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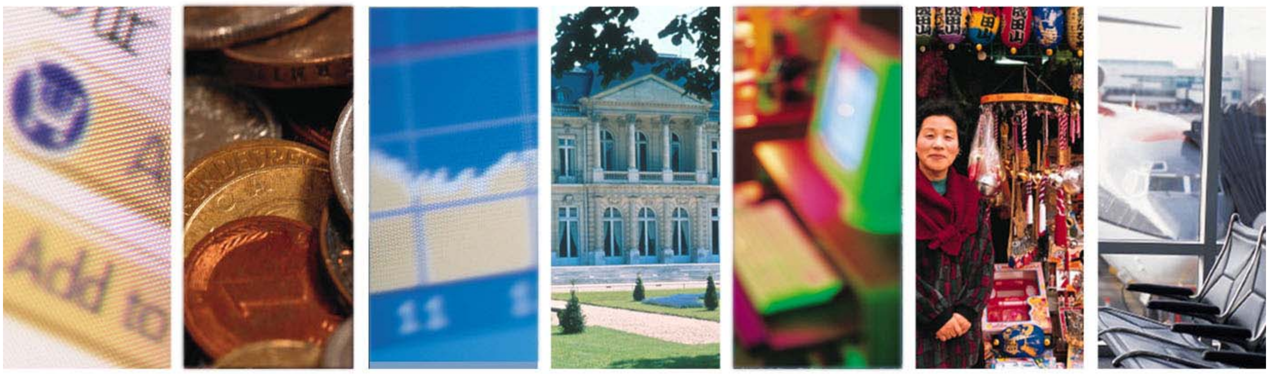

FORUM ON TAX ADMINISTRATION: COMPLIANCE SUB-GROUP

Final report

Monitoring Taxpayers' Compliance: A Practical Guide Based on Revenue Body Experience

22 June 2008

CENTRE FOR TAX POLICY AND ADMINISTRATION

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ABOUT THIS DOCUMENT

Purpose

This guidance note has been prepared to assist member revenue bodies advance their thinking and practices concerning the monitoring of taxpayers' compliance with the tax laws and to generally promote discussion among Forum members on this important strategic tax administration issue.

Background to the Forum on Tax Administration

Since its establishment in July 2002, the Forum on Tax Administration (FTA), a subsidiary body of the OECD's Committee on Fiscal Affairs (CFA), has operated with the broadly stated mandate ....

> *to develop effective responses to current administrative issues in a collaborative way, and engage in exploratory dialogue on the strategic issues that may emerge in the medium to long term………*

To carry out this mandate, the FTA's work is directly supported by two specialist Sub-groups—Compliance and Taxpayer Services—that each carry out a program of work agreed by member countries. The Compliance Sub-group exists to provide a forum for members to:

- periodically monitor and report on trends in compliance approaches, strategies and activities;
- consider and compare member compliance objectives, the strategies to achieve those objectives and the underlying behavioural compliance models and assumptions being used;
- consider and compare member compliance structures, systems and management, and staff skills and training; and
- develop and maintain papers describing good country practices as well as develop discussion papers on emerging trends and innovative approaches.

Caveat

National revenue bodies face a varied environment within which to administer their taxation system. Jurisdictions differ in respect of their policy and legislative environment and their administrative practices and culture. As such, a standard approach to tax administration may be neither practical nor desirable in a particular instance.

The documents forming the OECD tax guidance series need to be interpreted with this in mind. Care should always be taken when considering a country's practices to fully appreciate the complex factors that have shaped a particular approach.

Inquiries and further information

Inquiries concerning any matters raised in this information note should be directed to Richard Highfield (CTPA Tax Administration and Consumption Taxes Division) at e-mail (Richard.highfield@oecd.org).

Summary

This guidance note has been prepared to assist member revenue bodies advance their thinking and practices concerning the monitoring of taxpayers' compliance with the tax laws and to generally promote discussion among Forum members on this important strategic tax administration issue.

Revenue bodies have a responsibility to report on their performance in accordance with the expectations of the Government of the day and the parliament. While the scope and nature of these responsibilities varies from country to country, there is a trend in public sector administration for agencies to be required to report more fully and comprehensively on the outcomes and impacts of Government programs. For revenue bodies, this increased focus on the reporting of outcomes and impacts resulting from their activities calls into consideration aspects of taxpayers' compliance and the impact of administrative efforts to improve voluntary compliance by taxpayers with tax laws. This is a complex area for all revenue bodies, particularly given the difficulties inherent in producing accurate and reliable estimates of taxpayers' reporting compliance across the major taxes. The research carried out for the preparation of this note revealed that relatively few revenue bodies can claim to have a comprehensive approach.

Cognisant of the need for improved methods and tools for monitoring taxpayers' compliance and evaluating the impact of initiatives to improve taxpayers' compliance, the Forum on Tax Administration's Compliance Subgroup has embarked on work to update members' knowledge of leading practices in this field and to advance ideas for developing new approaches. This note is the first of a number that will explore such topics.

This note focuses on the development of measures and indicators of compliance and their role in monitoring taxpayers' compliance at the aggregate level. Drawing largely on the experience of a small number of member countries, it promotes the idea that each revenue body should have in place a compliance monitoring framework. Such a framework should include, to the extent practicable, a set of measures and indicators for the major risk types across each of the major taxes administered. Ideally, this should include a range of indicators that reflect taxpayers' attitudes to, and perceptions of, tax compliance that over time may point to changes in taxpayers' behaviour, of either a positive or negative nature.

The note includes practical examples of compliance-related measures and indicators from a variety of countries that can be used as part of such a framework, although it acknowledges that some of the measures and indicators given as examples are subject to various qualifications and limitations and, therefore, cannot be viewed as absolutely precise/fully reliable measures of compliance or non-compliance. Where such measures are used, especially in the public domain, the note suggests they should be accompanied by clear statements as to the limitations pertaining to their accuracy.

Finally, the note acknowledges that what is practicable in terms of an envisaged compliance monitoring framework will vary from country to country and that for some revenue bodies it may require some time to develop a comprehensive approach.

Recommendations

- Recognising their important planning and accountability requirements, revenue bodies in member countries are encouraged to improve their understanding of taxpayers' compliance and the effectiveness of their compliance improvement programs by developing a compliance monitoring framework (if one is not already in place). Such a framework, which can be progressively enhanced over time, should embody a range of measures and indicators for each of the major risk types for the major taxes administered by the revenue body, drawing on the ideas, approaches and practical examples provided in this note and other measures and indicators deemed useful by them.

- In line with the practice of revenue bodies in a small number of countries, revenue bodies are encouraged to document and publish their approaches (and where applicable, any related qualifications and limitations concerning the approaches adopted) and the results of their monitoring efforts in this area to promote greater dialogue, understanding and exchanges of experience among national revenue bodies.

Monitoring Taxpayers' Compliance: A Practical Guide Based on Revenue Body Experience

Background

1 The OECD's Committee on Fiscal Affairs has released a number of papers on topics related to the monitoring of taxpayers' compliance.

2 The practice note '*Risk Management*' issued in 1997 provided a generalised explanation of the concept of risk management and its relevance in a tax administration context.

3 The practice note '*Compliance Measurement*' issued in May 2001 (amended version) introduced a number of issues relevant to defining compliance and provided a brief synopsis of the work done on measuring taxpayers' compliance. It sought to encourage discussion and further research into the topic of measuring tax compliance (or non-compliance), especially in the large corporate sector.

4 The guidance note '*Compliance Risk Management: Managing and Improving Tax Compliance*' prepared by the FTA and released in October 2004 described (and sought to promote) the concept of compliance risk management as an essential management tool for revenue bodies and gave a more elaborated description of practical approaches that could be adopted by national revenue bodies. A key element of the recommended compliance risk management process was a compliance measurement framework that would provide revenue bodies with a range of compliance indicators that could be used to monitor and evaluate the impacts of their compliance activities (i.e. programs covering service, education, verification and enforcement activities). While the note singled out in high level terms the major categories of compliance risk faced by all revenue bodies (i.e. taxpayer registration, return filing, correct reporting, and tax payment) and provided some illustrative examples of indicators, it did not provide any practical guidance to members on the most appropriate set of indicators (and underlying measurement methodologies) that could be used as part of the measurement framework, it being considered necessary to carry out a further work with member countries.

5 The information note '*Compliance Risk Management: Use of Random Audit Programs*' prepared by the FTA and released in October 2004 described country approaches and experiences with the use of random audit programs for a range of tax compliance-related purposes, including overall measures of taxpayers' compliance.

6 Since October 2004, a number of activities have been undertaken to explore the topic and systematically gather information from member countries on their approaches to monitoring taxpayers' compliance and the measures and indicators being used to gauge the impacts of their compliance activities.

7 At a meeting of tax commissioners from selected countries in January 2005, the topic of compliance measurement and evaluation was the subject of special discussion.[1] The key points made by Commissioners were as follows:

- The practice to date across revenue bodies has largely been to report on compliance outputs (e.g. audit results, debts collected) rather than 'outcomes', thus reflecting a deficiency in agency reporting arrangements;

- Accountability requirements and strategic compliance management considerations dictate the need for a comprehensive set of practical outcome-related measures on aspects of tax compliance;

[1] Meeting of the former OECD body '*Tax Administration Advisory Board*', January 2005, Phoenix, USA.

- The focus of this work should not be just aggregate measures (which are more complex); the issues in practice are far more dynamic and other measures are called for; and

- Subject to progress being made, the wide adoption of a set of practical measures could facilitate benchmarking across countries and assist administrations in meeting their accountability obligations.

8 In May 2005, the Canada Revenue Agency hosted a workshop of representatives from nine countries—Australia, Canada, France, Japan, Netherlands, New Zealand, Sweden, United Kingdom and the United States—and the OECD Secretariat to discuss individual country experiences and approaches and to examine the feasibility of developing a few key indicators of compliance based on common methodologies. The results of this workshop and a number of case studies subsequently provided by participating countries were described in a report released (on a restricted basis) in February 2006.[2] The report of the workshop noted that while none of the participating countries had a comprehensive set of statistically reliable direct measures of tax compliance, several countries had a range of measures that provided a reasonably good sense of return filing, correct reporting, and/or payment compliance for a significant segment of their taxpayer population. Among other things, it noted the value of further collaboration to identify statistically robust measures of compliance for strategic and resource allocation purposes.

9 During 2006, members of the Forum's Compliance Subgroup gave further consideration to this matter and agreed that work should be carried out via the Secretariat working with member countries to further research the topic. The agreed terms of reference for this work foreshadowed the development of a set of the main measures and indicators (and associated methodologies) being used by member countries to monitor taxpayers' compliance, ***with the primary focus being on the identification of aggregate measures/ indicators to reflect absolute measures of compliance for the major compliance risk types***. This note is the product of this work and its completion has been greatly assisted by revenue bodies in member countries, in particular Australia, Canada, Netherlands, Sweden, United Kingdom, and United States.

The structure of this note

10 This note is structured along the following lines:

- Part I: Introduction
- Part II: Developing a comprehensive compliance monitoring framework
- Part III: Compliance monitoring—practical measures and indicators
- Part IV: Bringing it all together—an illustrative compliance monitoring framework
- Part V: Conclusions and recommendations
- Various annexes with related information.

[2] See '*Forum on Tax Administration: Compliance Subgroup Workshop on Compliance Measurement and Evaluation*' (CTPA/CFA/FTA/BUR(2006)2.

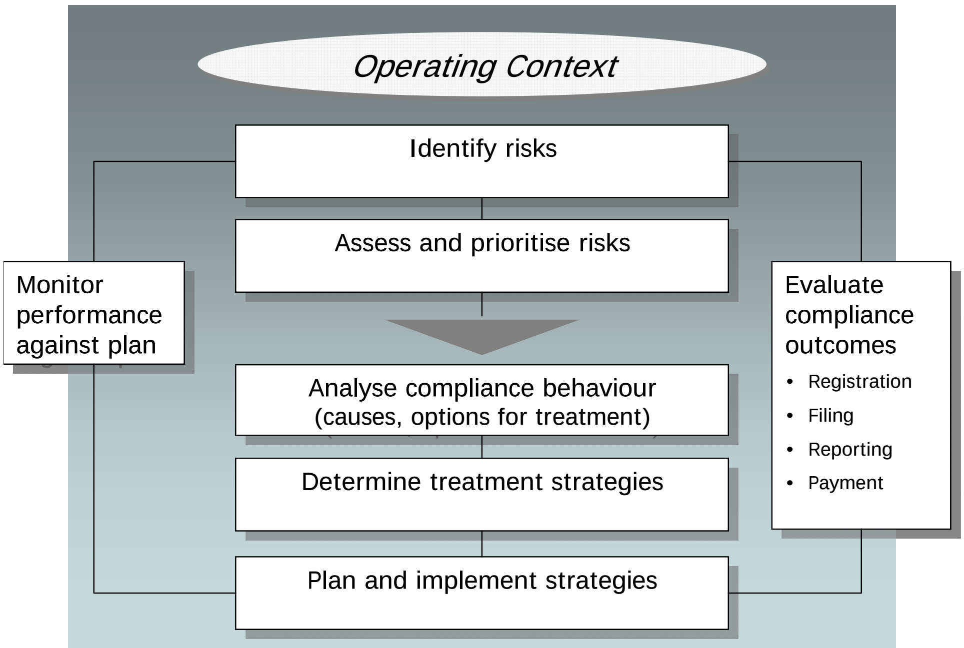
I. Introduction

The compliance risk management process

11 The guidance note '*Compliance Risk Management: Managing and Improving Tax Compliance*' describes a process for the identification, assessment, prioritization, and treatment of compliance risks, and the monitoring and evaluation of the impacts of treatment strategies as part of a revenue body's strategic management process (see Figure 1). The objective of this note was to encourage revenue bodies in member countries to adopt a more systematic and disciplined approach to compliance risk management that could be used to:

- guide and inform planning of compliance improvement activities across a revenue body;
- providing a defensible approach that could be used to inform key stakeholders (e.g. the Government and external audit bodies); and
- demonstrate a high level of accountability for improved revenue body outcomes.

