Australian Government
Australian Taxation Office

COMMISSIONER OF TAXATION

COPY

The Chairman
Joint Committee of Public Accounts and Audit
Parliament House
CANBERRA ACT 2600

Dear Chairman

ATO Response to Recommendation 5 of Joint Committee of Public Accounts and Audit Report 398, Review of Auditor General's Reports 2002-2003, Fourth Quarter, March 2004

Recommendation 5 appears at paragraph 4.53 at page 45 of the report. It reads:

"The Australian Taxation Office report to the Joint Committee of Public Accounts and Audit within 6 months, on a mechanism to estimate the tax gap, that would serve as the basis for reporting the overall efficacy of the range of measures being adopted to prevent and control Goods and Services Tax fraud."

The Tax Office has conducted research into estimates of the tax gap by overseas revenue agencies, conducted its own sample-based approach to measurement of non compliance, investigated the use of Treasury's Price Revenue Incidence Simulation Model (PRISMOD) as a means of assisting tax gap measurement activities, and investigated the application of the Australian Bureau of Statistics (ABS) approach to measurement of the underground economy in Australia.

It is the Tax Office view that there is an approach, which concentrates on a range of indicators that will provide the most appropriate means of providing an understanding of the efficacy of compliance measures undertaken by the Tax Office. This is an approach that attempts to monitor significant changes in the magnitude of the tax gap rather than its absolute size.

In forming this view, the Tax Office considered the implications of various measurement approaches, including their:

- accuracy and reliability,
- timeliness of results (and consequent compliance benefits in being able to address issues at an early point in time), and
- cost.

For example, while a rigorous and large scale random audit program might be one way of gaining reasonably accurate and reliable information, such programs take time to set up, to complete the audits required, and to analyse the results. This type of program is extremely costly to undertake. Not only would it consume large amounts of Tax Office resources that could otherwise be targeted at substantive compliance risks, it would place a significant additional burden on compliant taxpayers who otherwise would not need to incur audit-related costs.

In terms of appropriate indicators, the Tax Office believes that a key indicator is one which compares observed GST revenue outcomes with an indicator (from ABS derived data) on household consumption and private sector investment in dwellings that are subject to GST. This indicator reflects a theoretically justifiable relationship and a practical relationship that appears to be relatively stable over time. It is also used as a primary basis for forecasting GST revenue.

In addition to this primary indicator, the Tax Office has developed some supplementary, more disaggregated indicators and will continue to seek to develop additional indicators relevant to Tax Office efficacy.

In line with all tax gap measures and indicators, however, care needs to be taken in interpreting the implications of observed trend divergences. It would not be appropriate to immediately conclude that changes in trend are associated with GST fraud. Rather they should be regarded in the first instance as a basis for further investigation into the causes of the observed differences. The Tax Office is well placed to undertake such investigation, as resources have been honed to ensure rapid and targeted responses to identified high risk areas.

The Tax Office has concluded that accurate and defensible measures of the absolute size of the tax gap are impossible to achieve in a practical sense. This view is shared by Treasury and is consistent with conclusions drawn by the Australian Bureau of Statistics in its discussion paper on the underground economy. The ABS concludes that the official estimates of GDP are highly unlikely to be understated by any more than about 2 per cent. Further, the Tax Office believes that such absolute measures, even if they could be achieved, are unlikely to provide pertinent information for understanding the overall efficacy of the range of measures undertaken by the Tax Office.

More detail on the issues and proposals discussed above is provided in Attachment A.

Yours sincerely

M Carmody

Michael Carmody

ATTACHMENT A

Summary

Recommendation 5 of Joint Committee of Public Accounts and Audit Report 398, Review of Auditor General's Reports 2002-2003, Fourth Quarter, March 2004 is as follows:

"The Australian Taxation Office report to the Joint Committee of Public Accounts and Audit within 6 months, on a mechanism to estimate the tax gap, that would serve as the basis for reporting the overall efficacy of the range of measures being adopted to prevent and control Goods and Services Tax fraud."

The Tax Office believes that the most useful and timely information for reporting on Tax Office efficacy in relation to GST fraud would be achieved by the development of a set of indicators, and where possible, appropriate benchmarks for these indicators. This could include both quantitative and qualitative indicators.

