lending costs and protection provision costs. That profit rate needs to be adequate for the risks involved in the business, but is potentially significantly higher if market competition is limited and investors are unaware of the true value of, or unable to replicate, CPEPs, such that they earn above normal profits for the provider. However, once lending costs and protection costs have been estimated as outlined above, this third component can be calculated as the residual component of the total charges levied.

Whether this third component should be viewed as an expense item or a capital item for investors is a moot point, and the decision made in that regard perhaps dictates the appropriate approach for policy. If it is viewed as being a capital item, then it may be appropriate for tax policy to involve calculation of the ‘pure interest’ component and allow the remaining costs to be treated as capital costs. Alternatively, if it is viewed as an expense, then calculating the cost of the protection component and allowing the remaining costs to be treated as an expense item may be appropriate. A further option could be to require calculation of both ‘pure interest’ and ‘protection costs’ and pro rata the residual costs between expense and capital items.

At a more general level, there appears to be a case for a more fundamental reconsideration of the tax treatment of financial instruments offering contingent payoffs (as suggested by Bradford, 1997). The analysis of this paper has taken as given the current tax treatment applied to capital gains, which gives rise to the opportunities for tax arbitrage generally, and through development of products such as CPEPs. The suggestions advanced in this paper are based on making the tax treatment of CPEPs consistent with the tax treatment of the underlying products, and thus not providing even greater rewards to tax arbitrage.
References


The authors gratefully acknowledge the helpful suggestions of the Co-Editor, Graeme Wells and two anonymous referees. A working paper containing technical derivations is available on request from the authors.
Is Australia’s Productivity Surge Over?

Dean Parham

Australia’s productivity growth surged in the 1990s. Growth in both labour productivity (output per hour of labour input) and multifactor productivity (output per combined unit of labour and capital) lifted to record highs between 1993-94 and 1998-99 (Australian Bureau of Statistics, 2004).

However, there have been signs that Australia’s productivity growth has since slowed. The average rate of productivity growth is down markedly — although it still falls into line with the historical average. With declines in recent quarterly productivity estimates, some commentators have declared that Australia’s productivity surge is now confirmed as over.

That productivity growth would come off its record highs could well be expected. But does the evidence now available signal that Australia’s productivity growth has ‘permanently’ dropped to unremarkable rates, somewhere around the long-term historical average or even below?

The issue matters. A substantial and long-lasting drop in productivity growth would mean less growth in a major foundation for improvement in Australian living standards. From a policy point of view, it is now generally accepted that a series of policy reforms played an important role in driving and enabling the lift in productivity performance in the 1990s. A transitory surge would imply that the productivity payoff from policy reforms — whilst significant — has come as a ‘step-up in levels’ effect, rather than as a long-term increase in the rate of growth. Such a view has led some commentators to call for further policy reforms in order to reinvigorate productivity growth.

This article presents a preliminary and partial examination of the topography of the productivity slowdown and the factors that have contributed to it. The objective is to determine whether or not Australia’s experience of generally stronger productivity growth has drawn to a close.

Framework and Focus

Productivity growth in the 2000s has not received as much attention as that of in 1990s. Most analysts and commentators have been reluctant to consider the average rate of productivity growth since 1998-99 as a true ‘underlying’ rate, given an important ABS convention adopted to abstract from volatility in annual productivity. The Bureau calculates underlying productivity growth as the average annual rate between peaks in productivity cycles (points where the level of multifactor productivity (MFP) reaches a local high above a calculated trend series). Although MFP reached a new high above trend in 2003-04, the ABS did

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not declare that year as a peak because the endpoint of the upswing had not been established. And so the productivity cycle has not been viewed as complete.

However, for this article, 1998-99 to 2003-04 will be taken to be a complete cycle. Based on more recent information, it looks probable that 2003-04 will turn out to be a peak. The recent quarterly estimates provide a sufficient indication that productivity in 2004-05 is unlikely to be any higher above trend than the 2003-04 estimate. A qualification, which affects the level if not the existence of the peak, is that the 2003-04 estimate is likely to be revised in the next annual national accounts release.

This article focuses very heavily on the slowdown in underlying rates of productivity growth between the 1990s cycle and this latest cycle. The recent quarterly estimates do not provide a basis for assessment of trends. However, a few brief remarks about them are made in a later section, in view of the attention they have received.

The principal question addressed, whether Australia’s productivity surge is over, is subject to some debate and speculation. Some take the 1990s productivity surge to have been unsustainably high and so expect that a slowdown would inevitably follow at some stage. Others think that the slowdown is more the result of a series of short-term shocks, such as drought, that have held productivity growth back in the 2000s, but only in a temporary fashion.

To help distinguish between short-term fluctuations and structural shifts, the year-to-year movements in productivity over the two cycles are also examined. Some short-term effects have no influence on underlying rates of growth. A drop in productivity growth in a recession is often counterbalanced, in terms of a cycle average, by a productivity spike in the immediate recovery. However, a short-term effect that is not counterbalanced in this way would exert an influence on the cycle average.

The approach is to examine the immediate or proximate factors that have contributed to the productivity slowdown — the contours of change in growth in inputs and outputs and in industry contributions to aggregate productivity growth. For reasons that will become clear, attention is focussed primarily on growth in MFP rather than labour productivity. Changes in the relationship between input growth and output growth are examined as proximate contributors to the MFP slowdown.

The direction of causality needs clarification. MFP growth is usually viewed as affecting output growth and not the other way round. For example, MFP-enhancing innovation expands the production possibilities that can be generated from available resources. In the short term, however, causality can run in the other direction, with variations in output or input growth influencing MFP growth. For example, the proximate cause of an MFP drop during a recession is that output falls, while businesses maintain some excess labour and capital capacity. Alternatively, a build up of inputs that is not matched by output growth can also reduce MFP growth in the short-term. For example, large investments in capital (such as in mining) may slow MFP growth in the short term, even though investors expect improved efficiency or additional output over the long term. As
another example, businesses may choose or be forced to use less efficient, perhaps labour-intensive, methods to satisfy a surge in demand in the short term, if they perceive that surge to be only temporary, or if they had not anticipated its strength and have a shortfall in capital capacity in the short run. The important point is that it is possible and important to distinguish between, on the one hand, fluctuations in MFP growth that are associated with short-term changes in output or input growth and, on the other hand, shifts in MFP growth that reflect a change (usually over the longer term) in the output yield from input use.

A relationship between labour productivity growth and MFP growth is used in the assessment. To see this relationship, first consider a production function in which output (Y) is a function of capital (K), labour (L) and MFP:

\[ Y = f(K,L) \cdot MFP \]

Rearranging, labour productivity becomes a function of the capital-labour ratio and MFP — that is, \( Y/L = f'(K/L,1) \cdot MFP \). This relationship is usually expressed in growth terms as labour productivity growth equals capital deepening plus MFP growth. (See Table 1 for empirical verification.)

Finally, the assessment is based on ABS estimates of aggregate productivity and compatible estimates of industry productivity released by the Productivity Commission. The official ABS estimates cover the ‘market sector’ of the economy (the major part of the economy for which productivity can be more accurately measured) and exclude such areas as health, education, defence and public administration. An index number methodology is used to calculate productivity, with a value-added measure of output, a capital services measure of capital and an hours worked measure of labour. It should be noted, however, that the industry estimates are likely to be less accurate than the market sector estimates because of greater data measurement error. (For more details on productivity measurement, see Australian Bureau of Statistics, 2000).

An Aggregate Perspective on Productivity Trends

Bearing in mind that there could be revisions to the current figures, the estimates reveal a very substantial slowdown in underlying productivity growth. Average annual growth in both labour productivity and MFP has fallen by around one percentage point (ppt). For ease, 1993-94 to 1998-99 will be referred to as ‘cycle 1’ and 1998-99 to 2003-04 as ‘cycle 2’. Growth in labour productivity slowed by 0.9 ppt to 2.3 per cent a year over cycle 2 (Table 1), which is on a par with the historical average from the mid-1960s of 2.4 per cent a year. MFP growth slowed by 1.0 ppt to 1.0 per cent a year in cycle 2, which is a little below the historical average of 1.2 per cent a year.

Attention is now focused on MFP growth, as it is the source of the productivity slowdown. Since the rate of capital deepening was steady on average over the two cycles, the slower average labour productivity growth over cycle 2 is entirely attributable to slower average MFP growth (Table 1). Although not
shown here, the year-to-year differences in labour productivity growth and MFP growth are not that large and occur mostly in cycle 1 and so have little bearing on the slowdown in cycle 2. Discussion will return to labour productivity later in the context of quarterly estimates.

Table 1: Average Annual Growth in Output, Inputs and Productivity Over the Last Two Productivity Cycles

<table>
<thead>
<tr>
<th></th>
<th>Cycle 1&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Cycle 2&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>per cent per year</td>
<td>percentage points</td>
<td></td>
</tr>
<tr>
<td>1. Output growth [= 2 + 3]</td>
<td>4.6</td>
<td>3.2</td>
<td>-1.4</td>
</tr>
<tr>
<td>2. Input growth [= s&lt;sub&gt;l&lt;/sub&gt;2a + s&lt;sub&gt;k&lt;/sub&gt; 2b]&lt;sup&gt;c&lt;/sup&gt;</td>
<td>2.6</td>
<td>2.2</td>
<td>-0.4</td>
</tr>
<tr>
<td>• 2a. Labour growth</td>
<td>1.3</td>
<td>0.9</td>
<td>-0.4</td>
</tr>
<tr>
<td>• 2b. Capital growth [= s&lt;sub&gt;k&lt;/sub&gt; 2b(i) + s&lt;sub&gt;nit&lt;/sub&gt; 2b(ii)]&lt;sup&gt;d&lt;/sup&gt;</td>
<td>4.4</td>
<td>4.0</td>
<td>-0.4</td>
</tr>
<tr>
<td>2b(i). IT growth</td>
<td>23.8</td>
<td>25.7</td>
<td>1.9</td>
</tr>
<tr>
<td>2b(ii). Non-IT growth</td>
<td>2.2</td>
<td>1.9</td>
<td>-0.3</td>
</tr>
<tr>
<td>3. Multifactor productivity growth</td>
<td>2.0</td>
<td>1.0</td>
<td>-1.0</td>
</tr>
<tr>
<td>4. Capital deepening [= s&lt;sub&gt;k&lt;/sub&gt; (2b - 2a)]&lt;sup&gt;c&lt;/sup&gt;</td>
<td>1.3</td>
<td>1.3</td>
<td>0.0</td>
</tr>
<tr>
<td>5. Labour productivity growth [= 3 + 4]</td>
<td>3.2</td>
<td>2.3</td>
<td>-0.9</td>
</tr>
</tbody>
</table>

Notes:  
<sup>a</sup> 1993-94 to 1998-99.  
<sup>b</sup> 1998-99 to 2003-04.  
<sup>c</sup> s<sub>l</sub> = labour’s share in total factor payments. s<sub>k</sub> = capitals’ share in total factor payments.  
<sup>d</sup> s<sub>k</sub> = IT capital’s share in total factor payments. s<sub>nit</sub> = Non-IT capital’s share in total factor payments.