Figure 1. The Compliance Risk Management Process



12 Since the release of the original guidance note an increasing number of revenue bodies have started to strengthen their focus on the management of tax compliance risks by adopting more systematic and holistic approaches along the lines outlined in the guidance note.

13 This guidance note focuses principally on those parts of the model process dealing with 'Evaluate compliance outcomes' and 'Monitor performance against plan', it being acknowledged that the Forum's 2004 guidance note gave only limited guidance to these specific aspects of the overall approach being recommended.

Monitoring taxpayers' compliance?

What do we mean by taxpayers' compliance?

14 In an ideal world, all citizens and businesses would satisfy their obligations under the tax law to register where specifically required, and to voluntarily declare and pay on time their tax liabilities, all calculated fully and accurately in accordance with the law. This statement encapsulates four basic tax compliance obligations of citizens and businesses that generally speaking must be administered by all revenue bodies in accordance with their respective tax laws:

- To register for tax purposes[3];
- To file tax returns on time (i.e. by the date stipulated in the law) or at all;
- To correctly report tax liabilities (including as withholding agents);[4] and
- To pay taxes on time (i.e. by the date stipulated in the law).

15 While a country's tax laws generally contain other compliance obligations (e.g. the obligation of specified third parties to report details of income paid to employees, investors etc,), these are all subservient to the four basic obligations described in paragraph 14. This guidance note deals primarily with compliance monitoring as it relates to these four obligations.

16 Compliance by taxpayers with these basic obligations can also be viewed in terms of whether such compliance is achieved voluntarily (i.e. *voluntary compliance*) or corrected by verification/ enforcement actions carried out by the revenue body (i.e. *enforced compliance*).[5] In a tax administration context, this distinction is highly relevant as 'enforced compliance' has a cost, and very often a significant one. [6] In line with their overriding goal and mission, all revenue bodies should be aiming to improve the overall level of 'voluntary' compliance and, by definition, rely less on 'enforced' compliance. This distinction is reflected later in this note when discussing the issue of the 'tax gap' and specific compliance indicators.

17 Other terms often used in a tax 'compliance' or 'non-compliance' context are 'tax evasion' and 'tax avoidance' or 'unacceptable tax minimisation arrangements'. For the purposes of this note these terms have no particular relevance other than to say that they represent particular types of non-compliance behaviour that contribute to the total revenue leakage from all non-compliance.

Why monitor taxpayers' compliance?

18 The rationale for monitoring taxpayers' compliance derives from the primary goal of revenue bodies which is to improve overall compliance with tax laws. As stated in the guidance note '*Compliance Risk Management: Managing and Improving Tax Compliance*' (page 7):

"The primary goal of a revenue authority is collect the taxes and duties payable in

[3] Some revenue bodies do not separately identify/ monitor this obligation as the implication of non-registration is encapsulated in the requirement to file tax returns.

[4] The prior note 'Compliance Measurement' suggested that for definitional purposes it was useful to divide compliance into two categories—'administrative compliance' and 'technical compliance'. Concerning the latter, readers are directed to this note for discussion on the issues of ambiguity/ uncertainty concerning the questionable positions sometimes taken by taxpayers on technical issues and whether or not this constitutes compliant behaviour.

[5] A further dimension to enforced tax compliance is "motivation". In other words, should "intention of the taxpayer" be a relevant factor in defining and measuring compliance? In line with previous comments on this aspect- see { }, this note takes the view that non-compliance results from a variety of behaviours—both deliberate and non-deliberate in nature—and the activities of revenue bodies should be designed to detect and deter all forms of non-compliant behaviour, with the various measures and indicators of compliance used to reflect the overall success (or otherwise) of the revenue body's activities.

[6] Staff usage data from national revenue bodies (see OECD series '*Tax Administration in OECD and Selected Non-OECD Countries (2006)*' reveals that many allocate over 40% of their staffing budgets to enforcement activities.

accordance with the law and to do this in such manner that will sustain confidence in the tax system and its administration. The actions of taxpayers — whether due to ignorance, carelessness, recklessness, or deliberate evasion — as well as weaknesses in a tax administration mean that instances of failure to comply with the law are inevitable. Therefore, tax administration should have in place strategies and structures to ensure that non-compliance with tax law is kept to a minimum."

19 Implicit in this statement is a notion that revenue bodies have in place activities to monitor and report, to the extent practicable, on the effectiveness and efficiency of their compliance improvement strategies for internal management purposes. Revenue bodies also have an obligation to account for their performance to a range of external stakeholders (e.g. Government and government auditing bodies), as well as the general taxpayer population that has an expectation that the tax system will be administered fairly and competently. The research carried out for the preparation of this note revealed, among other things, that government auditing bodies are increasingly calling for improved measurement, evaluation, and reporting of compliance outcomes. A sample of such comments is provided in Annex 1.

20 The implicit requirement to monitor and report on taxpayers' compliance operates at a number of levels, serving strategic, operational, and tactical management needs. These levels are depicted in Figure 2 and elaborated in the comments that follow.

Figure 2. Management levels of compliance monitoring

MANAGEMENT VIEW	FOCUS OF COMPLIANCE MONITORING	PROVIDES FEEDBACK ON
STRATEGIC	WHOLE OF TAX SYSTEM	Overall tax system health, standard of administration
↑	WHOLE OF TAX	Overall health & administration of each tax
OPERATIONAL	WHOLE OF TAXPAYER SEGMENT (OR PROGRAM)	Overall impact of risk treatment strategies & program management for segment
↓	TARGETED COMPLIANCE RISK ISSUES	Impacts of specific risk treatments on targeted compliance risk issues
TACTICAL	TARGETED INDIVIDUAL OR GROUPS OF TAXPAYERS	Insights to individual/ group behavioural responses

21 At the ***'whole of tax system'*** level, compliance monitoring relates to the objective of having a comprehensive set of measures and indicators for all taxes that reflect on the performance of the overall tax system and its administration from a tax compliance viewpoint. This may include, but does not specifically require, estimates/measures of the overall tax gap (i.e. the total amount of tax not collected resulting from all forms of non-compliance for all taxes administered by a revenue body in a particular fiscal period). The US IRS's National Research Program described in Annex 5 is one example of research efforts directed to producing 'whole of tax system' level estimates. (More is said on overall tax gap measurement at paragraphs 67 et seq. and in Annexes 6 and 9.

22 Depending on the relevance and comprehensiveness of the information available, such information reflects on the "general health" of the tax system and can serve a number of purposes:

a) To account to Government by the revenue body for its stewardship of the tax system;

b) To indicate the trend, composition and likely direction of overall non-compliance with the tax laws, and thus the degree of urgency for any remedial action that may be needed;

c) To justify internal resource allocations; and

d) To garner support from Government and other stakeholders for a range of tax system reforms and/or additional resources for the revenue body.

23 At the '***whole of tax'*** level, compliance monitoring relates to having a set of measures and indicators for a specific tax that reflect on the performance of the tax from a tax compliance viewpoint. This may include, but does not specifically require, estimates/measures of the overall tax gap (i.e. the total amount of tax not collected resulting from all forms of non-compliance in a particular fiscal period). Again, depending on the relevance and comprehensiveness of the information available such information gives a sense of the overall level of effectiveness being achieved from a revenue body's administration of the tax, while trend data may indicate movements over time, either positive or negative, in overall effectiveness.

24 Annex 7 describes the UK's HMRC Department's 'top-down' approach to estimating overall VAT revenue losses from all forms of non-compliance. This is a global "tax gap" measure for the VAT system derived using consumption expenditure data from the national accounts data series that is collected independently of HMRC's administration. This measure of overall VAT compliance was introduced in 2001 as part of a comprehensive strategy to address what was then regarded as a serious level of VAT revenue leakage resulting from specific tax evasion schemes (commonly referred to as 'carousel' or 'missing trader' fraud), tax avoidance planning and general non-compliance. Its initial use was to gauge the likely magnitude of the non-compliance problem. The measure is continually reviewed and updated with an annual updated result published each year with the Chancellor's Pre-budget Report, with the trend being used to assess the overall impact of HMRC's compliance improvement activities and to gauge HMRC's progress towards achieving improved compliance.

25 At the '***taxpayer segment'*** (or program level), compliance monitoring relates to having a set of measures and indicators for a specific sub-segment of the taxpaying population (e.g. a category of taxpayer). Monitoring taxpayers' compliance at this level is in line with the practice of an increasing number of revenue bodies to segment their taxpayer populations for compliance management purposes. Indeed, many revenue bodies physically organise their compliance operations largely on a taxpayer segment basis. Information pertaining to compliance- related performance at this level may therefore directly reflect on the effectiveness of overall program activities (including the overall mix of treatment strategies implemented to address specific major risk issues).

26 An example of monitoring at this level is described briefly in Box 1.

Box 1. HMRC: Compliance monitoring of small and medium-sized companies and employers

As part of its direct taxes compliance monitoring activities, HMRC has derived and recently published separate estimates of overall compliance for SME companies and employers respectively, using the results of its random audit inquiry program and non-payment data. The first category concerns SMEs and their liabilities to corporations tax while the second relates to employers and their responsibilities to withhold income tax and national insurance contributions from payments of wages and salaries. The results of this monitoring are depicted in Examples 2 and 3 [xx and page xx].

HMRC's report of its work in this area notes that quantifying losses is important in helping to improve its understanding of such losses and that this knowledge will ultimately improve revenue collection. It is continuing to develop methodologies as access to more reliable and wider sources of data and sophisticated modelling techniques become available. It is the intention to publish further estimates of tax losses when robust methodologies have been put in place.

Source: Developing methodologies for measuring direct tax losses, HMRC, October 2007.

27 At the '***targeted risk'*** level compliance measurement relates directly to evaluating the impact of specific risk treatments (e.g. special education, service, and/or enforcement-related actions that have been applied to address underlying compliance risks. Knowledge of impacts (ideally benefits in the form of improved compliance) enables the revenue body to decide if further attention is

required, either using the same or a different mix of treatments or, alternately, if the risk has been mitigated. This is a critical element of the overall risk management process. As emphasised in the 2004 guidance note (page 62):

"Revenue authorities that fail to measure the effectiveness of their compliance strategies run the risk of continuing to sub-optimize their strategy selection. An evaluation framework provides the proper foundation for the improvement of compliance strategies".

28 Examples of monitoring at this level are provided at Annex 5, page 50— filing compliance by high tax level taxpayers—and page 58—reporting compliance by targeted taxpayers employing profit shifting arrangements to minimize tax liabilities.

29 In summary, the development and use of measures and indicators to reflect levels of, and trends in, taxpayers' compliance aims to satisfy a number of important requirements related to the strategic, operational, and tactical planning needs of national revenue bodies. These include the ability to:

1) determine the overall health of the tax system from a tax compliance viewpoint;

2) gauge the overall impact of compliance improvement strategies on overall levels of taxpayers' compliance;

3) evaluate the impact of specific strategies on taxpayers' behaviour; and

4) demonstrate accountability for the overall management of the tax system; and

5) gauge the effectiveness of compliance enforcement measures in relevant legislation.

30 Given resource limits and the need for revenue bodies to prioritise their compliance risks for administrative attention, as well as their increasing accountability requirements, it is the thesis of this note that a revenue body's compliance monitoring activities should aim to encompass all management levels. In line with the terms of reference for this project, this note deals principally with compliance monitoring at the 'whole of tax' and 'whole of taxpayer segment/ program' level. (Further work in 2008 will deal explicitly with the evaluation of specific risk treatment strategies.)

Key issues and concepts in monitoring taxpayers' compliance and evaluating revenue body performance

31 This section provides background to a number of important concepts and issues that are often raised when discussing tax compliance issues in general and compliance monitoring and measurement in particular. They are elaborated here to provide clarification, inform readers and to serve as a foundation for subsequent exploration of the substantive issues dealt with in this note.