The Tax Office has conducted research into various means of estimating the tax gap including:

- undertaking aggregate trend analyses that might provide indicators of changes in the level of the tax gap over time.
- investigating macro and micro approaches to estimating the absolute size of the tax gap, as attempted by overseas revenue agencies,
- conducting its own sample-based approach to measurement of non compliance,
- examining the application of the Australian Bureau of Statistics (ABS) approach to measurement of the underground economy in Australia, and
- investigating Treasury's Price Revenue Incidence Simulation Model (PRISMOD), as a means of assisting tax gap measurement activities.

The Tax Office has concluded that accurate and defensible measures of the absolute size of the tax gap are impossible to achieve in a practical sense. This view is shared by Treasury and is consistent with conclusions drawn by the Australian Bureau of Statistics in its discussion paper on the underground economy. Further, the Tax Office believes that such absolute measures, even if they could be achieved, are unlikely to provide pertinent information for understanding the overall efficacy of the range of measures undertaken by the Tax Office to ensure GST taxpayer compliance.

The following sections of this attachment outline the broad findings and conclusions of the Tax Office's consideration of GST tax gap measurement issues and details some proposed indicators that could be used to demonstrate the Tax Office's efficacy in relation to GST fraud.

Proposed indicators of Tax Office efficacy

Given overseas experiences, the Tax Office has deliberately adopted a risk management approach to optimise collections and levels of compliance, rather than engage in estimation of the absolute level of the GST tax gap.

Under the current approach, the Tax Office seeks to identify areas of key risk, focus efforts on mitigating risk in those areas, understand the reasons for non-compliance to ensure maintenance of compliant behaviour, and to minimise the costs of compliance.

An important part of that approach is to monitor revenue collections and seek to identify patterns of collection which are inconsistent with economic fundamentals. If we observe a change in the relationship between collections and the relevant economic indicators over time, this may indicate a change in taxpayer behaviour.

A range of indicators is used, from broad economy-wide data to industry indicators, including qualitative information relating to legal and structural influences. There is scope to develop further the current model to incorporate additional indicators.

Some examples of indicators include:

- A comparison of GST revenue growth to ABS household expenditure data,
- GST revenue comparisons based on size of enterprise, and
- A comparison of growth in GST by industry to a relevant economic benchmark.

Note that comparisons are based on quarterly growth rates only. An analysis of trend data may also be useful, but an insufficient number of observations is available at this stage to produce a reliable trend series. ABS advice is that a reliable trend series based on quarterly data requires around five years of data.

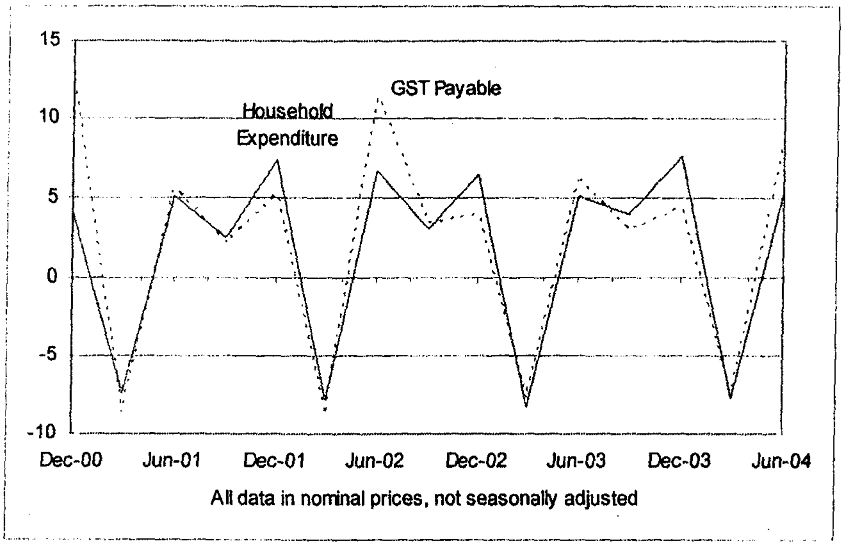
As will be seen over the periods reported, there continues to be a tight relationship between the growth rates, indicating at a macro level the continuing strength in the underlying compliance levels.

Further information on these indicators is provided below.

GST growth in relation to ABS household expenditure data

In the case of GST collections, we typically compare quarterly growth in GST payable to an indicator which combines household consumption that is subject to GST and private sector investment in dwellings, both sourced from the ABS. We have found that the relationship has been fairly constant over time, with the exception of the period immediately after the introduction of the GST when timing influences distorted the picture. Refer to Graph 1 below.