Source: Estimates based on ABS National Accounts.

In terms of cycle averages, the slowdown in MFP growth was associated with weaker output growth. Market sector output grew at a 1.4 ppt slower rate in cycle 2 (Table 1). A deceleration in input growth of 0.4 ppt — evenly spread between labour and capital — was in a direction that would have raised MFP growth, had output growth remained the same. In comparison to long-term averages, cycle 1 could be characterised as showing high growth in output and inputs, while cycle 2 was about average on both.

In terms of year-to-year MFP changes, the main difference between the two cycles came in just two years — 1999-2000 and 2000-01 — when MFP growth fell to unusually low rates of zero and -0.7 per cent respectively. These two years pulled down the cycle 2 average because there was no compensating and unusually-high growth in any other year in the cycle (Figure 1).

A short-term rise in input growth, as well as falls in output growth, contributed to the weak MFP results over these two years. The weak result in
1999-2000 was due to unusually-high input growth of 3.8 per cent (which compares with the historical average of 2.2 per cent a year) in the presence of weaker, but not unusually-low, output growth. (It must be said, though, that there was similar input growth in 1994-95. It was additional growth in labour, after a period of ‘jobless recovery’ from the early-1990s recession.) The negative MFP growth in 2000-01 was associated entirely with a sharp drop in output growth to an unusually-low rate of 0.7 per cent (which compares with the historical average of 3.3 per cent a year).

**Figure 1: Year-to-Year Growth in Output, Inputs and MFP**

The additional growth in inputs in 1999-2000 was principally additional labour (but this time from a bigger base of employment). Hours worked in the market sector grew by 2.7 per cent (historical average 1.0 per cent). There was also an increase in capital accumulation to 5.4 per cent (historical average 4.1 per cent). Part of the increased capital growth came from a jump in information technology capacity.

Finally, to reinforce the finding that two aberrant years had a substantial effect on the cycle 2 average, note that a pattern of output and input growth — and therefore MFP growth — roughly similar to that in cycle 1 had resumed by the end of cycle 2. Input growth resumed a similar growth pattern in 2002-03. Output growth did not resume its former strength until 2003-04 although, as is discussed below, drought wiped nearly 2.0 ppts off market sector growth in 2002-03 through a drop in agricultural output.
An Industry Perspective

Seven industries contributed to the cycle to-cycle decline in market sector MFP growth. They are listed in order of contribution to the change in market sector average MFP growth in Table 2.

Table 2: Industry Contributions to MFP Growth Slowdown

<table>
<thead>
<tr>
<th>Industry</th>
<th>MFP growth</th>
<th>Change in growth (Cycle 2-1)</th>
<th>Output</th>
<th>Input</th>
<th>Labour</th>
<th>Capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cycle 1a</td>
<td>Cycle 2b</td>
<td>Change Contributions to aggregate change</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>per cent per year</td>
<td>percentage points</td>
<td>percentage points</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wholesale trade</td>
<td>6.0</td>
<td>2.7</td>
<td>-3.4</td>
<td>-0.33</td>
<td></td>
<td>-2.6</td>
</tr>
<tr>
<td>Finance &amp; insur.</td>
<td>2.0</td>
<td>0.1</td>
<td>-1.8</td>
<td>-0.24</td>
<td></td>
<td>-1.4</td>
</tr>
<tr>
<td>Communication</td>
<td>4.7</td>
<td>-0.5</td>
<td>-5.2</td>
<td>-0.22</td>
<td></td>
<td>-7.1</td>
</tr>
<tr>
<td>Elect, gas &amp; water</td>
<td>1.5</td>
<td>-2.3</td>
<td>-3.8</td>
<td>-0.16</td>
<td></td>
<td>-0.7</td>
</tr>
<tr>
<td>Mining</td>
<td>0.1</td>
<td>-1.6</td>
<td>-1.7</td>
<td>-0.13</td>
<td></td>
<td>-2.1</td>
</tr>
<tr>
<td>Construction</td>
<td>2.3</td>
<td>1.3</td>
<td>-1.0</td>
<td>-0.11</td>
<td></td>
<td>-0.8</td>
</tr>
<tr>
<td>Agriculture</td>
<td>4.2</td>
<td>3.9</td>
<td>-0.3</td>
<td>-0.04</td>
<td></td>
<td>-2.3</td>
</tr>
<tr>
<td>ACR&lt;sup&gt;d&lt;/sup&gt;</td>
<td>0.9</td>
<td>0.9</td>
<td>0.0</td>
<td>0.0</td>
<td></td>
<td>-1.4</td>
</tr>
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<td>Transport &amp; storage</td>
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<td>2.6</td>
<td>0.3</td>
<td>0.01</td>
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<td>Retail trade</td>
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<td>0.4</td>
<td>0.02</td>
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<tr>
<td>CRS&lt;sup&gt;e&lt;/sup&gt;</td>
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<td>-1.0</td>
<td>-1.0</td>
<td></td>
<td>-1.4</td>
</tr>
</tbody>
</table>

Notes:
- <sup>b</sup> 1998-99 to 2003-04.
- <sup>c</sup> Change in industry MFP growth rates, multiplied by the industry’s share in market sector value added. Subject to rounding, contributions sum to the market sector total.
- <sup>d</sup> Accommodation, cafes and restaurants.
- <sup>e</sup> Cultural and recreation services.
- .. indicates less than ±0.1 percentage point.


On a year-to-year basis, the falls in MFP growth in 1999-2000 and 2000-01 were concentrated in Construction (especially), Finance and insurance, and Communication services (Figure 2B). The contribution of Accommodation, cafes and restaurants (ACR) also dipped negative in these two years, clipping 0.1 ppt off yearly market sector MFP growth.
Figure 2: Industry Contributions to Year-to-Year Growth in Market Sector MFP

Panel A

Panel B


An investigation of the cycle-to-cycle and year-to-year patterns has identified five proximate reasons for the productivity slowdown at the industry level. These are now outlined.
Major effect of input and output ‘shocks’ on productivity in some industries

The Construction industry featured prominently in the input build in 1999-2000 (through additional labour) and was the epicentre of the 2000-01 output shock (Table 3). MFP declined in 1999-2000 and very heavily in 2000-01. The 12.7 per cent decline in 2000-01 was equivalent to wiping 1.1 percentage points off market sector MFP — almost an entire year’s growth at the historical average rate. The strong effect on aggregate MFP growth is illustrated in Figure 2.

The Communication services industry was the centre of the input build in 1999-2000 (through both labour and capital) and was also affected by the output shock in 2000-01 (Table 3). There was a huge spike in growth in information technology capacity in 1999-2000, accounting for a third of the 10 percentage point increase in market sector growth. MFP growth dropped to lows of -5.8 and -6.3 in 1999-2000 and 2000-01.

Finance and insurance also faced an input build and an output decline, but over slightly longer than the ‘shock’ years. Output growth slid from its 1998-99 peak to a trough in 2000-01. Input growth peaked in 1999-2000, but remained strong through to at least 2001-02. MFP growth was very strong in the industry in 1998-99 (5.7 per cent), but started to slide thereafter until it fell into negative territory in 2000-01 (Table 3) and again in 2001-02. The 2000-01 low, in particular, had a strong influence on the lower average in cycle 2.

**Table 3: Output, Input and Productivity Growth in Industries Affected by the Input and Output Growth Shocks**

<table>
<thead>
<tr>
<th></th>
<th>Construction</th>
<th>Communication services</th>
<th>Finance &amp; insurance</th>
<th>Wholesale trade</th>
<th>Accom, cafes &amp; restaurants</th>
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</thead>
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<tr>
<td><strong>Output growth</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1999-00</td>
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<td>4.9</td>
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</tr>
<tr>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1999-00</td>
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<td>10.8</td>
<td>4.7</td>
<td>4.0</td>
<td>7.6</td>
</tr>
<tr>
<td>2000-01</td>
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<td>5.2</td>
<td>-3.0</td>
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<tr>
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<td>4.4</td>
<td>1.4</td>
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</tr>
<tr>
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</tr>
<tr>
<td>1999-00</td>
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<td>-6.0</td>
<td>1.5</td>
<td>0.9</td>
<td>-2.8</td>
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<tr>
<td>2000-01</td>
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<td>-6.5</td>
<td>-3.1</td>
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<tr>
<td>Historical</td>
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<td>4.1</td>
<td>-0.1</td>
<td>1.2</td>
<td>-0.6</td>
</tr>
</tbody>
</table>

Note:  *a* Average annual rate of growth 1974-75 to 2003-04.

Wholesale trade has been subject to a longer-term shift (see below), but was also part of the large input and output variations in the early 2000s. The additional input build was mostly in the use of labour. Even though the industry experienced an output drop in 2000-01, a larger drop in inputs (mostly through labour shedding) prevented a fall in industry MFP growth in that year. Wholesale’s weakest MFP growth was in 1998-99 and 1999-2000 (0.9 per cent in both years).