Measuring revenue body performance—outcomes and outputs; effectiveness and efficiency

32 The notion of monitoring taxpayers' compliance is directly relevant to the terminology of 'outcomes and outputs' and 'effectiveness and efficiency' when used in relation to measuring the performance of revenue bodies. As these terms are often confused and sometimes used interchangeably, it is useful to provide some clarification in a tax compliance context.

33 There is a considerable body of literature on performance measurement in general and government oversight bodies in many countries have formalised their definitions as part of agency guidance. A selection of these definitions is provided at Annex 3. The key points are as follows:

- ***Outcomes and outputs:*** The term 'outcomes' is typically associated with 'impacts', 'results', and 'external consequences'. In a tax compliance context, this can clearly be related to 'levels of voluntary compliance' (e.g. covering filing, reporting and payment obligations), noting that self assessment regimes operate on the fundamental principle of voluntary compliance. Also relevant in an 'outcomes' context are changes in taxpayers attitudes to, and perceptions of, tax compliance, as these are clearly influenced by the work (and effectiveness) of revenue bodies.

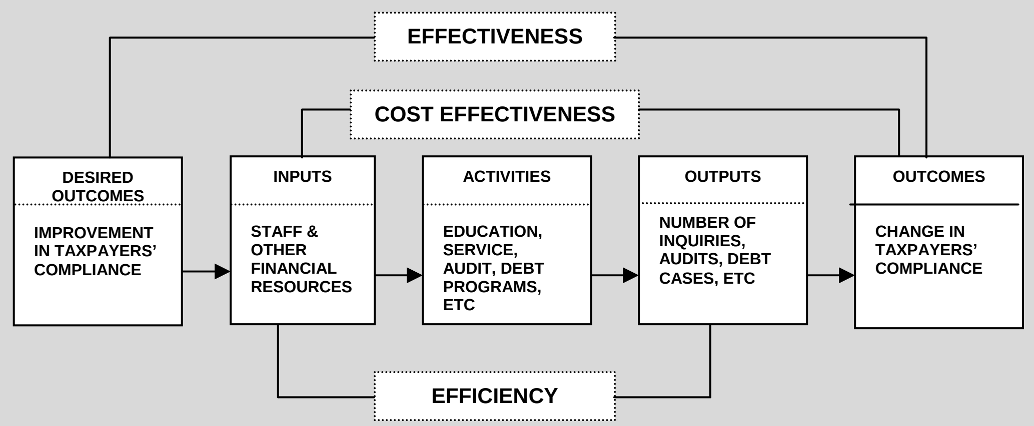
'Outputs', on the other hand, typically refer to the 'products' of internal activities undertaken by an organization to produce the outcomes being sought. For a revenue body this would include answering inquiries, conducting audits and collecting debts.

- **Effectiveness and efficiency**: The term 'effectiveness' is typically associated with the extent to which 'outcomes' are being achieved. In a tax compliance context, the extent to which compliance (e.g. filing, reporting and payment) has been improved as a result of revenue body activities would clearly be an indication of a revenue body's effectiveness (acknowledging, of course, that in some areas its measurement may be difficult to gauge in precise terms, as well as the issue of attribution to consider (see para. 51). Similarly, a trend of more positive attitudes to, and perceptions of, tax compliance could be seen as a positive indicator of a revenue body's effectiveness.

  'Efficiency' typically relates to reducing or minimising the use of resources to produce a given level of outputs (e.g. increasing the number of completed audits for a given level of staffing, other things being equal, would reflect improved efficiency) or conversely, increasing the volume of outputs for a given level of inputs.

34 The relationships between these terms in a performance measurement context are often presented by way of a 'program logic' diagram or chart. An example of this in a tax compliance context is provided in Figure 3.[7] Applying the model, a program typically entails the following steps 1) clarify the objectives (i.e. what outcomes are being sought); 2) map the connections between the inputs, activities, outputs and outcomes; 3) identify the level of outcomes to be measured (both intermediate and final), 4) defining how success will look; and 5) defining what performance information will be used. Within this model, efficiency measures (e.g. number of audits performed per staff resource) reflect the relationship between outputs and the inputs used to produce them, while effectiveness measures reflect the outcomes achieved (e.g. extent of change in compliance achieved) vis-à-vis the desired outcomes/ objectives set (extent of change in compliance sought).

Figure 3: Tax compliance program logic



35 As noted earlier, revenue bodies have traditionally accounted for their performance (including for their compliance improvement activities) in terms of the 'outputs' resulting from the various work

[7] As referenced in '*Literature Review, Measuring Compliance Effectiveness*' (Australian Taxation Office) May 2007.

streams administered by them (e.g. revenue collection, audits, and debt collection). However, while output measures represent an important part of revenue bodies' reporting systems and assist in day to day management, they do not provide any insights as to the outcomes or impacts resulting from their activities. A related issue of concern is that positive trends in output volumes are sometimes inferred (without adequate accompanying evidence) as reflecting improvements in taxpayers' compliance, but this need not necessarily be the case. For example:

- Over-achievement of budgeted revenue targets may result from improved compliance with tax laws; equally, and more often likely to be the case, it may result from unforeseen growth in a country's economy, from legislative changes with difficult-to-predict revenue impacts, and/or shortcomings in the official revenue estimating process;

- A trend of increased assessments (measured in monetary terms) resulting from audit and other verification activities may reflect increased compliance (albeit enforced) with the laws; on the other hand, the trend may simply result from a small number of abnormally large assessments in a specific economic sector and/or the situation that actual non-compliance in an overall sense has, in fact, increased in the period concerned; and

- Reductions in the aggregate level of unpaid taxes may result from a significant amount of debt write offs and/or the settlement of a few unusually large debts, neither of which relate to improved payment compliance in an overall sense.

36 These sorts of considerations suggest that a degree of caution should be applied when inferring improved compliance from what appear to be positive trends in output-related measures.

37 As already noted, monitoring taxpayers' compliance is essentially about the measurement of 'outcomes' (i.e. gauging the impacts/ effectiveness of a revenue body's compliance improvement strategies and more broadly its overall administration of the tax laws) and is the primary subject of this note. This focus on monitoring compliance-related outcomes is also one that is in line with broader trends in public sector accountability—refer Box 2—and for this reason alone should be of interest to all revenue bodies.

Box 2. Trends in public sector accountability reporting

The need for robust measures of the compliance-related (i.e. effectiveness) outcomes achieved by revenue bodies is directly in line with the directions of contemporary public sector reform being witnessed across member countries...............

"*Over the past two decades, enhancing public sector performance has taken on new urgency in OECD member countries as government face mounting demands on public expenditures, calls for higher quality services, and in some countries a public increasingly unwilling to pay higher taxes. These pressures have been accompanied by calls for more government accountability*" ………………

"*The strongest current performance-oriented trend across OECD member countries is performance oriented budgeting and performance management. While performance budgeting and performance management can be seen as separate concepts, in practice many governments have sought to adopt a results-based approach to both management and budgeting in- which in theory- input controls are relaxed and managers / organizations are given flexibility to improve performance and be held accountable for results measured in the form of outputs and outcomes*"………………

"*The design of measures is made difficult by finding measures for specific activities and relating what an agency or programme actually contributes towards achieving specific outcomes. Output and outcome measures each present a different set of challenges. Outcomes are technically more difficult to measure; they are complex and involve the interaction of many factors, planned and unplanned. Also, there are problems with time lag issues and in some cases the results are not within the control of the government. Outcomes, however, have a strong appeal for the public and politicians. Most countries appear to have adopted a combination of outputs and outcomes; this is potentially more beneficial than one type of measure.*"

Source: Modernizing Government (Public Governance Committee, OECD) March 2005.

Measures and indicators

38 Having introduced and defined the terms 'effectiveness' and 'outcomes' in a tax compliance context, it is appropriate to discuss how they are measured. For this purpose, it is relevant to introduce the terms 'measures' and 'indicators' as these are used widely in the rest of this note.

39 An OECD report (unpublished) prepared in 2001[8] makes the following distinction between 'measures' and 'indicators':

- 'Measures' correspond to the expected direct results at any program level—they are a quantification of the actual program results achieved (e.g. the number of taxpayers who file returns on time).

  'Indicators' are <u>less direct</u> measures, used where direct measures are impractical or unavailable; an example is a decline in the proportion of productive audits being used as an indication of improved taxpayers' compliance. Generally speaking, an indicator does not provide <u>irrefutable</u> evidence of the result being inferred and, in the absence of other indicators, should generally be used as a pointer for further inquiry. (The Canada Revenue Agency describes a compliance indicator as a quantitative or qualitative factor that provides a valid proxy measure of compliance achievement or change.[9]) On the other hand, a range of indicators all pointing to a similar conclusion may provide a stronger or more defensible case for the conclusion/ result being argued.

  NB: Readers might note from the definitions provided in Annex 2 that the terms 'measures' and 'indicators' are often used interchangeably in some quarters. However, in a compliance monitoring context and for the purpose of this note it is thought useful to maintain the distinction described above.

40 As will be explained later in this note, identifying a sufficient number of measures to monitor taxpayers' compliance is not always practical given the underlying nature of what is trying to be measured, as well as a result of cost and timeliness considerations. For this reason, revenue bodies are increasingly using a mix of both measures and indicators to monitor taxpayers' compliance. Part IV of this note describes the types of measures and indicators being used to varying degrees by revenue bodies while Annex 5, pages 48-63, provides a large number of practical examples.

Understanding and measuring the tax gap

41 Consideration of the issues associated with monitoring taxpayers' compliance inevitably raises the contentious notion of the 'tax gap' and its measurement and the topic is dealt with to some degree in various parts of this note. Putting to one side the merits or otherwise of revenue body efforts to measure the overall 'tax gap', it is useful at this point to clarify some concepts and terms :

- Practical measurement issues aside, there is no single phenomenon as 'the tax gap'; in practice, a revenue body will be confronted by a range of 'tax gaps', one for each tax that it is required to administer; it follows that any attempts to measure the overall tax gap will inevitably entail an aggregation of separate tax gap measurement activities covering each tax administered.

- The input from a number of revenue bodies (e.g. Australia, Sweden, UK, and USA) emphasizes that the 'tax gap' can and should be viewed in both "gross" and "net" terms. For these revenue bodies, the "gross tax gap" is seen as the difference between the estimated amount of tax that taxpayers should pay under the law and the amount they

[8] 'Performance measurement in tax administrations', OECD Centre for Tax Policy and Administration, 2001 (unpublished).

[9] 'Compliance Measurement Framework' (CRA, September 2003).

actually pay on time. The "net tax gap" is the difference between the "gross tax gap" and the amounts of tax actually recovered from enforcement activities (including verification activities such as audits).[10]

This distinction is particularly important for those revenue bodies that have adopted a philosophical disposition (refer later comments) to carry out tax gap measurement research (e.g. Sweden, United States, and United Kingdom) and to use tax gap reduction objectives and targets as the primary performance measure purposes for overall tax system management purposes.

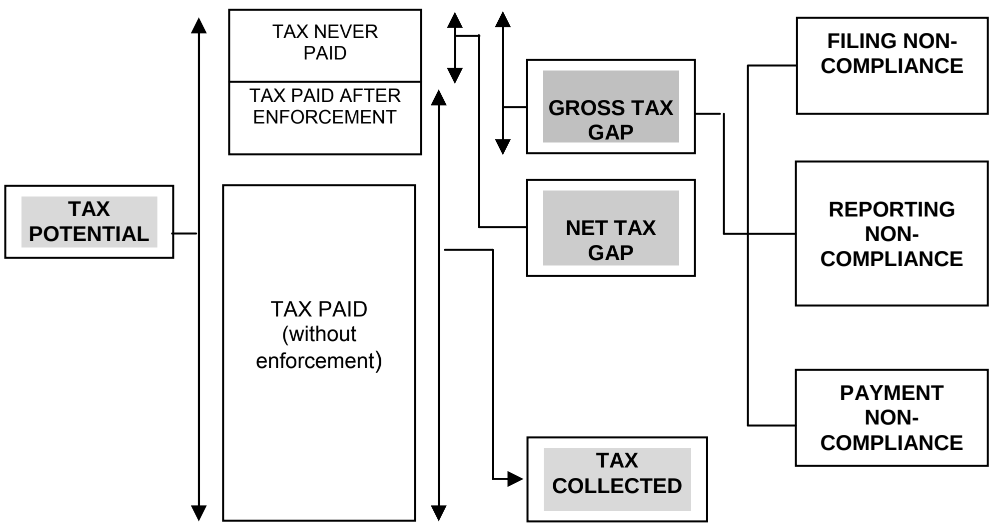
- The gross tax gap can be viewed as comprised of three components (refer Figure 4):

    1) Filing non-compliance (failure to file a tax return): The dollar amount of tax not paid timely on delinquent and non-filed returns.