Graph 1
Changes in GST payable and household expenditures
Percentage change on preceding quarter



The maintenance of this quite strong relationship over time is indicative of the continuing strength in underlying compliance levels. Variations in expected outcomes based on this indicator compared to actual outcomes are constantly monitored by the Tax Office. Significant divergences would be investigated with a view to determining whether fraud or other forms of non-compliane are contributing factors. Information on the state of the economy is supplemented with business intelligence in relation to legal, structural or other factors which could influence revenue outcomes. Variations here could legitimately be due to changes in the structure of demand in the economy. Although such changes would be expected to be gradual and more likely to affect the longer term trend.

GST growth by size of enterprise

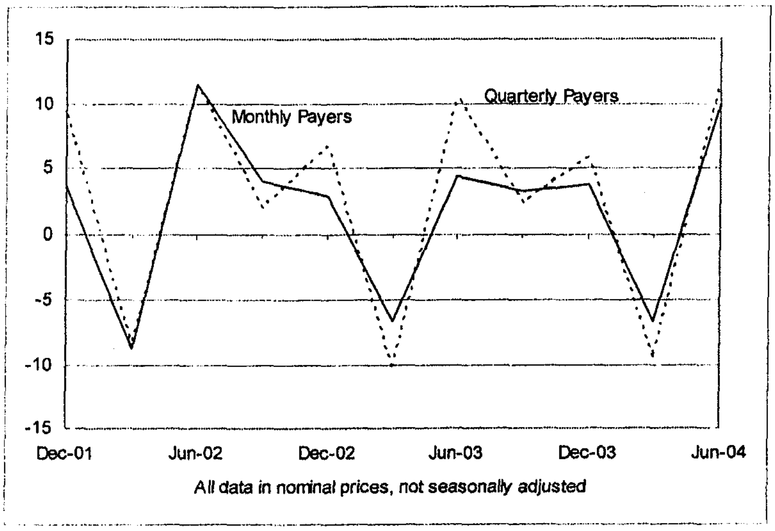
The ABS made the point in their 'underground economy' paper, mentioned above, that large enterprises and the Government and Community sectors are not segments of the market where one would expect under-reporting of income to be occurring.

It is reasonable to assume that GST fraud is more likely to occur in small businesses than large. If there had been a decline in the contribution of the small players to total GST collections over time, we could regard this as an indicator of potential revenue loss from fraud in this segment.

Another indicator therefore is to measure growth in the relative reporting of tax liabilities of the small business market compared to growth for large business and Government and Community sectors. This can be represented by comparing the GST reported liability of monthly and quarterly taxpayers. To date we have found that the relative contributions made by small (quarterly) and large (monthly) GST remitters have been fairly constant over time. Refer to the Graph 2 below. However, future analysis of this indicator would need to take account of the impact of business cycles which may impact differently on different sized businesses as would trends in the formation of small businesses, such as contracting out.

Note that the GST revenue data used in this indicator relates to processed business activity statements. As the period beyond a due date progresses, GST revenue data may be revised as additional business activity statements are processed.

Graph 2
Changes in GST payable by monthly and quarterly payers
Percentage change on preceding quarter



GST trends by industry

Analysis of GST collections by industry can further facilitate detection of GST evasion or fraud to the extent that growth outcomes are out of step with economic fundamentals. The ATO takes a targeted approach, focusing on those industries which are more susceptible to fraud.

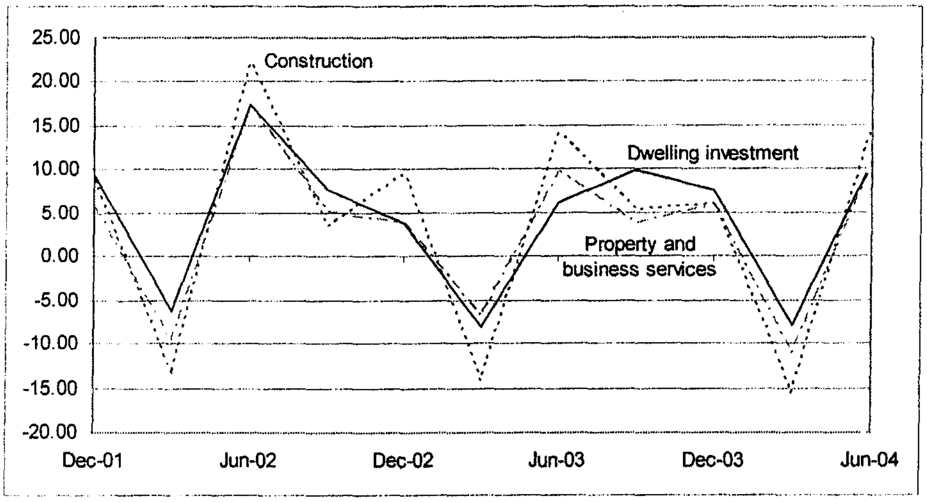
Building and construction[1] is one industry for which we have a relatively reliable economic benchmark. Using growth in private sector dwelling investment as the benchmark[2], we have found that over the past two years, growth in building and construction, and property and business services, has behaved broadly as we would expect. Refer to Graph 3 below.