Even though ACR is a relatively small industry, it featured very prominently in the aggregate input build in 1999-2000 and, to a lesser extent, the aggregate MFP declines in 1999-2000 and 2000-01. After a strong result in 1998-99 (5.1 per cent), MFP growth dropped to negatives in 1999-2000 and 2000-01 (Table 3). The decline appears to have been the result of capacity increases (a step up in capital growth) in the lead-up to 2000 that were subsequently under-utilised as output growth dropped from a peak of 8.6 per cent in 1998-99. There was also additional labour growth in 1999-2000 and 2000-01.

Apparent structural shift to lower productivity growth in two industries

As mentioned, there appears to have been a shift down in productivity growth in Wholesale trade. Productivity growth surged in the mid-1990s as wholesaling underwent a transformation from storage-based operations to transport-based logistics (Johnston et al, 2000). But the average annual rate of MFP growth fell from 6.0 per cent in cycle 1 to 2.7 per cent in cycle 2. Much of that decline can be explained by a drift down from a cycle 1 high of 13.7 per cent in 1994-95, in addition to the cycle 2 low in 1999-2000 (see above). The unusually good year for MFP growth in 1994-95 was based on a combination of unusually-high output growth and a cutback in input use. The subsequent slowdown in MFP growth was associated with a combination of weaker output growth and stronger input growth.

Wholesale MFP growth has, however, recovered from its lows in 1998-99 and 1999-2000. MFP growth ran at around 2.7 per cent for three years from 2000-01 and increased to 4.6 per cent in 2003-04.

The Communication services industry may also be subject to a structural shift. The industry showed the largest absolute drop in average annual MFP growth — from 4.7 per cent in cycle 1 to -0.5 per cent in cycle 2. Whilst it has been subject to quite dramatic short- and medium-term changes, including the input and output shocks in cycle 2 (see above), there has been a shift in output growth. In cycle 1, output growth was very strong and steady at around 10 to 11 per cent each year. Aside from a low in 2000-01, output growth was more in the range of 3 to 6 per cent in cycle 2.

Even with the apparent shift in output growth, productivity growth in Communications has returned to positive and more stable and strong territory. Annual MFP growth was in the range of 2 to 5 per cent in the last three years of cycle 2.
Slower productivity in two industries ‘in transition’

The Electricity, gas and water (EGW) and the Mining industries have been going through phases that are more input intensive (especially in the use of labour) and that have not been met, at least to 2003-04, by additional output growth.

Productivity growth in EGW had been strong since the 1980s. However, in 1998-99, MFP growth turned negative (associated with a marked shift upward in input growth) and has remained there since. Average annual MFP growth dropped from 1.5 to -2.3 per cent in cycles 1 and 2 respectively. Additional labour growth, which has been consistently strong since 2000-01, has been the major development. Although it might be tempting to view this as a correction for an overshoot in earlier reductions in excess manning, the recent growth in labour input has been concentrated on skilled labour, whereas the earlier reductions were on unskilled labour.

MFP growth in Mining turned negative from 2001-02 and was quite strongly so in 2003-04. Output and input growth have taken divergent courses in the 2000s. Output growth has declined progressively from a high in 2000-01, whereas input growth (predominantly labour) has increased progressively since an industry rationalisation and input cutback in 1999-2000.

Effect of output shocks in Agriculture

MFP growth in Agriculture is strong, on average. There was only a small difference in the annual average rates in the two cycles — 4.2 per cent a year in cycle 1 and 3.9 per cent a year in cycle 2. But agricultural productivity can be subject to large year-to-year variations because of climatic factors, and such variations were evident in both cycles. In cycle 2, drought led to a drop in agricultural output in 2002-03 of 24 per cent and this took 1.8 ppts off what would otherwise have been very strong growth in market sector output. Whilst there was also a cutback in inputs in that year, Agriculture took 0.9 ppt off market sector MFP growth. Output bounced back in 2003-04, with good grain harvests, and MFP growth bounced back with it.

Deeper Influences on Productivity Growth

The tour of proximate influences has pointed to three more observations about factors that have contributed to the productivity slowdown. The first is that the influences have been industry-specific or industry-concentrated. The most generalised effects have come from the input and output shocks. Even here, the effects were confined to a sub-set of industries and, in particular, Construction and Communications.

The second observation is about the factors that brought about the short-term shocks. There are three likely ‘drivers’ of the input and output shocks around the turn of the century that have operated either individually or severally in the affected industries: the introduction of the GST, the Sydney Olympics and concern prior to the year 2000 about the Y2K bug. It is likely that they brought some
Is Australia’s Productivity Surge Over?

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combination of: a build-up in capacity that then lay under-utilised; a time-shift in some major expenditures that accentuated a ‘boom and bust’; and some adjustment costs. The epicentre of the output shock was the Construction industry, which is widely considered to have been affected by the introduction of the GST and, to some extent, the Olympics. The construction ‘boom and bust’ could well have sent ripples on to Wholesale trade (which distributes building materials) and Finance and insurance, although there may have also been effects from softer Retail activity. Communications may have been affected by the Sydney Olympics and concern about the Y2K bug, and capacity in ACR was installed to meet the Sydney Olympics and anticipated expansion in tourism. The introduction of the GST could also have fed demand for computer and accounting systems and could have brought adjustment costs.

But the extent to which short-term shocks affect productivity growth also depends on the economy’s resilience. A large part of the greater economic stability since the early 1990s has been attributed to a combination of better macro management and more flexibility in the micro economy which facilitates adjustment to change. It is not that shocks were absent in the 1990s, as the 1997 Asian financial crisis exemplifies. The question then arises as to why the economy was not so resilient to the early 2000s shocks. The specific nature of the shocks would seem to be important. It may be that the authorities did not anticipate the magnitude or concentration of their effects; or, because of their short sharp and specific nature, they could not be offset with traditional instruments without longer-term adverse consequences. (Some specific measures introduced helped to stem the short-term decline in construction activity.)

Would it be reasonable to discount the shocks and their effects from an assessment of the productivity growth ‘trajectory’ in cycle 2? The grounds for discounting the input and output shocks seem strong. The drivers mentioned above are ‘one-off’, atypical factors that are unlikely to be repeated. The grounds for discounting the effects of drought on agriculture are weaker. Climatic influences are not atypical or unlikely to be repeated.

The third observation concerns the interpretation of the transitional productivity performance in Mining and EGW. The slowdown in Mining MFP appears to be part of a pattern of long-term ebb and flow as the industry goes through phases of investment in exploration and development, on the one hand, and tapping known reserves, on the other. These swings are driven more by world commodity markets than by domestic economic conditions. Periods of negative MFP growth arise but, on commercial grounds, they do not persist over the long term. The decline in output growth since 2000-01 has apparently been due to a decline in oil production from maturing fields, which has outweighed the strong growth in production of some minerals in recent times (Australian Bureau of Agricultural and Resource Economics, 2004). The growth in inputs has been predominantly labour and is associated with a shift in activity toward coal and metal ore and toward opening up new operations.

Although EGW appears to also be in some transition, there is not readily-available information to answer the question, ‘To what?’ There are several
possibilities. But the magnitudes of the input and MFP shifts suggest that the
industry is in transition to another way of operating that relies more on skilled
labour. In a more competitive and commercial environment, the industry
presumably expects to get a payoff from through growth in output and income.

A complete analysis of reasons for the productivity growth slowdown would
also cover other ‘traditional’ contributors to productivity growth. Whilst this is
beyond the scope of this paper, a place to start would be to look for evidence of a
reversal in factors that were considered responsible for the 1990s surge. A review
of studies of Australia’s productivity surge (Parham, 2004) reinforced the
importance of investment in physical and human capital to long-term productivity
growth, and pointed to three underlying factors — R and D, openness to trade and
use of information and communications technology (ICT) — as having a specific
influence on the 1990s surge. Moreover, the review suggested that these factors
are not unrelated and appeared to be linked to a number of government-induced
reforms in the policy and institutional environment.

Superficially at least, there do not appear to have been any obvious, major
reversals in these factors that would help explain a productivity slowdown. ABS
estimates do not show any substantial slowing in the rate of accumulation of skills.
R and D activity has continued to increase in the late 1990s and the 2000s. The
economy has continued to be more open to trade and the transfer of knowledge.
There has been continuing growth in the use of ICT, with no obvious evidence that
opportunities for ongoing ICT-based innovation in production, distribution and
sales have dried up.

A slowdown in productivity growth could also be expected if Australia’s
opportunities for international ‘catch-up’ are approaching exhaustion. According
to catch-up theory, a country at a lower level of productivity can realise relatively
rapid productivity growth by absorbing the technologies and knowledge that have
been developed by countries at the productivity forefront. However, whilst
Australia improved its position in the 1990s relative to the commonly-used
benchmark of the US, a remaining gap of the order of 15-20 per cent suggests that
scope for further catch-up remains. Australia performs well in international terms
in some industries such as agriculture and mining, but has substantial gaps in other
industries (Parham, 2002; van Ark and Timmer, 2002; Rahman, 2005).

**Very Recent Evidence**

As noted at the outset, quarterly productivity estimates released for 2004-05 have
indicated a decline in productivity. (Estimates for the June 2004-05 quarter have
not been released at the time of writing.) The probability of future revisions
makes it unwise to focus on specific magnitudes; and, again, a move over such a
short period does not constitute a change in trend.

The estimates show a downturn in labour productivity that is associated with
weak output growth and strong growth in labour input. In fact, the indications are
that growth in hours worked has been well above the historical average.
The decline in productivity may, to some extent, be a cycle pattern. It is not that unusual for input growth to be strong relative to output growth in the first annual observation after a cycle peak. This reflects lags in the adjustment of input use to weaker output growth (or that decision makers perceive the downturn in output growth to be short-term).