    2) Reporting non-compliance (understating income or over-claiming tax deductions and credits): The total tax that should be reported on timely filed returns minus the total tax actually reported on those returns.

    3) Payment non-compliance (failure to fully pay reported taxes owed): This is the difference between the total tax liability actually reported on timely filed returns and the total amount of timely payments associated with those reported liabilities.

Figure 4. Understanding the Tax Gap (This diagnostic applies to any tax)



Legend

Item	Explanation
Tax collected	The total tax collected from all reported & assessed tax liabilities.
Tax potential	The total amount of tax that would be collected by perfect application of the tax laws.
Gross tax gap	The total amount of tax not paid voluntarily for a fiscal period.
Net tax gap	The total amount of tax remaining unpaid for a fiscal period after enforcement action.

[10] As defined in '*A Comprehensive Strategy for Reducing the Tax Gap*' (*US Department of Treasury, Office of Tax Policy*), September 26, 2006.

- Consistent with this description of the components of the gross tax gap, it will be seen to include: 1) all forms of taxpayer behaviour that lead to a non-compliance outcome (e.g. ignorance of the law, an unintentional error in interpretation of the law, careless or reckless record-keeping, deliberate tax fraud, unacceptable tax minimization schemes, and a legitimate incapacity to pay an assessed tax debt); and 2) what is generally described as tax evasion, including non-observed (i.e. shadow or underground) economy activities, and illegal tax avoidance/ planning.[11]

- The net tax gap is the aggregate amount of taxes remaining unpaid after all forms of enforcement activity carried out by a revenue body. This will include activities to secure tax returns not filed by the due date for filing, to detect unreported tax liabilities through audit and other verification activities, and to collect taxes owed but not paid on time.

42 Given the widely varying types of non-compliance behaviours that comprise the overall tax gap, it will be apparent that measuring its overall size is a difficult, costly and (some would say) inevitably quite an imprecise undertaking. Furthermore, there is a view in some quarters that producing and publicising overall tax gap estimates may have a negative impact on taxpayers' compliance in an overall sense and could lead to inappropriate behaviour by revenue officials. For these sorts of reasons, there are mixed views among revenue bodies as to the merits of attempting such exercises. More is said on this at paragraphs 67 et seq.

The non-observed economy

43 A further issue that frequently gets raised in the context of measuring taxpayers' compliance concerns those "hidden" economic transactions that go unrecorded for Government statistical purposes, referred to formally by the OECD as a country's "non-observed economy" (NOE).[12] Interest in this issue has been driven from a variety of perspectives, including as a result the efforts of academics to measure its size within individual countries. It is considered useful at this point to make a few points.

44 The term 'non-observed economy' (or any other metaphor used to describe this phenomenon) is sometimes used inter-changeably or confused with the term 'tax gap', and indeed other terms such 'tax evasion' or simply 'tax non-compliance'. However, there are many forms of non-compliance behaviour that do not affect official estimates of GDP (e.g. taxpayers' omissions of salary, interest and dividend income that is otherwise properly reported by payers and over-claimed tax deductions) and accordingly tax revenue leakage resulting from NOE activities comprises only part of overall tax evasion and tax non-compliance. More is said on this in Annex 3, page 44.

45 It has been fashionable over recent decades for academics and others to attempt to make estimates of the size of a country's NOE. For this purpose, resort has most frequently been made to the use of macro-model methods (described in the OECD's handbook [13] as 'monetary methods', 'global indicator methods', or the 'latent variable method') to derive an estimate of unobserved activities. ***However, it should be noted that the OECD (and other international organizations) reject these methods as being useful in obtaining exhaustive estimates of GDP or in estimating underground production and have observed that when applied they produce for most countries spectacularly high estimates of NOE activities which have no sound scientific base but which, nevertheless, attract much attention from the media and other parties.***

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[11] For prior discussion on the issues of illegal/ unacceptable tax planning and ambiguity in tax laws and their relevance to interpreting the terms 'tax compliance' and 'tax non-compliance' readers are directed to the practice note 'Compliance Measurement' prepared by the CFA's Forum on Strategic Management and published in May 2001.

[12] Also described in the literature by other terminology (e.g. black, cash, hidden, informal, shadow and underground).

[13] See and '*Measuring the Non-observed Economy: A Handbook*' (a joint publication of the OECD, IMF, ILO and CIS Statistical Committee (2002).

46 In early 2006, following publication (and resultant media articles) of further estimates of countries' NOEs derived from using these macro-model methods, the international organizations involved in producing guidance on the preparation of national accounts published an official repudiation of the utility of macro-methods for deriving estimates of the GDP and NOE (see Box 3). For these reasons, the use of macro-model methods for estimating NOEs is not discussed in this note.

Box 3. Estimates of the unrecorded economy and national accounts: declaration of the ISWGNA- January 2006

The degree to which official national accounts estimates cover the economy differs among countries. Statistical authorities of some countries make explicit and comprehensive estimates of activities not recorded from the usual data sources—be it because these are illegal, underground, or simply outside scope [1]. In other countries, statistical authorities do not provide such estimates, a situation that sometimes prompts unofficial estimates. These unofficial estimates may have a sound statistical underpinning, but many are based on bold assumptions and few actual data. The Inter-secretariat Working Group on National Accounts [2] (ISWGNA) feels it is necessary to alert users to the limited value of these unofficial estimates in terms of reliability and accuracy.

Unofficial estimates are often based on macro economic models. For instance, they may assume a fixed relation between the size of the economy and money in circulation. Such methods may yield grossly exaggerated results, attracting the attention of politicians and newspapers and thereby gaining wide publicity. The OECD-ILO-IMF-CIS manual on measuring the non-observed economy [3] rejects such "macro-model" methods because these methods suffer from serious problems that cast doubt on their utility for any purpose in which accuracy is important. In particular, they are completely unsuitable for use in compiling the national accounts.

Signed: the members of the ISWGNA: **Commission of the European Communities (Eurostat); International Monetary Fund; Organisation for Economic Co-operation and Development; United Nations; World Bank (January 20060.**

[1] See the UN-ECE survey of some national practices of estimating the non observed economy: http://www.unece.org/stats/publications/non.observed.economy.pdf

[2] The ISWGNA gathers representatives of the five international organizations who have co-signed the international manual SNA 93 (System of National Accounts, 1993).

[3] http://www.oecd.org/document/49/0,2340,en_2649_34253_2463473_1_1_1_1,00.html

47 Those matters aside, it is generally accepted that NOE activities, in aggregate, represent a significant compliance issue for all revenue bodies. However, it is also acknowledged that each country's NOE is comprised of a diverse range of activities and behaviours (e.g. moonlighting employees across a variety of industries, unrecorded cash income of businesses, and bartering) that in practice necessitate a range of individually tailored strategies for the specific types of activities involved.

The use of random audit programs to provide measures of taxpayers' compliance

48 As described later in this note, a number of revenue bodies in OECD countries use random audit [14] programs to, among other things, derive aggregates measures of taxpayers' compliance. These programs vary widely in their scope and range from programs covering a 'whole of tax' taxpayer population, specific taxpayer segments (e.g. SMEs), to specific compliance risk areas. Conducted in a professional manner, a random audit program can be used to develop a statistically defensible estimate of the incidence of correct reporting, as well as to capture pertinent information that can be used to develop risk profiles/update audit selection formula and to inform consideration of tax policy changes. For example, in the US example described in Annex 6 the findings have been used

[14] Use of the term 'audit' in connection with random audit programs needs to be treated with a degree of caution, noting that the depth of inquiry associated with such 'audits' appears to vary significantly from country to country.

to derive an estimate of overall reporting compliance, to identify the incidence of reporting compliance for individual categories of income such as wages, interest, and self employed income, to update automated audit selection formulae and to support tax policy changes (e.g. new third party information reporting requirements).

49 The use of broadly focused 'whole of tax' random audit programs in tax administration is not without some degree of contention.

50 Critics of such programs argue that 1) they unnecessarily burden many of those taxpayers unlucky enough to be selected for audit; 2) they are generally not sufficiently exhaustive to detect all unreported tax liabilities and thus cannot provide precise measures of non-compliance; 3) they have long lead times to produce useful information; and 4) they entail a costly diversion of audit resources that could otherwise be deployed onto more revenue productive risk-based cases. These concerns, which have a degree of legitimacy and therefore need to be carefully assessed, apply particularly to more broadly-focused random audit activities conducted on a 'whole of tax' basis.

51 Proponents of the use of random audit activities, on the other hand, claim that 1) they can play a general deterrent role by ensuring that all taxpayers have a chance of being selected for audit; 2) they can produce valuable information that is essential to the effective management of the tax system, including information needed to enhance audit risk profiling techniques and taxpayer education programs that are a key feature of a revenue body's overall strategy of risk prevention and detection; and 3) by providing information on compliance patterns across the community and for specific taxes, they can play an important role in supporting arguments for legislative proposals to address compliance risk issues (e.g. proposals new information reporting obligations).

52 Recognizing the trend of increased accountability on government agencies, particularly revenue bodies, and the resultant need to improve the evaluation and reporting on the outcomes being achieved by their programs, this note takes the view that the use of random audit activities is likely to grow among revenue bodies in OECD countries over the medium term. However, given concerns for their intrusiveness, cost, and limited ability to detect all non-compliance, their use is likely to be increasingly selective and targeted, with 'whole of tax' programs conducted at fairly long intervals, say every 4 to 6 years. US experience from many years gives some insights as to how their program approach has evolved and recent developments there provide ideas on their approaches to improve the efficacy of the random audit process and the timeliness of related research findings. (refer Annex 7).

Attribution—Understanding the factors that influence taxpayers' compliance and behaviours

53 The guidance note '*Compliance Risk Management: Managing and Improving Tax Compliance*' (page 36 et seq.) emphasised the range and nature of factors that can influence tax compliance and taxpayers' behaviour. These include economic and social conditions, involving 1) national and global economic factors; 2) physical environment factors; and 3) legislative, social, economic, demographic attitudinal factors. From a tax compliance monitoring viewpoint, the existence of such factors may complicate determining the extent to which changes in observed behaviour can be attributed to the actions of the revenue body, as explained hereunder:[15]

"The attribution problem concerns how to determine whether a particular program caused the observed results, and to what extent. For example, a 'snapshot' of compliance <u>levels</u> in Australia could be shown by at any particular time (by number and dollar value of tax returns) and compliance <u>change</u> could be shown over time (by percentage trend). However, measuring compliance effectiveness means that these changes need to be attributed to ATO activities, rather than other factors. Furthermore, business needs will probably dictate that causes of observed changes also need to be attributed to specific areas or capabilities within the ATO, or even to individual projects.

[15] See '*Literature Review, Measuring Compliance Effectiveness*' (Australian Taxation Office) May 2007.

There are three main ways in which observed changes might not be attributable to compliance activities.

Firstly, a change might have occurred regardless of a compliance activity or program and may be due to external or internal factors. Secondly, while a program may have been necessary for the result to have occurred, it may not have been sufficient for the result. That is, particular circumstances were also required for that program to have had the results it did. This is important if the results are to be generalised to other contexts, such as different places, times or situations. This is called external validity. Where neither the program nor the circumstances can be perfectly replicated, the inferences could be weak. This has particular relevance for decision making in an organisation. It is therefore advisable to use multiple evaluation strategies where there are significant threats to external validity (Treasury Board of Canada, 1998). Thirdly, there may be no observable changes, but in fact a program may have halted deterioration and simply maintained the status quo. This does not mean that the program had no effect—it is still vital to know what would have happened had the program not been implemented.

54 More is said on the methods that can be applied for inferring attribution in the following section.

Direct and indirect effects of compliance treatments

55 Previous OECD materials have discussed the issue of the *direct* and *indirect* (ripple) effects of compliance treatments—see '*Compliance Measurement*' (2001) at pages 12-13, and '*Managing and Improving Compliance*' (2004), pages 63-64.

56 The *direct* effects of compliance treatments refer to the results achieved with the targeted taxpayer population for the fiscal period under examination and in subsequent periods. *Indirect* effects, on the other hand, refer to the impacts of treatments among other taxpayers, both for the period under examination and for subsequent periods. *Indirect* effects may result directly from personal knowledge of the affairs of target taxpayers, and/ or indirectly through media publicity or some other medium of communication. By their nature, *indirect* effects are extremely difficult to isolate and quantify.

57 Assessing the *direct* and *indirect* effects of compliance treatments in targeted risk areas is beyond the intended scope of this note and will be dealt with in further work on evaluation to be conducted by the Forum in 2008. This work will explore some of the different methods that can be used to assess the impact of risk treatments at the targeted risk level. Where available, practical examples will be provided to demonstrate how these methods are used by individual revenue bodies. The main methods are briefly summarised in Table 1 below while Part IV of this note provides two practical examples of compliance measures and indicators involving the use of a control (peer) group method.