Note that the industry data in the graph relates to finalised statements. These will represent a smaller proportion of the total population over the past year or so than the statements relating to earlier periods. We would therefore anticipate that for more recent periods, the growth in GST revenue for growth in building and construction (and property and business services) industries will move closer to the ABS derived growth in dwelling investment as more statements are processed. Some quarter to

[1] Note that there are issues of accuracy associated with the industry data, which are based on registration information and may not reflect current activity.
[2] This is not a perfect benchmark as building and construction activity includes commercial property. It is probably the most accurate one available.

quarter differences in the growth in these series would also be expected due to differences in the timing of revenue recognition for tax purposes and the recognition of business activity by the ABS.

Graph 3
Changes in dwelling investment and GST payable by the construction and property and business services industries
Percentage change on preceding quarter



Indicators of Tax Office Efficacy in relation to GST Fraud

The following outlines the revenue achievements of the Tax Office GST compliance program. The Tax Office has been developing its capability over the last 4 years since the introduction of the GST. So whilst the results have been improving, this should not be viewed as a deterioration in compliance levels. Nor is it a measure of the tax gap as the Tax Office uses a targeted approach aimed at treating the areas of greatest compliance risk. The Tax Office experience in this work and the build up of a history of taxpayer behaviour data is enabling better targeting of cases.

Indicators of Tax Office efficacy in relation to GST fraud measures are included in the level and composition of Tax Office active compliance outcomes. Over the four full years of operation the GST Business line within the Tax Office has raised the following additional liabilities and protected revenue through its overall GST Compliance Program:

Financial Year	Net GST Revenue	Actual Revenue Growth	Actual Compliance Adjustments (tax only)	Actual Compliance Adjustments Growth	Compliance Adjustments as proportion of Net GST Revenue
00/01	$23.8bn		$189m		0.8%
01/02	$27.4bn	15%	$363m	92%	1.3%
02/03	$31.3bn	14%	$888.3m	144.7%	2.8%
03/04	$34.1bn	8.9%	$1,139m	28.2%	3.3%

This table indicates significant improvement in results from Tax Office active compliance work through growing experience with the new tax system and improved capability. Note also that in the early years, 2000/01 particularly, the ATO continued to have a strong focus on advice and education. While achieving these results the overall coverage rate has tended to be static at around 10 per cent of the overall GST registered population in each year .

These results reflect strong outcomes for verification of refunds and field work such as audits, BAS reviews and specific GST issue checks.

The Tax Office follows best practice in its compliance program by encouraging voluntary compliance, continuous monitoring of the operating context including identifying and assessing risk, understanding underlying taxpayer behaviour, addressing non compliant behaviour through appropriate treatment strategies and evaluating the outcomes of interventions.

The Tax Office has conducted limited analysis of the impacts of its compliance program on compliance behaviour of taxpayers in cash economy industries. The evaluations indicate that where the ATO has audited an entity the impact appears to be two-fold. Firstly, there is the direct impact of the adjustments in the periods reviewed. Secondly, there is an observed indirect improvement in the mean net GST reported by taxpayers in periods subsequent to the review.

It is important to note that none of the indicators mentioned, alone, is determinative in terms of demonstrating Tax Office efficacy in relation to GST fraud. Trend divergences can be used as a signal that research and investigation is required to determine the reasons for the divergences.

As indicated earlier, this is in line with current Tax Office risk management approaches which seek to identify the key areas of non-compliance and fraud risk. That is, the ATO focuses its efforts on mitigating risks by understanding the reasons for non-compliance and endeavouring to change non compliant behaviour and to address problems arising through the cost of compliance.

The ATO will continue to monitor these trends and focus efforts on understanding and undertaking necessary compliance actions.

Various revenue authority experiences in macro and micro measurement of the absolute tax gap.

There have been some attempts made in overseas revenue jurisdictions to measure the tax gap, notably in the UK and US.