The decline could partly reflect weaker capital deepening. The quarterly national accounts cover labour productivity only and estimates of the contributions from capital deepening and MFP will have to await the release of the annual estimates. To the extent that growth in labour input has increased relative to growth in capital — and this seems quite possible — the decline in labour productivity would reflect welfare-enhancing employment growth rather than lower MFP.

It is likely, though, that MFP will be affected by a number of industry-specific factors. The recent quarterly estimates show heavy output falls in Agriculture, which has been hit again by drought. Manufacturing (especially in Textiles clothing and footwear) also had output declines, which could be related to increased international competition, reinforced by pressures from a stronger currency (lifted by higher commodity prices). This could be more than just a fluctuation. Activity appears to have also dropped off somewhat in Construction.

Mining calls for more comment. This industry has demanded more labour in recent years and has featured in recent claims of skill shortages and infrastructure bottlenecks. It appears that the industry is still in transition to a position where it takes advantage of commodity price rises, not only in income terms, but also in quantum (and therefore productivity) terms. The quarterly national accounts show very strong output growth in Services to mining, probably associated with exploration and development, but more modest growth in mining production.

**Conclusion**

This assessment suggests that it is premature to declare Australia’s experience of stronger productivity growth to be over. There are grounds to conclude that productivity growth has slipped off its record highs of the 1990s. But there are also grounds to conclude that productivity growth over the 1998-99 to 2003-04 period would still have been above the long-term historical average, had it not been for some atypical, short-term shocks. The very weak results in 1999-2000 and 2000-01 did not have a compensating ‘spike’ that usually follows a MFP downturn. Estimates for more recent years show tentative signs of a return to stronger productivity growth (and would have been firmer had it not been for drought). Furthermore, there is no obvious evidence of a reversal in factors that were considered to underlie the productivity surge in the 1990s; or of an exhaustion of catch-up and ICT-based innovation opportunities.

On the other hand, very recent quarterly estimates do show a decline in labour productivity growth. But they do not establish a trend, do not necessarily reflect (in entirety) a fall in MFP, may be in part a cyclical phenomenon and may also stem in part from another short-term shock in agriculture. MFP in
manufacturing is also down but, depending on how quickly and vigorously the industry responds, this may endure beyond the short term.

Productivity growth has also been held back in recent times in Mining and EGW. Mining is yet to see its investment of further inputs pay off fully in volume terms. Not enough is currently known about the EGW transition, but the nature of the industry suggests that this may turn out to be more of a ‘one-off’ transition than a long-term or repeated experience.

If it is not clear that the period of stronger productivity growth is over, it is also not clear that policy reforms and other factors that have helped to sharpen the incentives and enhance the capacities for improved productivity growth have run their full course. Even so, it would still be worth introducing any further policy measures that have net benefits and that help to lift productivity performance over the long term.

References


The views expressed in this article do not necessarily reflect the views of the Productivity Commission. The author is grateful for assistance from Tony Kulys and Paula Barnes and for comments from referees.
Engagement with Asia


Reviewed by Nicholas Farrelly

As Australia is repeatedly nudged by regional economic and political events the country’s history of Asia policies and programs has begun to inspire thorough re-examination. Much of today’s Asia scholarship, educational policy, and regional development support is grounded in the priorities, policies and culture defined in the years after World War II. Reflecting on the Australian experience of regional engagement is an important task: this history cannot be ignored. In *Facing Asia*, Daniel Oakman provides an invigorating consideration of the ways in which Australian policies towards the region evolved. Anchored in the history of the Colombo Plan, this is an exhaustively researched and sensibly argued account of a key Australian program in Asia. *Facing Asia* offers an important stimulus for historians and a crucial tutorial for Australian scholars and policy-makers interested in better connecting with the region.

Oakman’s contribution forms part of a reflective and self-perceptive track in recent Australian writing on Asia that puts politics and economics at the heart of studies of the region. Like recent contributions such as Edwards and Goldsworthy (2003) and Dalrymple (2003), *Facing Asia* has an eye for the historical development of policy and for the nuances and practical considerations that underpin it. Oakman begins his discussion of the Colombo Plan, which was established in 1950, by noting that it was Australia’s ‘most ambitious attempt — outside of war — to engage with Asia’ (p. 1). His key contribution is to our understanding of the specific ways in which Australian ‘assistance’ to Asia defined many cultural and political interactions in the region. *Facing Asia* gets into the nitty-gritty of these relationships and tries to ‘illuminate the complex mix of self-interest, condescension and humanitarianism that characterised Australia’s early ventures in Asia’ (p. 4).

In the popular psyche, the Colombo Plan is most directly associated with the mass arrival of foreign students in Australia. These students were a ‘striking and conspicuous manifestation...of Australia’s foreign policy and the most tangible aspect of Australia’s program of international aid’ (p. 178). Between 1951 and 1965, nearly 5,500 students and other trainees studied in Australia. This was ‘16 per cent of the 33,000 places offered by all donor nations contributing to the Colombo Plan’ (p. 179). These students were not always welcomed — some were even tarred as ‘potential spies’ or ‘left-wing activists’ (p. 185) — and their
reviews experiences in Australia were, as one would expect, ‘private and deeply personal, and evade easy generalisation’ (p. 187).

According to Oakman there are ‘few Australians [who] are aware that the Colombo Plan extended far beyond the giving of scholarships’ (p. 2). The training of police and other government officials, agricultural and rural development assistance, and a focus on capital accumulation, all helped define a much broader policy ambition. With its ‘quasi-imperial intent’ (p. 278), the Colombo Plan had ‘breathtakingly ambitious goals’ (p. 69) as a multilateral initiative trying to influence the path of de-colonisation in Asia. The then Australian Minister for External Affairs, Percy Spender, was ‘the man who pushed the idea of an aid program for the region through to reality’ (p. 3). However, ‘humanitarian duty to poor Asians was a relatively minor feature of Spender’s effort to garner support for the Colombo Plan’ (p. 74). He focussed on defining conservative foreign policy objectives that sought to defend Australia in a troubled neighbourhood. For this reason, Oakman argues that ‘to some extent, the Colombo Plan was a façade, a device intended to lure independent Asia into an alliance with the Western bloc’ (p. 67).

As other bilateral and multilateral aid efforts emerged, and as the geo-political situation evolved, the Colombo Plan was gradually superseded. However it retains a small secretariat, a website with descriptions of current activities (www.colombo-plan.org) and the bland motto, ‘for cooperative economic and social development in Asia and the Pacific’. Its program has little of the influence or public recognition associated with the Colombo Plan’s immediate post-World War II establishment. Australia remains a member of the Plan, but Oakman does not dwell on any current activities. Oakman’s contribution is instead a much needed historical discussion of Australian aid and development policy.

In Chapters 1 and 2 he charts the development of ideas about Australia’s place in the region. With copious and well-chosen quotations he describes how Australians have viewed their geography. Beginning with the battlements set against ‘a hostile world’ (p. 5), he goes on to describe how ‘bureaucrats embarked on the onerous task of challenging Australia’s history of regional passivity’ (p. 19). The effectiveness of Oakman’s narrative is a result of the quantity of material that it successfully synthesises. This is no easy task, and demonstrates an uncommon flair for using diverse textual sources and placing them in their specific historical contexts. This effective use of sources continues throughout the book and helps to illuminate the Cold War antagonism that defined international relations during the period. Oakman documents many instances where Australia’s contribution to the Colombo Plan was used for political purposes. For example, External Affairs Minister Richard Casey ‘met with Charles Spry, Director General of ASIO, and asked him to train a small group of English-speaking Thai police in anti-subversive techniques — training that would ostensibly be financed under the Colombo Plan budget’ (p.140-141). This training hints at the underlying agenda for Australia’s contribution to regional development. While implementing such programs to train Thai and other police and intelligence officers, ‘Spry … raised
concerns about the ‘language problem’ and the embarrassing ignominy of providing training to potentially hostile countries’ (p. 141).

Later, in Chapter 7, there is a particularly useful summary of criticisms levelled at the Colombo Plan, starting with Peter Russo’s delightful image of ‘a toothpick to prop up a swaying skyscraper’ (p. 219). Oakman goes on to describe a ‘cavalier attitude towards Australian aid to Asia’ (p. 219), and documents the way that ‘early projects, in particular, suffered from a combination of inadequate supervision, poor coordination, hasty execution and ‘unbusinesslike’ procedures’ (p. 221). Oakman points out that ‘Australian policy-makers placed considerable stock in the Colombo Plan’s ability to generate benefits incommensurate with the limited funds channelled through the program’ (p. 229). This ‘goodwill’ quotient — unquantifiable and impossible to incorporate into any conventional budget — continues to motivate some of Australia’s regional interactions. The desired but ‘elusive store’ (p. 233) of fraternal amity was predicated on an Australian expectation of gratitude and acceptance.

The Australian experience of the Colombo Plan suggests that being ‘a good neighbour’ requires tangible involvement that cannot be tied to an assumption of immediate appreciation or thanks. Since the early days of Australian aid in the 1950s, Australia has amassed considerable experience and expertise in aid delivery and management. However, commitments in the region have failed to dent the ‘pervasive uncertainty about Australia’s regional presence’ (p. 263), which remains strong in many sections of the Australian community. We are now faced with the on-going tensions and ambiguities that come with ‘reconceptualising … regional identity outside the boundaries of a defensive and insular nationalism’ (p. 278).

In terms of economic development, the aid provided by the Colombo Plan had ‘little measurable impact on capital formation’ (p. 244). Oakman’s nuanced descriptions of the relationship between aid and trade hint at on-going inconsistencies and problems. He chronicles the ‘double bind’ created by Australian policy-makers, who gave aid with one hand, yet denied access to Australian markets with the other. According to Oakman, ‘the decision to bolster the Colombo Plan and multilateral aid agencies instead of negotiating trade concessions emerged as the path of least resistance’ (p. 246). Along that path, Australia’s involvement in the Colombo Plan also served as a symbolic ‘bridge between disparate and divergent political and economic systems’ (p. 275). That bridge between Asia and Australia is now a well-trodden part of the regional landscape. Oakman’s description of the linkages that evolved between Australia and the region deserve to be read by all those involved in Australia’s continuing efforts to better understand and engage with its neighbours.