Table 1. Examples of methods for assessing risk treatment impacts & program effectiveness /1

Method	Explanation
Randomised control trials	Compares a control group and treatment group and assumes the observed differences are due to the activity being evaluated. The control group should be representative of the treatment group and of an appropriate size.
Champion/ challenger method	The method compares the results of treatments on three different groups with different weightings. The first group is a control group, containing 80% of the observed sample and subjected to a current (champion) treatment. The other two groups each contain 10% of the observed sample and are subjected to different (challenger) treatments. The results are evaluated to determine which treatment group was most effective and, if it was one of the challengers, that challenger is made the champion and the method is repeated with other challengers
Comparison group study	Like randomised control trials, this method compares two groups to find the difference, which is then attributed to the activity in question. However, rather than use a group chosen randomly it uses a comparison group with similarity to the treatment group.

Non-experimental direct analysis	This method only examines the treatment group and there is no comparison with a control group. The method can be applied on a pre and post study basis, or as a longitudinal study which looks at change over time. This method has weaknesses concerning accurate attribution.
Trend analysis	Trend analysis provides comparisons over time. However, by itself, this method cannot reliably attribute any observed changes over time to a particular cause (such as compliance activity). Other supporting evidence is required.

/1. Sourced from '*Literature Review, Measuring Compliance Effectiveness*' (Australian Taxation Office) May 2007.

II. Developing a comprehensive compliance monitoring framework

Why have a compliance monitoring framework?

58 Revenue bodies exist to administer the tax laws in a way that ensures high and improving levels of compliance are being achieved. It follows that in order to gauge progress in achieving their primary goal they require a set of reliable quantifiable measures and indicators for the major taxes they administer.

59 The guidance note '*Compliance Risk Management: Managing and Improving Tax Compliance*' emphasized the value to revenue bodies of having a 'compliance measurement framework' [16]:

> *"To enable a revenue authority to monitor its performance against its overall compliance plan the authority needs to establish a consistent and comprehensive picture of compliance at any given time. This guidance note recommends application of a Compliance Measurement Framework (CMF) similar to the framework in Canada to provide a systematic approach to monitoring and measuring compliance. A CMF enables decision makers to:*
>
> *— understand compliance trends and how they relate to current programmes and initiatives;*
>
> *— help identify areas where compliance treatment strategies need to be modified or adjusted; and*
>
> *— be aware of emerging trends in non-compliance that will need close attention in the future………*
>
> *Revenue authorities that fail to measure the effectiveness of their compliance strategies run the risk of continuing to sub-optimise their strategy selection."*

60 This prescription is fairly self-explanatory and underlines the importance to all revenue bodies of having a comprehensive approach. On the other hand, it raises some obvious questions and difficult challenges to be addressed:

— What is a compliance measurement framework (CMF) in practical terms?
— How might a CMF be developed, implemented and updated as needed?
— What measures and indicators should be included in the CMF?

61 The remaining parts of this note provide practical guidance on these matters.

What is a compliance monitoring framework (CMF) in practical terms?

62 A CMF can be defined in broad terms as an agency-wide strategy for monitoring compliance and evaluating the impacts of specific compliance improvement activities. To achieve its objectives, it embraces a comprehensive range of compliance measures and indicators and accompanying measurement methodologies for the key compliance obligations of the major taxes administered by the revenue body.

63 The research conducted has revealed that relatively few national revenue bodies in OECD countries have a reasonably comprehensive approach to the monitoring of taxpayers' compliance, while a number of others are intensifying their efforts to develop a more informed understanding of taxpayers' compliance levels and trends in compliance. While it is still very much an evolving area of tax administration, this all provides a base of experience that has been used to inform this note.

[16] In the course of developing this note Compliance Subgroup members agreed that the term 'monitoring' rather than 'measurement' was more appropriate given the nature of the activity being described. Accordingly, the term 'compliance monitoring framework' has been adopted for the purpose of this note.

64 The CRA's describes its CMF as a reference tool that lays out the key concepts, constructs and operational definitions for the study of compliance. Its application provides a structured, comprehensive, and dynamic approach for research on tax compliance behaviour that aims to enhance the CRA's knowledge of program effectiveness. The CMF is used as a basis for research planning, monitoring and reporting, and consists of five inter-related elements as the foundation for the study of tax compliance:

1. *Compliance definitions* define the four key compliance requirements that will be the focus for its research and analysis;
2. *Program mapping* aligns tax programs and services to one or more of the four key compliance requirements to provide a consolidated view of the CRA's efforts and influences in support of compliance;
3. *Client segmentation* outlines the approach for segmenting the client population as a basis to analyse & understand trends, issues & behaviours of relevance to compliance strategies;
4. *Compliance indicators* provide the essential building blocks for tracking compliance outcomes trends and developments using proxy measures that are derived from a variety of internal and external accounting sources; and
5. *Measurement methods* describe the methodologies for collecting and processing data for each indicator or set of related indicators.

65 The CRA reports comprehensively on identified trends in compliance in its annual report to Government using a sample of the measures and indicators from its CMF (refer Annex 4).

66 The DTCA's strategy for monitoring compliance flows directly from its general policy objective which is ….. "*maintaining and strengthening the willingness of taxpayers to meet their legal obligations towards the Tax and Customs Administration*". It comprises three broad components: 1) use of specific measures of compliance effectiveness; 2) use of its Tax Monitor survey tool—annual questionnaires of a representative sample of the administration's various client groups to capture data on their attitudes to tax obligations; and 3) targeted research activities. Results of these activities are published in its annual report.

67 The STA describes its approach to compliance monitoring as reflecting its efforts to assess fulfilment of agency's objectives and to gather more knowledge about the environment in which it operates so as to improve its performance. Long term objectives set to reduce the tax gap and increase public trust in the agency are supported by a range of monitoring activities: 1) regular surveys of taxpayers' perceptions, attitudes, and behaviours; 2) a limited number of effectiveness measures; 3) targeted research activities (e.g. the informal sector); and 4) efforts to construct a periodic snapshot of the tax gap. Progress is described in the agency's annual report.

68 HMRC has been putting substantial efforts over recent years into formulating a comprehensive and coherent set of set of compliance-related outcome measures, focusing explicitly on the tax gap and its measurement. Initially targeted at quantifying and addressing indirect revenue leakage in the area of VAT and excise, these efforts in recent years have been extended to include the direct tax gap and, as an extension of this work, to major taxpayer segments and risk areas. It has also devised a comprehensive set of measures for monitoring the timely filing of tax returns and timely tax payment. A feature of its work to date also is the fact that much of the findings have been made public, either through its annual performance or by separately released reports. More is said on HMRC's activities in Annexes 6 and 9.

69 The IRS utilizes its National Research Program (NRP)—also see Annexes 6 and 7—to design and implement its strategy to collect data that is used to measure payment, filing and reporting compliance for all taxes and to deliver the data to the IRS's Business Operation Divisions to meet a wide range of needs including support for the development of strategic plans and improvements in workload identification. The IRS also uses the NRP to analyse taxpayer compliance and to assess the effectiveness of compliance programs and treatments in use by the IRS.

70 The compliance effectiveness measurement framework being developed by the ATO represents its intended approach to measuring compliance effectiveness. It is central to its proposed compliance effectiveness measurement capability. The proposed framework process is described in the following terms:

1. Measures the key compliance obligations, enabling the ATO to measure whether its strategies directed at changing taxpayer awareness, understanding and willingness to comply translate into positive and sustainable shifts in compliance within key obligations.
2. Uses the ATO Business Model to show what type of strategy is needed to change compliance behaviour.
3. Is anchored in corporate processes, namely, the ATO's strategic statement, outcome outputs framework, corporate and business planning and intelligence and risk management processes.
4. Has a coherent logic and is practical, enabling the ATO to think about its desired compliance outcomes upfront.
5. Supports a range of views that gives the ATO the ability to drill up or down and determine compliance effectiveness for different products and segments, and
6. Differentiates the effect of the ATO's strategies from other factors that may be affecting compliance effectiveness, where practical. Because of the inherent difficulties involved in this type of analysis, the ATO takes the approach that evidence of effectiveness must be defensible rather than definitive.

The scope and nature of compliance monitoring activities

Measuring the tax gap - to be or not be?

71 One of the more controversial issues to be addressed under the heading of 'compliance monitoring' is whether revenue bodies should aim (or be required) to measure and report on the overall tax gap (i.e. the difference between the estimated theoretical tax base of all taxes administered and what is actually collected in practice) as part of their approach to monitoring and evaluating changes in taxpayers' compliance. The research conducted in preparing this note has revealed divergent views in the philosophical disposition of some revenue bodies as to the pros and cons of aiming to provide a comprehensive measure of the overall tax gap for their tax system, or even attempting to measure the 'tax gap' for specific taxes.

72 The first point to be recognized is that there is no single phenomenon as 'the tax gap'. As already noted, a revenue body will be confronted by a range of tax gaps, one for each tax that it is required to administer. It follows that any attempt to measure the overall tax gap must inevitably entail an aggregation of separate 'tax gap' measurement activities, each possibly using different measurement methodologies for each tax administered.

73 A number of countries (e.g. United Kingdom and United States) take the view that notwithstanding limitations as to the overall accuracy that can be achieved from tax gap measurement research and the costs involved there is value to government, policy makers and administrators in having a regular/ periodic "snapshot" of aggregate levels of compliance (i.e. the tax gap) and key components, resulting from administration of their tax system. The following statements describe the positions of the agencies concerned:

- ***United States:*** [17] Tax administration in the United States relies in part on the concept of individuals and businesses self-reporting their tax liabilities. Given the voluntary nature of the system, there is a gap between the taxes that should be paid and those that are actually paid – the Tax Gap. The Internal Revenue Service (IRS) has always faced the challenge of

[17] '*The Tax Gap, Compliance Measurement and the National Research Program*' prepared for this study by the Internal Revenue Service's Small Business / Self-employed Operating Unit, Research Division, (February 2007).

closing this gap and is held accountable by the Administration and Congress to do so. The IRS has engaged different measurement efforts over many decades – each more comprehensive than the last.

In the last seven years, the IRS has renewed its commitment to Congress and to the taxpaying public to resolve the tax gap. The IRS has focused more intently - with the knowledge gained through prior efforts and with improvements in technology - on measuring and understanding the tax gap.

The result of this focus is the National Research Program (NRP). The NRP represents a comprehensive and long-term measurement approach, designed to quantify the tax gap, not only for individual income taxes, but for all types of taxpayers, including businesses, and all types of taxes. In the short time since the NRP measures of reporting compliance have been available, the IRS has been able to use the estimates effectively in identifying ways to improve taxpayer compliance and to improve IRS service to the public. The estimates allow the IRS to make data-driven decisions on directing internal resources to best contribute to resolving the tax gap.

- ***United Kingdom:*** [18] HMRC's measurement work is largely focused around understanding the nature and extent of the tax gap, and the full impact of our interventions upon it……… Measurement of this gap captures the measurement of compliance. The UK is unusual in having set targets and proxies around the gap itself. HMRC is accountable through the delivery of Public Service Agreements (PSA) that are set as three year targets. HMRC currently has three targets often summarised as: 1) tax gap closure; 2) improving the customer experience; and 3) frontier protection. Each is broken down into further detail and the first objective comprises four sub-targets:

PSA Objective 1: Improve the extent to which individuals and businesses pay the amount of tax due and receive the credits and payments to which they are entitled:

Target	Description of objectives (to be achieved by 2007-08)
1.1	Reduce the scale of VAT losses to no more than 11 % of the theoretical liability.
1.2	1) Reduce the illicit market share for cigarettes to no more than 13%; 2) Reduce the illicit market share for spirits by at least a half; and 3) Hold the illicit market share for oils in England, Scotland and Wales at no more than 2%.
1.3	Reduce underpayment of direct tax and National Insurance Contributions due by at least £3.5 billion a year.[19]
1.4	Increase the percentage of Self Assessment returns filed on time to at least 93 %.

Needless to say, targets such as these are meaningless unless there are supported by a measurement strategy that can be used to gauge progress.

74 At the time of preparing this note, revenue bodies in both Denmark and Sweden were also undertaking exercises to provide an overall picture of the tax gap for the major taxes administered by them, in order to provide data to inform the planning of future compliance activities. More is said on these activities in Annex 6.

75 The counter argument to attempting comprehensive tax gap measurement is that the costs associated with conducting random audit programs that are required to derive estimates of compliance for most taxes, the revenue foregone from otherwise more productive audits, and the

[18] HMRC's report '*Measurement and Monitoring of Taxpayers' Compliance*' prepared for this study.

[19] HMRC has reported that it is unable to measure progress towards this target by reference to a 'tax gap' measure. Rather, the target is an 'additional yield' target with monitoring of receipts undertaken to demonstrate that a growth in yield did not result from an increase in non-compliance. A technical note providing more detail on the background to the target and the measurement of progress can be found at http://www.hmrc.gov.uk/psa/tn05-08obj1.htm%23tar3

additional compliance burden placed unnecessarily on some taxpayers far outweigh the benefits of the measurement effort. This view is conveyed in the following verbatim comments from two revenue bodies (i.e. Australia [20] and Canada [21]) ....