The United Kingdom – a macro approach to VAT tax gap measurement

The United Kingdom published its approaches to "Measuring indirect tax losses" in November 2002. The approaches employed include a top down estimate of the tax that should theoretically be collected versus actual collections, and attempt to generate absolute measures of the tax gap at a point in time.

This approach would be useful to translate to the Australian context if it could be conducted with a high level of confidence in the accuracy and reliability of the results. However, in the UK experience, it appears the outcomes are of limited usefulness in that variations in the absolute measure of the gap over time might reflect problems in its measurement process more than changes in the tax gap *per se*. That is the calculation method may introduce errors in calculation that could be wrongly interpreted as a change in the tax gap.

The UK also acknowledges that its top down approach has limitations owing to their national accounts data containing a margin of error, not being up to date and being subject to revision. The same issues would be true for Australia.

Critically, such top down analyses do not help in identifying and managing each particular type of revenue loss problem. That is, they do not provide any practical guidance as to which elements of the tax landscape should be targeted in addressing the revenue loss problem, a point that the UK acknowledges.

The UK also uses a broad trend analysis, and believes that this is a better representation of the true underlying trend in fraud. In particular, the UK has acknowledged the value of identifying the trends for VAT receipts versus measures of the amount of spending occurring.

The United States of America – a micro approach to income tax gap measurement

The US undertook a large scale tax gap measurement program for income tax through conducting a large scale full audit program in the 1980s and 1990s – under its Taxpayer Compliance Measurement Program. This involved the IRS conducting a rolling program of random audits of income tax returns, where tens of thousands of taxpayers were subject to line-by-line audits wherein they were asked to prove each item in their tax returns.

The audits were not targeted at high risk areas, rather they were designed (appropriately for the program's objectives) to collect information about the range of income tax items that taxpayers were claiming.

The program was highly criticised for being invasive, burdensome and costly and was ultimately suspended.

In 2002, however, an audit program was reinstated, albeit on a smaller scale than the TCMP. The program's objective is to measure reporting compliance and identify compliance issues through audits which target high risk areas.

While a TCMP style program is theoretically an approach that will provide a reliable indication of the absolute size of the tax gap, it too suffers from a number of practical problems. In addition to the taxpayer burden and administrative cost considerations noted above, the results of such a program are not timely – requiring time to plan an appropriately designed program, undertake the audit activity and analyse the results. Even then, adjustments to the audit results are likely to be necessary in order to estimate the absolute level of the tax gap, reflecting the reality that even full audits will not necessarily discover all elements of existing non-compliance.

Australian Tax Office random audit program for GST

The Tax Office has undertaken its own limited scale random audit program for GST – with a view to gaining insights into taxpayer compliance levels. This occurred in 2002 and was based on a random sample of about 33 taxpayers in each GST region (254 audits in total). While the exercise did provide some useful and actionable intelligence it had a number of shortcomings, including:

- The sample only included GST registered taxpayers. It therefore could not provide a measure of those businesses operating outside the system of which the ATO is not aware.

- The ABS reported that the sample sizes were too small to provide valid measures of non compliance, that is, it would not be possible to extrapolate to establish a tax gap estimate. The cost of the project was of the order of $1.7 million. In order to ensure a high level of integrity, it was necessary to use our best audit staff and to fully audit the taxpayers included in the sample. The ABS recommended that, for a credible outcome, at least 3000 audits would need to be undertaken which would come at a cost of about $20 million. This is greater than our current comprehensive audit program and about 15 per cent of all our non BAS refund compliance activities in the Micro and SME markets. If the audits were to be used to determine problem industries etc., then we would expect that the minimum sample size would have to be significantly higher than 3000.

- The exercise was not an efficient use of ATO resources as the amounts of revenue recovered were only about 10 per cent of the audit yield of the ATO's targeted compliance program using a risk based approach.

- The ATO excluded large businesses as there was a significant possibility that a very large enterprise could be selected, which would involve a full audit potentially taking a team over 12 months to complete in the necessary detail.

An extension of this approach to enable measurement of the GST tax gap is not recommended owing to the extreme expense, opportunity cost and the severe negative impact it would have on the vast majority of taxpayers involved in the sample who are doing the right thing.

However, notwithstanding the limited representativeness of its results, the exercise did suggest that there was no widespread or systemic GST non-compliance at that time.