Australia’s involvement in the Colombo Plan — which was framed by the government’s anti-communist ideology — must be understood by new generations of Australia’s Asia scholars and specialists. In the context of continuing tension and uncertainty in Australia’s immediate neighbourhood, greater historical perspective is needed. At a time when wars on terror, poverty, tyranny and drugs tend to ill-define much regional interaction, Australian involvement in Asia
requires a deep understanding of old plans and their successes and failures. In this vein, Oakman warns that while the specific context has now changed, ‘the nexus between international aid and national economic, social and cultural imperatives is as intricate as it was 50 years ago’ (p. 284). His account of that intricacy suggests that there are lessons from Australia’s historical engagements with Asia that could be integrated into current Australian thinking on the region. Some of those lessons concern the practicalities of running aid programs. Others are more relevant to the murky political and ideological frontlines of a region where old ideas about weakness, fraternity and influence probably need to be revisited. Putting fair trade, education and shared ambition at the heart of Asian engagement is one way to start, even if it means a significant re-imagination of Australia’s place in the world. At a time when much of the Asian region (and many Colombo Plan partner countries) have experienced a succession of disturbances — of which the December 2004 tsunami disaster is only the latest — Australia needs to define a sustainable plan for material and cultural support.

Facing Asia offers a further lesson for future Australian scholars and policymakers. It reminds us that geography only makes up one part of the Australian place in the world. Australia’s place is also defined by a history — shaped by war — that was transformed on the ideological battleground of the last century. Through Oakman’s book some of the voices of that history have had their say. Their counsel and experience should be revisited to guide future Australian deliberation and policy.

References


Authors’ Note: Both of these books were recently reviewed in Agenda — see Volume 10, No. 4 and Volume 11, No. 3.

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Financing Public Infrastructure


Reviewed by Christopher Findlay

The South Australian government, according to the local newspaper, The Times, on 17 February this year, has chosen a preferred bidder to construct a new police station and court complex in Port Lincoln. The private sector provider would design, build and maintain the facility, which it would then lease to the government for 25 years. The winning consortium included financiers and debt providers, builders, facilities managers, consulting engineers and architects.

This model of provision is becoming more and more popular in Australia. State governments have established offices that manage these arrangements, with perhaps the best known example being Partnerships Victoria (www.partnerships.vic.gov.au). The Commonwealth more recently has shown greater interest in the model of service provision. In a speech to a Pacific Economic Cooperation Council forum in Sydney last December, The Hon. Dr Sharman Stone MP, Parliamentary Secretary to the Minister for Finance and Administration, explained the Commonwealth’s approach to Public Private Partnerships (PPPs), and identified a number of new proposals for partnerships. (See http://www.finance.gov.au/scripts/Media.asp?Table=PSEC&Id=14).

However, the value of partnership models like that in the Port Lincoln police station has been hotly debated in Australia. Correspondents of the Australian Financial Review have insisted that these PPPs create ‘muddles’ and ‘conflicts’. Vivek Chaudhri and Paul Kerin (2005), writing on the opinion page in the same newspaper in January this year, guess that of the ‘large infrastructure projects under way or proposed in Australia, less than 5 per cent (by value) would be best conducted through PPPs’. Around the world, there are plenty of examples of bad PPPs — the case of the Mexican toll roads being an outstanding example (Ruster, 1997), in which the government ended up bailing out the private sector.

The collaboration in this book by Grimsey (a partner in Pricewaterhouse Coopers) and Lewis (Banking and Finance Professor at the University of South Australia) is timely. Their framework provides answers to many of the questions people are asking about PPPs: when are they value for money? is the public interest served by a PPP? don’t PPPs simply amount to a ‘free kick’ to the private sector to make profits out of traditional government business? The book also highlights the point that getting PPPs right is not easy, and doing so also demands government capacity in managing bidding processes and writing contracts, as well as in economic regulation.
As Grimsey and Lewis explain, PPPs involve the sharing of risks between the private and public sectors to deliver an agreed outcome or service. The private participants can include one or more businesses, as in the Port Lincoln example. The partnerships are designed to achieve more efficient procurement of goods and services than by governments acting alone.

In a traditional approach to procurement, governments would design a project, such as a police station/court house complex, buy all the components separately and supervise construction of the facility, and then manage its operation. From the PPP perspective the question is whether some or all of these activities might be bundled together and provided by the private sector.

Hart (2003), cited by Grimsey and Lewis, along with a number of other papers on this framework question, examines a case in which the government can either contract out to the private sector both the building and operation of an infrastructure facility, or can contract the building and operations separately. The latter Hart refers to as ‘conventional provision’, and the former as having the core features of a public private partnership (PPP). He argues that the choice depends on the relative importance of different types of error. Unbundling provides an incentive to build at lowest possible cost, which includes too little investment in aspects of the facility that might later lower its operating cost. Bundling leads to investments that take these spillovers between structures and subsequent costs of operation into account. Bundling leads to other actions that diminish or ‘shade’ the quality, but also lower the cost of operation, of the services. The choice therefore depends on the relative importance of the spillover effect compared to the quality shading effect.

Hart concludes that unbundling is preferred if the quality of the facility can be well specified, but the quality of the service cannot be: this approach therefore avoids the problem of quality shading that can occur in bundling. A bundled approach is preferred if the service can be well specified, whereas the quality of the facility cannot be (that is, where the spillover effect between facility characteristics and operations is important, and which, in the unbundled approach, the builder would not take into account).

The extreme form of a PPP involves the private sector financing, building, owning and operating an asset and eventually transferring it back to the public sector. As Chaudhri and Kerin explain, the value of this model depends on whether the private sector has a genuine competitive advantage, whether transferring risk to the private party improves performance, and whether bundling pays. They are also concerned about whether efficient bidding and contracting can be arranged, and their concern about these four points leads to their assessment of the limited scope to use the PPP model, at least in that extreme form. A PPP in this form is more likely to be appropriate in an innovative project using a design in which construction and operating risk are connected. Quiggin (2004) also questions the likely frequency of this circumstance, and whether a ‘financier-led’ approach to procurement provides any advantage compared to the government arranging the contracts itself. He describes the adoption of PPP programs by state governments as a ‘triumph of hope over experience’ (p. 60).
Grimsey and Lewis point out, however, that there is a variety of models of partnerships, and that taking a wider view of the options is useful. Full privatisation is at one extreme of the possible models of service provision. The simplest form of private participation is a service contract. In between there is a wide variety of options, including Design Build Operate and Manage, and Build Lease Transfer Maintain.

The choice of model depends on the capacity to negotiate and implement the relevant contract, and also on the gains from redistributing risk. Grimsey and Lewis have a chapter on the categories of risks likely to be observed (design, construction, operations, revenue, financial, force majeure, regulatory and political, environmental) and how they might be allocated. The basic principle is to allocate risk to those who can manage it at least cost. Details of how various risks are treated in different PPP structures and contracts, and examples of the linkages between them that are relevant to the case for bundling of activities, are provided in the book.

To weigh the gains from a redistribution of risk against other factors, Grimsey and Lewis explain how to apply the Public Service Comparator. In this methodology the cost of the services payments (plus that of any risk retained by government) under the PPP model is compared with public provision. A problem in evaluating a PPP proposal is determining the cost of capital. Grimsey and Lewis tackle the view that PPPs can never provide value for money because governments can borrow more cheaply. They point out that there is little risk in government debt, since governments can raise taxes to meet their obligations. But that means taxpayers are bearing a risk, and the cost of that burden should be taken into account in any cost-benefit analysis.

Another common talking point on PPPs is how to make sure the wider public interest is being served. The wider application of the model to prisons, courts and schools intensifies interest in this issue. Government procurement and its procedures would be subject to parliamentary scrutiny. This does not apply to PPPs, and market discipline on their operations is also usually absent. The solution, as Grimsey and Lewis explain, lies in the bidding and contracting process, for which they lay out the components of a public interest test. This is especially important, since those stages have to involve extensive discussion between the government and private sector over the allocation of risks.

Grimsey and Lewis examine the criticism that PPPs involve ‘back door financing’, since the financing of the projects is shifted off the balance sheet of the government. The government continues to assume liabilities linked to the project, and the authors review the debate on how to account for those risks. The UK experience is particularly relevant.

The framework elaborated here applies to all forms of procurement, but a major interest in the book is infrastructure projects — also currently topical in Australia, with claims of lack of capacity in that sector by the business community, and with a government enquiry underway. The framework is relevant, since in large infrastructure projects the government is procuring services in behalf of households. The main challenge is also the appropriate allocation of
risks, and the ways of dealing with the inevitable incompleteness of contracts, including the role of re-negotiations and of complementary regulatory processes that can be used to reduce the complexity of the contracts. (The contracting perspective is presented by Gomez-Ibanez, 2003, and discussed by Findlay, 2005). According to this perspective, lack of capacity could be due to an inefficient allocation of risks in the initial design of contracts, which impedes private participation, or an ineffective process for dealing with incompleteness in those contracts, including through regulatory errors. The interaction between the regulatory process and the design of PPPs is one topic that Grimsey and Lewis might have taken further.

The authors report a number of useful case studies, particularly from the UK, and have compiled a companion volume (Grimsey and Lewis, 2005) of 36 papers on PPPs. (The World Bank publication Private Sector is another good source available online at: http://rru.worldbank.org/PublicPolicyJournal/). The present volume also contains a chapter on governance arrangements in PPPs and another on the operation in PPPs in emerging markets, including some case examples. Currently, a significant gap in this field is the lack of an extensive set of Australian case studies. Filling that gap would be useful.