"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 ……………… 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 would otherwise not need to incur audit-related costs.……

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 (ABS) in its discussion paper on the underground economy. The ABS concludes that the official estimates of GDP are 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.…………."

"The CRA is interested in the concept of tax gap and carefully reviews studies completed to gain a general sense of the compliance challenge facing its administration. However, it is recognized that there is no generally accepted approach to tax gap measurement, and the assumptions built into the various models are numerous and subject to controversial interpretations. And although a tax gap exists, an aggregate theoretical estimate would always be subject to legitimate debate, given the complexity of the exercise used to arrive at it. Further, it is not the best tool to practically apply in terms of resource allocation or strategic decision-making. For these reasons, the CRA does not pursue the development of such an aggregate estimate and prefers to rely on the more rigorous development of longitudinal compliance indicators and operational performance measures to evaluate the success of its programs. In this regard, business case development for additional resources is premised on program performance measures, compliance indicators, and knowledge of relevant business context, practices, and trends."

76 These stated views reflect differences of opinion which are likely to change over time as each revenue body's practical experience of measurement approaches accumulates. Given the evolving nature of the different approaches being adopted, it is not the intention of this note to evaluate the merits of the arguments for or against tax gap measurement per se. Rather, the note is intended to reflect individual country approaches and experiences and present a summary view of possible approaches to compliance monitoring that may, but need not, incorporate comprehensive tax gap measurement activities. The remaining comments in this part lay out the essential elements of a compliance monitoring framework, a management tool for which there appears universal support.

[20] As per the ATO's response to recommendation 5 of the Joint Committee on Public Accounts and Audit Report 398, review of Auditor General's Reports 2002-2003, Fourth Quarter, March 2004.

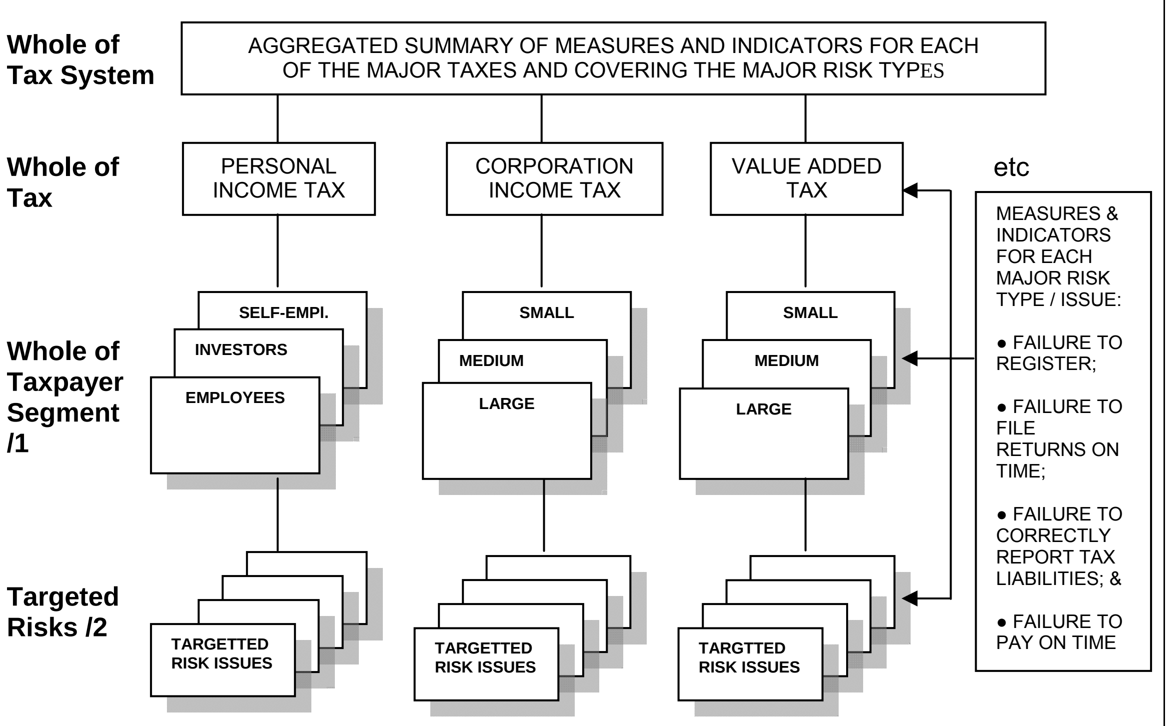
[21] Extracted from the CRA's background paper prepared as input for this note.

Developing a compliance monitoring framework

77 As noted earlier in this note, revenue bodies can benefit from having multiple perspectives (e.g. whole of tax, taxpayer segment, etc.) on taxpayers' compliance for internal planning purposes and in order to be able to account for their performance. To these ends, they require a comprehensive and robust set of outcome-related measures and indicators reflecting the results of their programs and strategies to achieve improved compliance with the tax laws.

78 From the research and work undertaken for the preparation of this note, it is clear that while there is some difference of opinion as to the nature of the approaches to be taken for monitoring compliance (at the aggregate level) , there is wide support for the view that revenue bodies ideally require a comprehensive framework that should: 1) encompass the major taxes administered at the aggregate level; 2) explicitly report on the main compliance risk types; 3) report on compliance impacts at the program and 'targeted risk' level; and 4) include a comprehensive set of measures and indicators, all of which have a multi-year focus (i.e. at least 3 years but preferably 5). Figure 5 depicts the structure of a compliance monitoring framework in a conceptual way while a practical example is provided in Part IV.

Figure 5. Conceptual view of a comprehensive compliance monitoring framework



/1. The 'segments indicated are illustrative only and are likely to vary from country to country.
/2. 'Targeted risk issues' will vary from country to country, as identified by the revenue body's risk management processes.

79 In the next part of this note, guidance is provided by way of descriptions of practical measures (direct) and indicators (indirect) of compliance that might be incorporated into a revenue body's compliance measurement framework.

III. Compliance Monitoring—Practical Measures and Indicators

80 This part provides a description of the main compliance-related measures and indicators used by revenue bodies. It commences with a description of the main measures and indicators used for each of the four areas of compliance obligation identified earlier in the note (i.e. registration, filing, reporting, and payment) and concludes with a section describing the work of selected revenue bodies in undertaking overall measurement exercises to provide aggregate tax gap estimates.

Direct measures of taxpayers' compliance

81 The key measures identified from research of country practices are described in Table 2. This table also provides comments concerning the value, priority, and reliability of these measures as part of a compliance monitoring framework. Actual examples of the indicators used and published by various revenue bodies are set out in Annex 5. The aim of providing this information is to illustrate at the individual revenue body level the main measures and indicators being used, how they are derived, and what they are reveal concerning taxpayers' compliance. In a number of the country examples provided in Annex 5 an indication is given of the administrative target that has been set for improving compliance—the trend indicated revealing what progress has been made in achieving the desired outcome.

Indicators used in a tax compliance context

82 A number of revenue bodies also use a range of indicators—see Table 3, either in conjunction with or as a substitute for a set of direct measures, to monitor movements/ changes in taxpayers' compliance levels, not their absolute level, as well as attitudes and perceptions as part of their overall approach for compliance monitoring.

83 The CRA has developed a comprehensive set of such indicators to complement its direct measures, which it describes in the following terms:

- ***Macro indicators***: These indicators illustrate a relationship between an aspect of compliance and an external statistic, benchmark, or similar point of reference that can be used for tracking macro-trends. This category of indicators use the CRA operational data in conjunction with broad macro-economic, fiscal or socio-economic data produced externally by other organisations such as Statistics Canada. An example is the tracking of GST/ VAT receipts with trends in personal consumption expenditure. These indicators provide a general assurance of the effectiveness of the CRA's approach to compliance.

- ***Public opinion indicators:*** These indicators draw information from client surveys and other public opinion research and are used to understand compliance behaviour and contributing influences. Included are indicators that deal with 1) public awareness of compliance requirements; 2) perceptions, attitudes and motivations that can affect the public's compliance behaviour; and 3) personal experiences in meeting compliance obligations. These indicators provide insight to the behavioural aspects of compliance and public views on tax programs.

84 The CRA's framework also includes 'program impact'[22] and 'non-compliance indicators'[23]. For the purposes of this note, both of these categories are in the nature of direct 'measures' of non-compliance and discussed in such terms in this note.

[22] Program impact indicators assess the impact of specific programs or initiatives on their identified client populations. They explore cause and effect relationships and identify factors for improving program effectiveness. These indicators are usually produced through special studies that vary from year to year according to the research agenda.

[23] Non-compliance indicators are essentially rates of non-compliance projected from the results of random audit inquiries for specific client populations.

85 Other revenue bodies (e.g. Australia, Netherlands, and Sweden) also conduct regular surveys of their taxpayers on their perceptions, attitudes and motivations on compliance-related issues.

86 The DTCA uses a survey tool known as the 'Tax Monitor' to measure the norms and values of taxpayers with regard to the payment and evasion of taxes. This is an annual survey conducted among a representative group of taxpayers and their representatives. Trend data gather over a period of time provides an indirect but valuable means to gauge taxpayers' attitudes and perceptions that, based on a wide body of research, are seen to be important determinants of their behaviour in meeting their own tax obligations.

87 The STA has, since 1986, regularly surveyed public opinion about the tax system and the service provided the tax authorities and enforcement bodies. The present program of annual surveys is based on a two year cycle: the general public is addressed in the first year and the business sector in the next. The surveys have a number of aims: 1) to evaluate how attitudes towards the tax system and STA are changing; 2) to evaluate how the general public and business view the STA's services, different kinds of tax non-compliance and the STA's investigation services; and 3) to provide statistical and inspirational assistance to the STA for its various planning activities.

88 Macro indicators of the kind described are useful from the viewpoint that the data required can be fairly readily obtained and presented by way of trend data. However, for virtually all of the examples of indicators described in this note positive or negative trends are likely to require further investigation to establish with any degree of certainty as to whether there have been real changes in taxpayers' compliance. Of course, a range of indicators all pointing to the same conclusion is likely to provide a stronger base of evidence for any inferences on tax compliance than a single indicator. Practical examples of the indicators described in Table 3 are set out in Annex 5.

Benchmarking of compliance measures

89 The examples provided in Annex 5 of compliance measures and indicators are not intended to serve as the basis for a cross-country benchmarking of the compliance performance of the revenue bodies cited[24]—there are a variety of factors (e.g. differences in measurement calculations and the reliability of the data sources used) that make such comparisons inappropriate (unless there is some validation direct with the revenue body (ies) concerned)). However, it is recognized that some revenue bodies may choose to use some of the data for these purposes and/or refer to revenue bodies' performance reports to gather similar information. This being the case, revenue bodies are urged to closely examine the precise way the measures are described and how calculations have been made and, if needed, to contact the revenue bodies concerned to obtain more concise information.

All compliance obligations—researching and presenting the full view of compliance

90 Of the revenue bodies approached for the preparation of this guidance note, only two have prepared and published a complete picture of the estimated total tax gap for their respective administrations.[25] These are the US Internal Revenue Service (IRS) and the Swedish Tax Agency (STA). The UK HMRC has prepared and published the results of its tax gap measurement work for indirect taxes for each of the last 6 years, and recently has prepared and released the results of its research into the compliance of some segments of direct tax. Danish officials indicated early in 2007 that their revenue body was embarking on a wide program of random audits from late in 2007 that would be used to, among other things, provide a 'whole of tax system' view of the tax gap. For further details, see Annex 6.

[24] All data appearing in this part were provided by revenue bodies as part of the research for preparing this note and/or were obtained from public annual performance/ statistical reports of the revenue bodies identified.

[25] Revenue bodies in Chile and Mexico also undertake compliance monitoring research and provide reporting to Government each year of their estimates of trends in taxpayers' compliance for the major taxes.