Canada – a different approach to tax gap

While some work was undertaken by Statistics Canada in 1992 to estimate the understatement of consumption expenditure due to skimming etc, the Canadian tax authority noted in its 2001-02 Annual Report that it did not directly invest in measurement of the tax gap. It chose instead to rely on qualitative and quantitative information derived from compliance programs and other indirect measures to assess compliance. It believed that measurement of the tax gap was costly, imprecise and fraught with assumption and interpretation issues.

Measurement of underground activity – the Australian Bureau of Statistics' (ABS) experience

The ABS' paper, titled '*The Underground Economy and Australia's GDP*', outlines the current adjustments that the ABS makes to their national account estimates to account for the underground component of the non-observed economy. The term underground economy refers to those activities that are productive and legal but are deliberately concealed from the public authorities to avoid payment of taxes or complying with regulations.

In its study, the ABS points out that underground activity potentially missing from GDP cannot be directly measured, and that reliance has to be placed on a variety of indirect approaches, all of which can be regarded as methodologically contentious. However, taking this into consideration, the ABS concludes that the official estimates of GDP are highly unlikely to be understated by any more than about 2 per cent.

The main goal of the ABS analysis was to assess the potential for GDP to be understated because of missed transactions in the underground economy. The ABS analysis in no way attempted to identify the tax gap, nor was analysis undertaken with possible measurement of the tax gap in mind.

The ABS study is relevant, however, in illustrating the level of accuracy that can be achieved in estimating the underground economy and the wide range of results that are possible using various indirect approaches. It rejects as implausible the relatively high levels of missing GDP estimated by some macro-economic models.

While the modelling and results for some of the higher (non-ABS) estimates have recently been under further challenge from other academic research, the range of possible values is illustrative of the high likelihood that macro measurement approaches alone will not provide sufficiently robust and precise measures of the tax gap to enable well founded conclusions to be made about the efficacy of the Tax Office's fraud minimisation measures.

In addition, while it might be possible to use the ABS study's approach and conclusions to indicate a level of GST that might not be collected as a result of the underground economy, the figuring is unlikely to provide a robust estimate – particularly given that estimates of under-reporting for National Accounts purposes cannot necessarily be directly translated to under-reporting for GST revenue purposes. However, the ABS study does give a confidence interval that can be used to establish the reliability of National Accounts based measures of movements in the tax gap.

The Treasury model - PRISMOD

The Australian Department of the Treasury developed a model, the Price Revenue Incidence Simulation Model – PRISMOD, that was used in developing the 'A New Tax System' (ANTS) proposals to estimate the initial revenue from implementing GST.

PRISMOD is a large scale, highly disaggregated model of the Australian economy which contains a highly detailed specification of the Australian National Accounts, with detailed inter-industry flows from ABS input-output tables.

It models 107 industries purchasing about 1200 inputs and selling their product to other industries, and seven categories of final demand.

For the initial GST modelling, it relied on input-output tables supplied by the ABS in relation to the 1993-94 income year, as these were the most recent Australian tables available when the database was updated. The input-output table was subsequently benchmarked to the Australian National Accounts for 1996-97, to provide a more contemporary, albeit still not up-to-date, picture of the economy for GST modelling.

Notwithstanding the possibility of compositional changes adversely influencing the model's accuracy, the published estimates derived from PRISMOD for the initial GST year were very close to actual collections for that year. This would suggest that the absolute size of any initial gap was no larger than you would expect from the ABS' National Accounts analysis of the potential size of the underground economy.

It was considered whether PRISMOD might be a useful source or adjunct for estimates of the likely theoretical GST yield, which could then be compared with actual collections. However, the model is designed to analyse the impact of changes in policy rather than trends in tax receipts. The Tax Office view, confirmed by Treasury, is that with the bedding in of GST and associated major inter-industry compositional change, there would be limited additional benefit in using PRISMOD as compared to some alternative indicators for GST compliance trends.

Conclusions

- Analysis of activity based indicators indicates that there is no reason to believe that GST non-compliance is increasing (at least within the bounds of the measured economy). However, there is scope to develop this indicator based approach further.
- Analysis based on the ABS paper indicates that measures of movements in the GST gap based on National Accounts data should be reliable and that the error from the base used would not be expected to be in excess of 2 per cent.
- GST revenue is close to the level that would be expected based on National Accounts information and the initial PRISMOD analysis, indicating that the tax gap is likely to be smaller rather than larger.
- ATO compliance activity is not a good base for measuring the size of the GST gap because it uses a targeted risk based approach. Increasing returns from such activity results from improvements in the information upon which that activity is based better targeting non-compliant areas rather than any trends in actual non-compliance.