References


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NON-AGENDA

With the view of causing an increase to take place in the mass of national wealth, or with a view to increase of the means either of subsistence or enjoyment, without some special reason, the general rule is, that nothing ought to be done or attempted by government. The motto, or watchword of government, on these occasions, ought to be — Be quiet...Whatever measures, therefore, cannot be justified as exceptions to that rule, may be considered as non-agenda on the part of government.

—Jeremy Bentham (c.1801)

Banks in the Australian Community

Kim Hawtrey

The term ‘bank bashing’ refers to ‘unjustified and unfair criticism of banks’ (Valentine, Ford and Copp, 2003:89) and has become a regular occurrence in Australia and overseas. Critics such as Hand (2001) in Australia and Coggins (1998) in the United Kingdom have argued that financial deregulation has failed consumers and have called for an end to the deregulated approach to the banking industry on the grounds that banks act like a cartel. This school of thought has enjoyed widespread support outside academia, including from certain arms of government (New South Wales Department of Fair Trading, 1999), some consulting firms (Deloitte Research, 2000) and the media (Sampson, 2000).

Such anti-bank opinion is likely to have real economic effects. There is evidence that sustained media criticism of corporations leads to increased instability in the institutions concerned and their senior management (Farrell and Whidbee, 2002). Criticism of banks has given rise to the ‘community banking’ movement in Australia and other countries such as the United States, with mixed implications for the integrity of the banking system (Yeager, 2004). Calls are currently being made in the political sphere for stronger direct government regulation of banks (Australian Labor Party, 2004). This could possibly involve measures such as imposing fee ceilings, mandating branch quotas or legislating for universal free bank accounts. Such re-regulation of the industry would almost certainly have negative implications for allocative efficiency and global competitiveness of banks (Sturm and Williams, 2004).

The purpose of this paper is to assess certain criticisms made against Australian banks, using a comprehensive set of industry data brought together in a unified manner, in three main areas: affordability, access and social obligations.

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First, the claim that the monetary cost of banking has increased is found to be false when all forms of revenue are taken into account. Second, the charge that banks have reduced points of banking access is evaluated using measures based on Bank for International Settlements (BIS) benchmarks. Third, the claim that banks are failing to return ‘social capital’ to the community is contrasted with their contribution data. The conclusions have significant implications for future community debate and government policy toward the industry.

Affordability of Banking

An important first step in measuring ‘affordability’ is to employ a comprehensive definition. The overall remuneration customers are paying to banks, relative to the volume of services rendered, is the most comprehensive measure of affordability. Such a global measure involves aggregation of customer outlays to compensate the industry for services rendered. There are two main costs to the consumer:

- interest margin — the net cost to the community from paying and receiving interest; and
- non interest margin — the net cost to the community from paying and receiving fees.

These costs need to be considered together, not in isolation as often occurs in public debate. It is also important to use appropriate scaling. For instance, assessments of ‘raw dollar’ payments to banks by the community are meaningless if no attempt is made to relate the payments to the steady increase in the use of banks’ services. Also, it is useful to benchmark the community’s banking overheads against that in other countries.

When both interest and non-interest margins are taken into account, aggregate community remuneration to banks has unambiguously declined. Table 1 shows total remuneration by the rest of the economy to the Australian banking sector in interest plus fees, scaled against the growth of bank balance sheets. Relative to the growth in services received, as measured by balance sheet growth, there has been no net increase in fees paid. At the same time the net interest margin paid to banks by the community has trended down. The growth in fees has been in line with growth in domestic balance sheet assets, and the reduction in interest margins has more than offset the increase in fee income. This is broadly consistent with evidence in the literature from other countries post-deregulation, post-globalisation (Maudos and Fernández, 2004; Saunders and Schumacher, 2000).

The constancy of fees may suggest banks have been over-charging in latter years, because a relatively constant fee to assets ratio could be taken to imply either that no economies of scale are present in the provision of banking services, or that the banks are not passing on such economies to customers. Yet it also needs to be remembered that fees started from an artificially low base at the beginning of the 1990s. Under the old regime of cross-subsidisation and non-transparent account-keeping fees, consumers paid the fee component implicitly in
the form of higher interest margins. In the 1990s, banks switched to transparent recovery of account-keeping costs (allowing them to reduce interest margins) and began to provide explicit statements of fees charged to consumers. Starting from a historically low explicit fees base, sharp increases in the ratio of fees to assets over the decade as banks played ‘catch up’ would not have been surprising. The fact that a sharp increase did not occur suggests that that banks may have limited the impact by passing on significant cost savings to customers.

### Table 1: Major Banks, Net Interest and Fee Income

<table>
<thead>
<tr>
<th>Year</th>
<th>Domestic net income to average domestic assets ratio</th>
<th>Domestic bank fees to average domestic assets ratio</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>2.94</td>
<td>0.99</td>
<td>3.93</td>
</tr>
<tr>
<td>1998</td>
<td>2.52</td>
<td>1.05</td>
<td>3.57</td>
</tr>
<tr>
<td>1999</td>
<td>2.33</td>
<td>1.06</td>
<td>3.39</td>
</tr>
<tr>
<td>2000</td>
<td>2.26</td>
<td>1.02</td>
<td>3.28</td>
</tr>
<tr>
<td>2001</td>
<td>2.08</td>
<td>0.95</td>
<td>3.04</td>
</tr>
<tr>
<td>2002</td>
<td>2.04</td>
<td>0.97</td>
<td>3.01</td>
</tr>
<tr>
<td>2003</td>
<td>1.96</td>
<td>0.99</td>
<td>2.95</td>
</tr>
<tr>
<td>2004</td>
<td>1.96</td>
<td>0.59(^a)</td>
<td>2.55</td>
</tr>
</tbody>
</table>

Note: \(^a\) the sharp fall from 0.99 to 0.59 in the fees to assets ratio in 2004 largely reflects a drop in merchant service fees as a result of the reforms to credit card payments.


A further objection may concern technological change. Extensive technological advance in the delivery of banking services has generated productivity improvements (Rushdi and Tennant, 2003) that might have been expected to produce a commensurate decline in the fee to assets ratio. Once again, the ‘standing start’ factor is important to the story. At the beginning of the 1990s, the use of technology in banks was not extensive, but this changed rapidly with substantial technology investment in the 1990s. That investment was expensive not just for normal business reasons, but also because of the particular historical phase the decade represented. It was the decade of change from traditional paper-based banking to electronic banking. This investment had to be paid for and while part of the explanation is the closure of bank branches (see next section), another part is that to pay for the technology upgrade, banks sought to recoup costs through fees. In other words, while it is true that technology has brought with it productivity gains in service delivery, by the same token it carried a huge up-front cost for the banks. The cost was incurred up-front, swamping to some degree the productivity gains which will be more fully evident in future years.

Have all sections of the community been equally affected, or have some borne more of the fee burden than others? There is evidence that ordinary customers on the whole have experienced faster increases in fees than big
business. Over the period 1996 to 2004 inclusive, the average annual growth rate of bank fees levied on households was 15 per cent (Reserve Bank of Australia, 2005), compared with 11 per cent for business. At the start of the above period, households accounted for 29 per cent of total fee revenue and business for 71 per cent. By 2004, the household share had risen to 38 per cent and the business share had declined to 62 per cent. The fee burden has therefore tilted in a direction unfavourable to households, especially in the product areas of credit cards (29 per cent average annual growth) and personal loans (25 per cent). Clearly, this is an area of the affordability debate where criticism of the banking industry has a good deal of support from the data, and which the industry may need to address.

By the same token, households have been major beneficiaries of the overall improvement in banking affordability since the end of cross-subsidisation and the accompanying fall in retail loan interest margins. The margin today between official rates and home loans is almost 2.5 percentage points narrower than a decade ago (Reserve Bank of Australia, 2005:Tables F1, F5). The reduced margin translates into substantial savings for home buyers, amounting to thousands of dollars on their mortgage each year. This may be illustrated using Australian Bureau of Statistics (2004) figures which show that the average value of owner-occupied housing loans taken out in mid-2004 was $196,952. Thus, the squeeze on margins as a result of competition over the past ten years saves the average home buyer more than $92 a week.

A comparison of the Australian banking sector with its overseas counterparts provides a horizontal perspective on affordability. It shows that, in terms of affordability relative to asset size, banks in Australia rank about the middle of an international peer group. Table 2 summarises the data on net interest margin (NIM) and non-interest margin (NOM) as a ratio to total assets for Australia and fifteen other countries. The database used is Bank Profitability: Financial Statements of Banks, a publication of the Organisation for Economic Cooperation and Development (OECD). The data provide comprehensive annual information on the financial statements of all banks in OECD member countries, where the definition of ‘banks’ includes all institutions conducting ordinary banking business, such as taking deposits from the public at large and making loans for a wide variety of purposes. The framework used for presenting the statistics is that recommended by the OECD’s Task Force on Bank Profitability. Australian banks’ fee income (NOM) is not high by world standards, ranked 7th out of sixteen countries. The highest earners of fee income are Finland (3.1 per cent) and the US (2.6 per cent). The reliance of UK banks on fees (1.4 per cent) is approximately around the same level as that of Australian banks (1.5 per cent).

Perhaps the ultimate test of affordability is to look at the revealed preference of consumers when it comes to the choice of whether to use banks at all. A genuine fee-free alternative to account banking exists for every customer, namely do-it-yourself bookkeeping and currency-only transactions. Despite the existence of this no-fees cash alternative, more than 17 million Australians ‘vote with their feet’ and choose to employ the account services of their bank over the cheaper (at least in simple monetary terms) alternative of making payments in notes and coin
with self-managed record keeping. This revealed preference for account banking by customers gives genuine indication of the economic value the community places on the services banks provide, and its willingness to pay, despite the availability of a less expensive alternative (in terms of monetary cost). A bank account also confers other benefits to personal and business users, including better security, regular interest, access to electronic funds transfer networks, and account statements for accurate record-keeping.