Table 2. Summary and description of compliance measures used by revenue bodies (by compliance risk type)

Risk types	Compliance measures	Definition/ description	Value, reliability and priority for a revenue body's CMF	Tax bodies using this measure /1
To register for tax purposes	1) VAT: % of businesses registered	This indicator is derived by comparing the number of GST/ HST taxpayers registered with the revenue body with independent data on business registrations obtained from statistical authorities.	This measure is contingent on availability of independent data, and must also take account of the legislated VAT registration threshold. Where feasible to replicate, this indicator has '*medium priority*' for a CMF.	Canada (For country example, see Annex 5, page 48)
To file returns due on time	1) % of returns filed on time (any tax) 2) % of returns filed after a prescribed period after the due date for filing	This indicator captures the frequency of voluntary filing compliance and is calculated as the number of returns filed by a prescribed date for a liability period divided by the number of returns expected to be filed. Depending on country practice, the 'prescribed date' may be the actual due date identified in the law or some other date after a further stipulated period. For ease of calculation, the 'number of returns' expected is normally taken as the number of active (or presumed to be active) registered taxpayers on the revenue body's database. These indicators can be applied for: 1) any tax, although its use for taxes that are subject to regular filing requirements (e.g. VAT) needs to be considered and applied carefully; and 2) for a sub-segment of taxpayers (e.g. self-employed individuals) to gauge the need for, and impact of, specific compliance improvement strategies.	This measure reveals the extent to which taxpayers comply with their statutory obligation to file tax returns by a date specified in the law or some other date (NB: Some revenue bodies (e.g. UK) specify an additional date to reflect progress in obtaining returns from late filers (e.g. % of returns filed 12 months after normal due date.) The measure can be calculated with high precision and the trend over time should provide an accurate indication of any changes in compliance patterns. The wide use of this measure evidences its '*high priority*' for a CMF.	Australia, Belgium, Canada, Chile, France, Ireland, Japan, Korea, NZ, Netherlands, Norway, Spain, Switzerland, UK and USA (For country examples, see Annex 5, page 48)
	3) Non-filing tax gap	This measure, used by the US IRS, captures the dollar amount of filing non-compliance & is calculated as the total tax liability of late filers & non-filers minus the tax paid by late filers & non-filers.	This indicator is captured periodically as part of the IRS's NRP research program. The trend of this indicator over time reflects the impact of activities to enforce filing compliance.	USA
To correctly report tax liabilities	1) % of overall tax liabilities correctly reported, as measured by random audit programs, for any taxes.	This measure of reporting compliance is derived from the results of a random audit program entailing the audit examination of a statistically representative sample selection of a population of taxpayers. Such programs may also be used to measure compliance for subsets of tax liability (e.g. by segment of taxpayer or specific category of income, deduction and/or credits). For example, in an income tax context, they can be used to	The accuracy of the measures derived from these activities is influenced by the representativeness of the selected random sample and the ability of auditors to correctly assess taxpayers' obligations and entitlements under the law. There are a large variety of factors that determine the importance, priority, and feasibility of this sort of measurement approach (as described in the text).	Used to varying degrees by Canada, Denmark, Ireland, Sweden, UK, & USA. (For country examples, see Annex 5, page 51)

Risk types	Compliance measures	Definition/ description	Value, reliability and priority for a revenue body's CMF	Tax bodies using this measure /1
		estimate the extent of unreported income (by income type) and over-claimed deductions & tax credits. In relation to VAT, they can be used measure the extent of over-claimed input tax credits.		
	2) Personal tax gap (NA methods)	This measure entails a comparison of income derived from National Accounts expenditure estimates with incomes reported in tax returns.	(More research is required to better understand this methodology.)	Denmark, Sweden, Chile, Mexico
	3) VAT tax gap (NA method)	This measure entails a comparison of actual VAT receipts (lagged as deemed appropriate) with an estimate of the potential revenue base using relevant consumption expenditure data collected for National Accounts (NA) purposes, adjusted for policy settings that reduce the VAT base (e.g. exemptions, reduced rates, VAT registration thresholds) and estimated tax collection lags. The resultant "gap" is an estimate of revenue leakage resulting from all forms of non-compliance. However, there are a number of issues that bear on the reliability of the tax gap computed using this method: 1) NA expenditure data are based on surveys (that may not capture all relevant expenditure including that which arises in the NOE); 2) There is a lag in the availability of survey data meaning that any estimates of the potential tax base and VAT gap based on forecasted expenditure are subject to revision; 3) Expenditure data, and hence estimates of the potential base and revenue losses, can be subject to methodological revision; and 4) Net VAT receipts in any year do not necessarily relate to liabilities in that year (e.g. collections arising after audits of prior years liabilities and the enforced late collection of taxes).	Given the issues raised concerning the accuracy and reliability of this measure, there are varying views as to its value as a trend indicator of compliance. On the one hand, use of this measure in a <u>professional, thorough, and consistent</u> manner is seen as providing a "broad order of magnitude" estimate for the VAT tax gap (i.e. the total amount of VAT revenue not collected as a result of all forms of non-compliance). Of particular value in a compliance planning and monitoring context is the trend of the indicator over a 4-6 year timeframe, more so than any individual year's result. On the other hand, some see the measure as too inaccurate and/or the general issue of the 'tax gap' as being politically sensitive. In Europe where there are major concerns for the perceived overall extent of VAT revenue leakage, this measure (and others) are currently being applied for all 27 member countries by external consultants working on behalf of the EC. Furthermore, the Contact Committee of the Supreme Audit Institutions of the EU has resolved to "encourage" revenue bodies and statistical agencies to produce their own 'top down' and 'bottom up' estimates of VAT losses in order to check their reliability and to allow international comparisons. Given all of this, the measure would seem to have a '*high priority*' for at least revenue bodies in Member States.	Argentina, Chile, Denmark, Mexico, Norway Sweden, UK (For country examples, see Annex 5, page 54) and Annex 9)

Risk types	**Compliance measures**	**Definition/ description**	**Value, reliability and priority for a revenue body's CMF**	**Tax bodies using this measure /1**
	4) Excise tax gap (NA method)	This methodology entails deriving an estimate of the theoretical excise tax liability for each major product subject to excise (e.g. tobacco and alcohol) using relevant national accounts consumption expenditure data to assess the total amount of expenditure that is theoretically liable to excise and estimating the excise liability on that expenditure. The estimated excise tax base is then compared with net excise receipts to derive an estimate of the excise tax gap for the particular product (i.e. the aggregate revenue leakage resulting from all forms non-compliance).	The methodology and results for this measure are published annually by HMRC. The measurement work follows on from concerns some years ago as to the incidence of cross channel smuggling etc. This may not be a major area of concern for other OECD revenue bodies.	UK
To pay tax due on time	1) % of taxpayers paying taxes on time	This indicator is calculated by comparing the number of taxpayers paying their tax liabilities (voluntarily) on time for a given liability period with the number of taxpayers who actually pay tax for the 'tax liability' period. Depending on country practice, the date for '*timely*' tax payment is normally the due date for payment prescribed in the law (or very shortly thereafter). Depending on the tax type, the liability period may be monthly, bi-monthly, quarterly, six monthly or annually.	These indicators can be calculated reasonably accurately for each tax and provide insights as to the compliance of taxpayers in paying their tax obligations on time. The trend over time gives a good indication of any changes in compliance patterns. Given their wide use, the indicators are seen to have a '*high priority*' for a CMF.	Australia, Austria, Belgium, Canada, France, Ireland, Japan , Korea, Mexico, Netherlands, Norway, Switzerland, UK, USA (For country examples, see Annex 5, page 62)
	2) % of tax paid on time	This indicator is calculated by comparing the amount of tax paid for a tax liability period by the prescribed date (or very shortly thereafter) with the overall amount of tax debited for a given liability period. It measures the extent to which taxpayers comply with their statutory obligation to pay each tax liability by a date prescribed in the law (NB: Some revenue bodies (e.g. UK) specify an additional date to reflect progress in obtaining tax payments from late payers.)		

/1. This information was obtained principally from a survey of members carried out in the first half of 2007. For some countries, use of the measure may not cover all major taxes.

Table 3. Summary and description of compliance indicators used by revenue bodies

Risk types	Compliance indicator	Definition/ description	Value, reliability and priority for a revenue body's CMF	Tax bodies using this indicator
To register for tax purposes	The number of corporations registered for tax purposes compared with the number reported by statistical or regulatory authorities.	This trend indicator shows the relationship between the number of corporations registered for tax purposes and the number registered externally (typically by a corporate regulatory body).	There may be legitimate reasons in individual countries explaining the differences between these two indicators. That aside, a divergence in the relationship over time may be indicative of increasing non-compliance with tax laws. The feasibility and value of this indicator will vary from country to country.	Canada
To file returns due on time	The participation rate (i.e. proportion of adult citizens filing a tax return).	The participation rate is the proportion of adult citizens who filed a tax return for each fiscal year, compared to the number of adult citizens as established by national census processes.	This trend indicator reflects the rate of overall return filing from all citizens (as income taxpayers), but not the extent of *timely* filing. Use of the indicator is not feasible in countries where employee taxpayers are generally not required to file a tax return.	Canada
	The % of returns filed with salary and wage income and/or self-employed income to independently derived estimates of the labor force.	This trend indicator shows the relationship between the number of taxpayers filing returns with employment and self-employed income —the labour force—with independently derived estimates of the labour force (typically produced by government statistical bodies)	This trend indicator reflects the rate of overall return filing from citizens deriving employment income or from self-employed sources (as income taxpayers), but not the extent of *timely* filing. Use of the indicator is not feasible in countries where employee taxpayers are generally not required to file a tax return.	Canada
To correctly report tax liabilities	Growth of aggregate personal income reported to the revenue body compared to personal income estimated by statistical bodies.	This trend indicator compares the relationship between growth in aggregate personal income reported to the revenue body and the corresponding amount estimated by statistical bodies using various data sources. The feasibility of using this indicator, either in aggregate form or for major categories of income (e.g. wages, rents), is contingent on the independence of the data sources used by statistical bodies.	The usefulness of this measure will depend on the range of data available to the revenue body from annual tax returns. It is unlikely to be feasible in countries where employees are generally not required to file annual tax returns and/or where interest and dividend interest income is taxed at source as a final tax.	Canada
	Net income of unincorporated enterprises reported	This trend indicator compares the relationship between the net income of unincorporated enterprises reported to the revenue body (i.e.	The feasibility and usefulness of this indicator will depend on the range of data available to the revenue body from annual tax returns.	Canada

Risk types	Compliance indicator	Definition/ description	Value, reliability and priority for a revenue body's CMF	Tax bodies using this indicator
	to the revenue body compared with the amount estimated by national statistical bodies	personal income from self-employment in Canada) and the corresponding amount estimated by statistical bodies using various data sources. The feasibility of using this indicator, either in aggregate form or for major categories of self-employment income (e.g. professional, business, farming, fishing, rental, or commission income) is contingent on the independence of the data sources used by the revenue bodies.		
	1) % of net corporation income that was taxable; 2) The amount of income tax payable as a % of net income; and 3) The amount of taxes payable as a % of corporate profits before tax.	All of these indicators reflect relationships between items of information contained in the annual tax return of corporations that may be influenced by changes in compliance behaviour. Other things being equal, the trend of these indicators over time may (but not necessarily) reflect changes in taxpayers' compliance behaviour. On the other hand, changes in these relationships may result from extraneous factors (e.g. tax policy developments, changes in the use of tax concessions) that are not related to taxpayers' compliance. The indicators should therefore be used as a pointer to further inquiry in order to better understand the reasons for the trend(s) indicated	These indicators may be of assistance in the absence of more direct measures pointing to changes in taxpayers' compliance.	Canada
	Effective tax rates (ETR): The average amount of tax raised in assessments compared with net business income.			Australia, Canada
	Automated risk assessments: The proportion of returns that are assessed systematically of being "at risk"	This methodology entails the systemic risk scoring of tax returns as they are computer processed and comparisons of aggregate tax-at-risk and numbers of taxpayers scored over time. As such, use of the methodology is only achievable by those revenue bodies with a sophisticated/mature system for risk assessing tax returns.	The value of this indicator turns on the sophistication of the scoring criteria and overall system for risk assessing tax returns in place. As 'risk potential' may be influenced by changes over time to the risk scoring criteria and the inclusion of new risk issues, the isolation of any trend may require fairly complex examination.	Canada
To pay taxes on time	The ratio of end-year tax debts to total annual gross or net revenue collections	This indicator is computed by comparing the total amount of tax outstanding (either calculated in 'gross' terms or reduced by the amount of disputed debt and/or debt subject to insolvency action to	This indicator calculated over a number of years is used by a number of revenue bodies to gain some insight as to the likely overall trend of tax payment compliance (rather than timely payment per se). An	Australia, Canada, Ireland, Netherlands