Table 2: Banking Affordability by Country

<table>
<thead>
<tr>
<th>Country</th>
<th>NIM/total assets ratio</th>
<th>NOM/total assets ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>1.4 per cent</td>
<td>1.5 per cent</td>
</tr>
<tr>
<td>Belgium</td>
<td>1.0 per cent</td>
<td>0.9 per cent</td>
</tr>
<tr>
<td>Canada</td>
<td>2.1 per cent</td>
<td>2.2 per cent</td>
</tr>
<tr>
<td>Denmark</td>
<td>1.9 per cent</td>
<td>1.3 per cent</td>
</tr>
<tr>
<td>Finland</td>
<td>1.7 per cent</td>
<td>3.1 per cent</td>
</tr>
<tr>
<td>France</td>
<td>1.0 per cent</td>
<td>1.7 per cent</td>
</tr>
<tr>
<td>Germany</td>
<td>1.3 per cent</td>
<td>0.7 per cent</td>
</tr>
<tr>
<td>Italy</td>
<td>2.6 per cent</td>
<td>1.1 per cent</td>
</tr>
<tr>
<td>Netherlands</td>
<td>1.5 per cent</td>
<td>1.2 per cent</td>
</tr>
<tr>
<td>New Zealand</td>
<td>2.0 per cent</td>
<td>1.2 per cent</td>
</tr>
<tr>
<td>Norway</td>
<td>2.3 per cent</td>
<td>0.8 per cent</td>
</tr>
<tr>
<td>Spain</td>
<td>2.4 per cent</td>
<td>0.9 per cent</td>
</tr>
<tr>
<td>Sweden</td>
<td>1.1 per cent</td>
<td>1.5 per cent</td>
</tr>
<tr>
<td>Switzerland</td>
<td>1.2 per cent</td>
<td>1.7 per cent</td>
</tr>
<tr>
<td>UK</td>
<td>1.8 per cent</td>
<td>1.4 per cent</td>
</tr>
<tr>
<td>US</td>
<td>3.4 per cent</td>
<td>2.6 per cent</td>
</tr>
<tr>
<td>Average</td>
<td>1.8 per cent</td>
<td>1.5 per cent</td>
</tr>
</tbody>
</table>

Note: Net interest income margin (NIM) is the margin earned by banks from traditional ‘intermediation’ activities and is calculated as the difference between interest received (IR) by banks on assets and interest paid (IP) on liabilities, as a ratio to total assets (TA): NIM = (IR − IP)/TA. The non-interest income margin (NOM) is the difference between non-interest income received (OR) and non-interest income paid (OP), expressed as a ratio to total assets: NOM = (OR − OP)/TA. Net non-interest income incorporates fees receivable and payable, commissions receivable and payable, net profit or loss on securities trading, and other miscellaneous non-interest items.

Accessibility of Banking

If ‘accessibility’ is conceived of solely in terms of branch teller service, then it is undeniable that Australian banks have reduced the number of traditional branches and the community has experienced a reduction in branch-style accessibility.

Notwithstanding this, however, several countervailing observations need to be made. First, the data show that the downtrend in branch numbers has stabilised in the past two years (Table 3). After the lengthy period of rationalisation that lasted about ten years, since 2002 the number of branches has begun to increase again, marking a reversal of the trend. Indeed, at least one player (Bendigo Bank) has announced a new strategy that involves intentionally increasing its branch numbers.

Table 3: Points of Public Banking Access

<table>
<thead>
<tr>
<th>Year</th>
<th>Branches</th>
<th>giroPost</th>
<th>ATMs</th>
<th>EFTPOS</th>
<th>Total</th>
<th>Total – excluding EFTPOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>6,921</td>
<td>Na</td>
<td>4,636</td>
<td>15,514</td>
<td>27,071</td>
<td>11,557</td>
</tr>
<tr>
<td>1991</td>
<td>6,917</td>
<td>Na</td>
<td>4,956</td>
<td>22,752</td>
<td>34,625</td>
<td>11,873</td>
</tr>
<tr>
<td>1992</td>
<td>6,920</td>
<td>Na</td>
<td>5,314</td>
<td>26,260</td>
<td>38,494</td>
<td>12,234</td>
</tr>
<tr>
<td>1993</td>
<td>7,064</td>
<td>Na</td>
<td>5,483</td>
<td>30,486</td>
<td>43,033</td>
<td>12,547</td>
</tr>
<tr>
<td>1994</td>
<td>6,747</td>
<td>Na</td>
<td>5,910</td>
<td>51,707</td>
<td>64,364</td>
<td>12,657</td>
</tr>
<tr>
<td>1995</td>
<td>6,655</td>
<td>Na</td>
<td>6,422</td>
<td>88,082</td>
<td>101,159</td>
<td>13,077</td>
</tr>
<tr>
<td>1996</td>
<td>6,508</td>
<td>2,557</td>
<td>7,465</td>
<td>123,984</td>
<td>140,514</td>
<td>16,530</td>
</tr>
<tr>
<td>1997</td>
<td>6,121</td>
<td>2,627</td>
<td>8,670</td>
<td>177,766</td>
<td>195,184</td>
<td>17,418</td>
</tr>
<tr>
<td>1998</td>
<td>5,615</td>
<td>2,720</td>
<td>9,472</td>
<td>230,573</td>
<td>248,380</td>
<td>17,807</td>
</tr>
<tr>
<td>1999</td>
<td>5,358</td>
<td>2,724</td>
<td>10,089</td>
<td>278,238</td>
<td>296,409</td>
<td>18,171</td>
</tr>
<tr>
<td>2000</td>
<td>5,003</td>
<td>2,814</td>
<td>11,819</td>
<td>333,739</td>
<td>353,375</td>
<td>19,636</td>
</tr>
<tr>
<td>2001</td>
<td>4,789</td>
<td>2,821</td>
<td>13,289</td>
<td>375,883</td>
<td>396,782</td>
<td>20,899</td>
</tr>
<tr>
<td>2002</td>
<td>4,843</td>
<td>2,962</td>
<td>16,398</td>
<td>415,167</td>
<td>439,370</td>
<td>24,203</td>
</tr>
<tr>
<td>2003</td>
<td>4,858</td>
<td>2,990</td>
<td>20,339</td>
<td>433,640</td>
<td>461,827</td>
<td>28,187</td>
</tr>
<tr>
<td>2004</td>
<td>3,040</td>
<td>4,888</td>
<td>21,550</td>
<td>465,757</td>
<td>495,243</td>
<td>29,486</td>
</tr>
</tbody>
</table>

Source: RBA, Bulletin, Table C.5. Figures as at June.

Second, any reasonable measure of access to banking today needs to extend beyond branches and include the new forms of service delivery in all their variety. Less than two decades ago, banking services were operated using passbooks and offered only at branches between 10am and 3pm, Monday to Friday — it was a ‘horse-and-buggy’ system known for its Friday afternoon rush for weekend cash. Today, bank accounts are effectively accessible 24-hours a day seven days a week and customers need not even leave home to do their banking. More than 90 per cent of transactions are today conducted outside bank branches. As Table 3 shows, the growth in non-branch points of access has been rapid. A large
proportion of the savings that banks made by closing branches were reinvested in alternative modes of delivery. Customers today have access to over 20,000 automatic teller machines (ATMs), a figure that has quadrupled since 1990, and more than 433,000 electronic funds transfer at point-of-sale terminals (EFTPOS) compared with only 15,000 in 1990.

**Figure 1: Points of Presence: International Comparison**

Note: Figures for 2002; total includes branches, ATMs and EFTPOS.

Source: Bank for International Settlements;

This principle of recognising mixed modes of delivery in a modernising industry is now incorporated by BIS in its international benchmarking of points of access to banking. The BIS statistical measure includes branches, ATMs, EFTPOS, and giroPost. These represent physical supplier-installed points where customers can conduct the majority of everyday banking services such as withdrawing cash or making payments. By the BIS definition, compared with other countries Australia is a world leader in points of access (Figure 1). The international average is 12,700 points of presence per million inhabitants. Australia has 21,800 points.

An important facet of the accessibility debate concerns rural and remote locations. Here, the evidence is surprising: proportionally, banks are under-represented in cities and over-represented in remote and very remote locations. On a per capita basis, the banking industry’s service network exceeds the population base (6.0 per cent of banking points of presence serve just 2.9 per cent of the population in remote areas). The geographic distribution of branch services across rural Australia matches closely where people live, and frequently exceeds the population base in proportional terms (see Table 4).

In 2002 a Parliamentary Inquiry (Chapman, 2002) was conducted into the level of banking services in rural and remote Australia. A study for that Inquiry (Bamford, 2002) compared the geographic spread of banks with other common services: police, schools, hospitals and pharmacies. It found that the physical
presence of banks in remote communities is closely similar to that of schools, and better than pharmacies (see Table 5). As essential services, only schools and police have a greater presence than banks in remote and very remote locations. Further, through a rural postcode survey the Parliamentary Inquiry identified that there are fewer than 15 towns across Australia with no face-to-face banking service, and even in most of these cases there is either giroPost or a bank agency within 20 kilometres (Chapman, 2002).

### Table 4: Geographic Spread of Face-to-Face Services

<table>
<thead>
<tr>
<th>ARIA Category</th>
<th>Branch</th>
<th>Other</th>
<th>Total excl. giroPost</th>
<th>per cent of Total</th>
<th>Population reach (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly Accessible</td>
<td>3,324</td>
<td>1,597</td>
<td>4,921</td>
<td>63.5</td>
<td>65.9</td>
</tr>
<tr>
<td>Accessible</td>
<td>833</td>
<td>667</td>
<td>1,500</td>
<td>19.3</td>
<td>20.6</td>
</tr>
<tr>
<td>Moderately Accessible</td>
<td>455</td>
<td>358</td>
<td>813</td>
<td>10.4</td>
<td>10.6</td>
</tr>
<tr>
<td>Remote</td>
<td>144</td>
<td>109</td>
<td>253</td>
<td>3.3</td>
<td>1.8</td>
</tr>
<tr>
<td>Very Remote</td>
<td>102</td>
<td>108</td>
<td>210</td>
<td>2.7</td>
<td>1.1</td>
</tr>
<tr>
<td>Unclassified</td>
<td>35</td>
<td>35</td>
<td>70</td>
<td>0.9</td>
<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>4,858</td>
<td>2,874</td>
<td>7,732</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: The ARIA remoteness index is used, developed by the National Centre for Social Applications of Geographic Information Systems, for the Department of Health and Ageing (see http://www.health.gov.au/aria/aria.htm).


### Table 5: Points of Presence of Selected Services by ARIA Category

<table>
<thead>
<tr>
<th>ARIA Category</th>
<th>Police</th>
<th>Schools</th>
<th>Banking/Financial</th>
<th>Hospitals</th>
<th>Pharmacies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly Accessible</td>
<td>360</td>
<td>1,574</td>
<td>1,510</td>
<td>135</td>
<td>1,224</td>
</tr>
<tr>
<td>Accessible</td>
<td>410</td>
<td>1,187</td>
<td>817</td>
<td>207</td>
<td>436</td>
</tr>
<tr>
<td>Moderately Accessible</td>
<td>498</td>
<td>971</td>
<td>762</td>
<td>227</td>
<td>270</td>
</tr>
<tr>
<td>Remote</td>
<td>145</td>
<td>258</td>
<td>188</td>
<td>75</td>
<td>50</td>
</tr>
<tr>
<td>Very Remote</td>
<td>133</td>
<td>137</td>
<td>103</td>
<td>60</td>
<td>16</td>
</tr>
</tbody>
</table>


The accessibility of banking in remote areas goes well beyond even the numbers above — customers can also use thousands of private (non-installation) points of access such as personal computers, fixed telephones and mobile phones as their primary banking ‘location’. The percentage of Australian households with access to a computer at home has increased steadily from 44 per cent in 1998 to 61 per cent in 2002. Internet access at home has increased strongly, rising from 16 per cent in 1998 to 46 per cent in 2002 (ABS, 2003).
In summary, Australia does not suffer to the same degree the problems found in other countries relating to a high recorded incidence of ‘financial exclusion’. Recent research by the Financial Services Authority (FSA) in the UK, for instance, estimated that around 1.5 million households (7.0 per cent) in Britain have no basic bank or building society account whatsoever (FSA, 2000). A further 4.4 million (20 per cent) have only very limited access to financial services. The FSA found that the extent of financial exclusion in the UK is high — up to 9 per cent of adults have no bank or building society account of any kind, one third of households have no savings or investment products, 27 per cent of employees have no occupational or private pension, and up to a quarter of households have no home contents insurance. While directly parallel statistics are not available, the available evidence points to a much more inclusive banking sector in Australia.

The Contribution of Banks to ‘Social Capital’

The concept of social capital or community service obligations is gaining clearer definition in the recent literature. Donaldson and Dunfee (1999) argue (in their influential book *Ties that Bind*) that implicit understandings or ‘contracts’ exist that bind industries, companies, and economic systems into communities. Using Integrative Social Contracts Theory they demonstrate how the theory can be applied to particular social questions currently being asked of the financial services industry, such as how should banking institutions interlock with broader community objectives.

A starting point for assessing the social contribution of Australian banks to the community is the extent to which they provide ‘basic account’ banking to the needy. A recognised definition (FSA, 2003) is an account that offers a minimum of six free transactions per month, and carries no account-keeping fees. Using this definition, the scale and scope of provision of basic bank accounts by the industry in Australia is very extensive. At a minimum, the banking industry already automatically offers basic accounts to around six out of every ten Australians. The population of Australia may be subdivided into three groups: children aged up to 18 years; concession card holders (described below); and other adults. These three cohorts provide a useful framework for assessing basic banking in Australia today, and give a good indication of its extensive availability. The two concessionary cohorts — 5.9 million cardholders and 5.4 million children — immediately qualify for and enjoy automatic access to free or low-cost accounts. In many instances, such customers receive basic banking services free of charge. Concession cardholders (29.9 per cent; Department of Education, Science and Training, 2003; Table 19) together with children aged eighteen or under (26.9 per cent; Department of Family and Community Services, 2004) account for 57 per cent of the Australian population of 20 million, or about six out of every ten persons.

The largest group of concession cardholders is older Australians. Banks operate pensioner deeming accounts for such cardholders, with no account-
keeping fee, between six and unlimited free transactions per month, BPAY facility, access to ATMs and EFTPOS, and in virtually all cases, a cheque facility. The Department of Family and Community Services (FACS) publishes and regularly updates an independent survey on its website of financial institutions offering deeming accounts. According to FACS, an account is a ‘deeming account’ if the bank pays interest rates generally based on the current social security deeming rates. In its bulletin of 2 July 2004, FACS confirms the widespread availability of these accounts, which ‘are offered by the four major banks, other banks, and a large number of credit unions and building societies’.

The extent of basic banking extends well beyond concession cardholders and children, however. Within the 43 per cent labelled ‘Other Adults’ are many additional customers who also can access free or low-cost bank accounts. Within the general customer category, banks offer tailored basic products for approved customers from a diverse range of groups such as, small business, Christmas Clubs, farmers, mortgagors, not-for-profit organisations and others. Data obtained from market survey firm Cannex shows there are currently almost 100 products that fit the ‘basic account’ description, including many that can be utilised by customers who belong to the Other Adults segment. A key finding from the survey is that all retail banks operating in Australia offer at least one account that has no account keeping fee and at least six free transactions per month.

Some have called for a single industry-wide mandated generic bank account that low-income earners could access. While all mainstream retail Australian banks offer a form of ‘basic bank account’, it is not currently possible to institute a uniform industry-wide product. The reason is the existence of a legal impediment that prevents banks from agreeing together over product design. The Trade Practices Act 1974 disallows competitors agreeing on the pricing of products, which includes setting a price at zero and features of basic bank accounts without authorisation from the competition regulator. Indeed, a proposal for an agreement between ten banks in 2002 to provide an industry basic bank account was denied authorisation by the Australian Competition and Consumer Commission on the grounds it would not ‘expand consumer choice’.

Provision of basic bank accounts is considered the most important aspect of banks’ contribution to ‘social capital’, however it is not the only factor. A further part is their extensive philanthropy. Based on information in annual reports, banks donate over $90 million a year to charitable and community causes, involving gifts to worthy causes, projects and sponsorships to support particular local organisations (examples currently include junior cricket, Opera Australia, community cinema, heritage buildings, zoos, theatres, orchestras, and country arts festivals) and environmental projects to improve conservation and sustainability, such as the Banksia Awards, WIREs and the Holsworth Wildlife Research Fund. A number of banks are signatories to the UN Environment Program for banks. In-kind support relates to time donated by bank staff on worthy local projects such as wrapping Christmas presents for welfare agencies, marshalling and assisting with registration at a variety of events, or manning telephones and counting cash at
fund appeals. Banks also contribute in kind by making available their branch facilities for collecting donations without charge.

An often overlooked aspect of contributing to ‘social capital’ is the maintenance of a reliable and well-managed banking system. This is vital to the safekeeping of the savings of ordinary depositors. Because of the nature of banking, there is a constant trade-off between risk and return — between safety and profitability. In this regard, Australian depositors, entrusting their money to banks, can have good reason for confidence. Australian banks maintain higher-than-average levels of safe assets, compared with banks elsewhere in the world. International evidence shows that Australian banks currently have the highest capitalisation in the OECD, a factor that is not cost-free to shareholders who must forego potentially higher returns on loans in order to allow the banks hold high reserves. Based on a survey of thirty countries, some of which are shown in Figure 2 Australia leads in holdings of Capital Plus Reserves, expressed as a ratio to total balance sheet assets, with 11.5 per cent. The comparable figure for the USA is 9.1 per cent, and for the UK is 5.1 per cent. Alongside this, International ratings of Australian banks’ governance are impressive. Governance Metrics International (www.gmiratings.com), a US-based independent ratings agency, rates 1600 companies from fifteen countries using such criteria as board accountability, disclosure and corporate behaviour. Australia’s major banks are rated ‘Above-Average’ relative to the global cohort.

**Figure 2: Bank Capital and Reserves (ratio to balance sheet)**

![Bank Capital and Reserves Chart](chart)

Conclusion

This paper has evaluated three common criticisms of Australian banks in the light of evidence from industry data. First, the paper evaluated the claim that the cost of banking to the average consumer has increased such that bank revenues are at record levels, and found the reverse to be true. When all forms of revenue are taken into account, banking in Australia has never been more affordable to the community as whole than it is today. Improved affordability has been marked for household customers and Australian bank fees and profits are not high by world standards.

Second, the paper assessed the claim that banks have unduly reduced their branch network and found that as measured by Bank for International Settlements criteria, accessibility to Australian bank services in non-traditional formats has expanded significantly and is the highest in the world. The decline in branch numbers has been reversed and representation in remote regions is proportionally greater than in the cities.

Third, the paper assessed the assertion that, as an ‘essential service’, banks are failing in social obligations to the community. It has been argued that, on reasonable criteria, the Australian industry substantially meets its social obligations and returns significant ‘social capital’ to the community. Banks’ services are supplied free of charge or at low cost to over 60 per cent of customers. Around 100 basic bank accounts are offered by the industry, including to groups as diverse as farmers and home buyers. Each year, community organisations receive over $90 million dollars of direct support in various forms, from banks and Australian banks’ level of safe assets is high by world standards.

These conclusions have significant implications for future government policy, especially for evaluating current interventionist proposals such as imposing fee ceilings, mandating branch quotas or legislating for universal free bank accounts. To the extent such policy proposals are based on the three criticisms evaluated in this paper, they are misguided or at the very least require fresh justification. The evidence suggests that direct government sanctions on banks are not required to achieve improved economic outcomes for consumers or to induce satisfactory corporate citizenship on the part of banks.

References


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