Risk types	Compliance indicator	Definition/ description	Value, reliability and priority for a revenue body's CMF	Tax bodies using this indicator
	received by the revenue body.	arrive at an amount of "collectible debt") at the end of the fiscal period to the 'gross' or 'net' amount of overall annual revenue collected by the revenue body in the relevant fiscal year.	upwards trend in the indicator (i.e. where recorded end-year tax debt is growing faster than annual tax collections) may indicate a decline in tax payment compliance and/or reduced efficiency and effectiveness in the enforced debt collection function, while a downwards trend may indicate improved payment compliance.	(For country examples, see Annex 5, page 63)
All risk categories	Public opinion survey findings on citizens attitudes to taxpayers' compliance	These indicators draw information from client surveys and other public opinion research and are used to understand compliance behaviour and contributing influences. They include indicators that deal with 1) public awareness of compliance requirements; 2) perceptions, attitudes and motivations that can affect the public's compliance behaviour; and 3) personal experiences in meeting compliance obligations.	These indicators provide insight to the behavioural aspects of compliance and public views on tax programs. Survey findings of this nature may reflect general community attitudes to compliance as well as the degree of confidence perceived in a revenue body's administration of the laws. In both respects, they can provide valuable feedback by helping to identify changes/ patterns in compliance behaviour.	Australia, Canada, Netherlands, Sweden (For country examples, see Annex 5, page 60)
	Growth of net VAT collected compared to growth of retail sales & personal domestic expenditure (as per NA estimates)	This trend indicator compares the relationship between growth in net receipts and consumption expenditure. A consistent trend implies unchanged compliance levels, while any divergence may suggest movements in compliance warranting further examination.	Given the aggregate nature of the indicator its trend will/may reflect overall movements in filing, reporting, and/or payment non-compliance. This is a valuable indicator for a CMF in the absence of a VAT gap measure.	Australia, Canada (For country examples, see Annex 5, page 55)
	VAT Revenue Ratio (VRR)	This indicator is defined as the ratio between the *actual VAT revenue collected* and *the revenue that would theoretically be raised if VAT was applied at the standard rate to all final consumption expenditure and perfect compliance was achieved*. As such, it is influenced by both policy design & administrative factors. A high VRR is taken as evidence of a VAT bearing uniformly on a broad base with effective tax collection. On the other hand, a low VRR may indicate an erosion of the VAT base either by policy choices (i.e. exemptions or reduced rates) or administrative considerations such as poor compliance or poor tax administration, or both.	Although use of the VRR to monitor compliance has not been observed as yet, changes in the VRR trend over time could result from changed compliance behaviour. However, in practice other factors external to the revenue body (e.g. tax policy changes) may also influence the ratio, and their actual impact may be difficult to quantify. In the absence of any external factors, a trend of declining or increasing VRRs for a country's VAT system may reflect negative or positive movements respectively in taxpayers' compliance. The VRR may be useful in the absence of any other measure/ indicator, <u>but only as a pointer to further inquiry</u>.	Computed ratios for all countries are shown at Annex 5, page 56.

IV. Bringing it together—an illustrative compliance monitoring framework

91 Drawing on the ideas set out earlier in this note and the practical examples of compliance measures and indicators described in Part III, this part develops some illustrative examples of a compliance monitoring framework for the 'whole of tax' , 'taxpayer segment' and 'targeted risk' levels. It must be emphasised that the framework is illustrative and by no means definitive; what is feasible at an individual revenue body level will be contingent on many factors (e.g. the availability of relevant external data sources, the comprehensiveness of the data captured from the processing of tax returns, the use of random inquiries to establish the incidence of under-reporting). Furthermore, the illustrative framework is not intended to imply that revenue bodies should aim to estimate, either regularly or on an ad hoc basis, the size of the overall tax gap for any or each of the major taxes administered, although this is clearly an approach some countries may wish to consider and adopt, if considered useful in their circumstances.

92 The framework, as illustrated in Table 4 is presented on a tax-by-tax basis and for each major risk type shows the measures and indicators that might be useful, based on revenue body experience, at each of the three management levels as part of a compliance monitoring framework.

93 It should be noted that some of the measures and indicators given as examples (both in the illustrative framework and in the country examples in Annex 5) are subject to various qualifications and limitations and, therefore, cannot be viewed as absolutely precise/fully reliable measures of compliance or non-compliance. For example, the use of random audit inquiries to establish the degree of under-reporting of tax liabilities is generally subject to the practical limitation that such inquiries may not fully identify all aspects of taxpayers' under-reporting. Similarly, the National Accounts and other data used in macro-comparisons to derive estimates of the VAT tax gap are subject to various limitations and assumptions that impact their absolute reliability and, indeed, may be revised over time. That said, such measures can be seen as the best available measures of compliance or non-compliance, where such measures are deemed necessary to have and in the absence of any others. However, where such measures are used, especially in the public domain, they should be accompanied by clear statements as to the limitations pertaining to their accuracy.

94 Finally, the checklist provided in Box 4 may be helpful in assessing what is appropriate and constructing a meaningful set of measures and indicators at the individual revenue body level.

Box 4. Checklist for effectiveness-related indicators /1

- ***Effectiveness indicators should be***: 1) expressed as an index, rate or other ratio (a raw number is meaningless unless expressed as a comparison); 2) compared with one or more criteria to show whether it has been satisfactory (for example with standards, targets, pre and post changes, over time, similar program); and 3) monitored at regular intervals.
- ***Check higher order results***: 1) Do they address the real needs of program clients (actual and potential)? 2) Are they well-matched to government policies? and 3) Do they contribute to the organisation's goals?
- ***Check the cause-effect chain***: 1) Is the achievement of lower–order results likely to bring about higher order results? 2) Is any link in the cause-effect chain based on doubtful for unknown assumptions? 3) What are the likely unintended effects, side effects, or counter-productive effects of each level of the hierarchy? and 4) Are there other factors affecting achievement of results?
- ***Check performance indicators***: 1) Is there at least one indicator for each important program result? 2) Does each indicator provide important and useful information about the program? 3) Can the necessary data be provided cost effectively? 4) Can the data be collected with reasonable accuracy? 5) Will use of the data encourage positive staff behaviour (for example focus on positive outcomes rather than minimum standards)? and 5) If an indicator is new, does it include the possibility of a target in the future?

/1. Source: '*Performance Indicators for Government: Handbook*' DRG Consulting 2003), as reported in '*Literature Review, Measuring Compliance Effectiveness*' (Australian Taxation Office) May 2007.

Table 4. Illustrative compliance monitoring framework for a revenue body

1) Personal income tax

<table>
<tr><th rowspan="2">Level</th><th colspan="4">Compliance measures and indicators (by major risk types)</th></tr>
<tr><th>Failure to register</th><th>Failure to file on time</th><th>Failure to report correctly</th><th>Failure to pay on time</th></tr>
<tr><td rowspan="5">Whole of tax</td><td rowspan="2"></td><td rowspan="2">Trend % of returns filed on time (and by other fixed points of time)</td><td rowspan="2">Trend % of liability under-reported (as per by random audits)</td><td>Trend % of tax paid on time</td></tr>
<tr><td>Trend % of taxpayers who pay on time</td></tr>
<tr><td colspan="3">Trend in growth of aggregate personal income reported to the revenue body compared to personal income estimated by Statistical bodies. /1</td><td rowspan="2">Trend % of end-year unpaid tax compared to annual (net or gross) revenue collections</td></tr>
<tr><td colspan="2">Trend in participation rate (% of adult citizens filing a return)</td><td>Trend in the incidence of taxpayers assessed "at risk" by automated risk assessment system.</td></tr>
<tr><td colspan="4">Public perceptions survey results</td></tr>
<tr><td colspan="5"></td></tr>
<tr><td rowspan="3">Whole of taxpayer segment</td><td rowspan="2"></td><td rowspan="2">Trend % of returns filed on time (and by other fixed points of time)</td><td>Trend % of liability under-reported (as per random audits)</td><td>% of tax paid on time</td></tr>
<tr><td>Trend in the incidence of taxpayers assessed "at risk" by automated risk assessment system.</td><td>% of taxpayers who pay on time</td></tr>
<tr><td colspan="4">Public perceptions survey results</td></tr>
</table>

/1. The feasibility of measures and indicators relying on data compilations of national statistical bodies is contingent on the sources and comparability of the data items concerned. Data sourced directly from the revenue body is unsuitable for such measures.

2) Value added tax

<table>
<tr><th rowspan="2">Level</th><th colspan="4">Compliance measures and indicators (by major risk types)</th></tr>
<tr><th>Failure to register</th><th>Failure to file on time</th><th>Failure to report correctly</th><th>Failure to pay on time</th></tr>
<tr><td rowspan="6">Whole of tax</td><td rowspan="2">% of eligible businesses registered for VAT</td><td rowspan="2">% of returns filed on time (by filing periodicity, if useful)</td><td rowspan="2">% of aggregate liability under-reported (as per random audits)</td><td>% of tax paid on time</td></tr>
<tr><td>% of taxpayers who pay on time</td></tr>
<tr><td colspan="4">Trend of aggregate VAT tax gap (as established by macro-comparison with National Accounts data)</td></tr>
<tr><td colspan="4">Trend in growth of net VAT collected compared to personal domestic expenditure estimated for National Accounts purposes</td></tr>
<tr><td></td><td></td><td>Trend in the incidence of taxpayers assessed "at risk" by automated risk assessment system.</td><td>% of end-year unpaid tax compared to annual (net or gross) revenue collections</td></tr>
<tr><td colspan="4">Public perceptions/ attitudes survey results</td></tr>
<tr><td colspan="5"></td></tr>
<tr><td rowspan="3">Whole of taxpayer segment</td><td rowspan="2"></td><td rowspan="2">% of returns filed on time (by filing periodicity if useful)</td><td>% of aggregate liability under-reported (as per random audits)</td><td>% of tax paid on time</td></tr>
<tr><td>Trend in the incidence of taxpayers assessed "at risk" by automated risk assessment system.</td><td>% of taxpayers who pay on time</td></tr>
<tr><td colspan="4">Public perceptions/ attitudes survey results</td></tr>
</table>

3) Corporation income tax

<table>
<tr><th rowspan="2">Level</th><th colspan="4">Compliance measures and indicators (by major risk types)</th></tr>
<tr><th>Failure to register</th><th>Failure to file on time</th><th>Failure to report correctly</th><th>Failure to pay on time</th></tr>
<tr><td rowspan="5">Whole of tax</td><td rowspan="4">Trend in number of corporations registered for tax purposes compared with an available external aggregate</td><td rowspan="4">% of returns filed on time (and by other fixed points of time (e.g. end of fiscal year))</td><td rowspan="2">% of aggregate liability under-reported (measured by random audits)</td><td>% of tax paid on time</td></tr>
<tr><td>% of taxpayers who pay on time</td></tr>
<tr><td>Trend in: 1) overall effective average tax rates of corporations; and 2) % of corporations' net income that was taxable.</td><td rowspan="2">% of end-year unpaid tax compared to annual (net or gross) revenue collections</td></tr>
<tr><td>Trend in the incidence of taxpayers assessed "at risk" by automated risk assessment system.</td></tr>
<tr><td colspan="4">Public perceptions/ attitudes survey results</td></tr>
<tr><td colspan="5"></td></tr>
<tr><td rowspan="3">Whole of taxpayer segment</td><td rowspan="2"></td><td rowspan="2">% of returns filed on time (and by other fixed points of time (e.g. end of fiscal year))</td><td>% of liability under-reported (measured by random audits)</td><td>% of tax paid on time</td></tr>
<tr><td>Trend in 1) overall effective average tax rates of corporations; and 2) % of corporations' net income that was taxable</td><td>% of taxpayers who pay on time</td></tr>
<tr><td colspan="4">Public perceptions/ attitudes survey results</td></tr>
</table>

4) All taxes

<table>
<tr><th rowspan="2">Level</th><th colspan="4">Compliance measures and indicators (by major risk types)</th></tr>
<tr><th>Failure to register</th><th>Failure to file on time</th><th>Failure to report correctly</th><th>Failure to pay on time</th></tr>
<tr><td>Targeted risks /1</td><td></td><td>Trend in filing compliance by targeted taxpayers in subsequent (i.e. post-enforcement) periods</td><td>Trend in effective average tax rates of targeted taxpayers in subsequent filing periods compared to those of taxpayers in selected control group</td><td>Trend in payment compliance by targeted taxpayers in subsequent (i.e. post-enforcement) periods</td></tr>
</table>

/1. This section is not fully developed, with further work to be done in 2008.

95 Clearly, it is at the discretion of individual revenue bodies to decide which measures and indicators are appropriate to their circumstances, taking account of factors peculiar to their individual circumstances. Equally relevant is the fact that what is important with all of the measures and indicators described is their trend over time, indeed more so than their absolute value for a particular fiscal period. In this respect, it may take some years to establish trends that can be used to monitor specific risk types in an effective manner.

Part V. Conclusions and recommendation

96 As noted at the outset of this note, revenue bodies ideally require a comprehensive set of practical outcome–related measures on taxpayers' compliance (covering the major risk types) in order to gauge progress towards achievement of their primary goal (i.e. to improve overall compliance with tax laws). Measures of the impacts resulting from compliance improvement programs aim to inform a revenue body on the effectiveness of its overall strategy and approach to compliance improvement and whether new or varied approaches are required, including changes to legislation. In line with developments in public sector administration, revenue bodies are also increasingly being expected to account more fully for their performance in general and for the specific impacts of their programs in particular.

Conclusions

97 The research conducted for the preparation of this report has revealed valuable information on the scope and nature of approaches and activities of national revenue bodies for the monitoring of taxpayers' compliance. The key conclusions are set out hereunder:

- While relatively few revenue bodies in OECD countries have a comprehensive approach to the monitoring of taxpayers' compliance, there is considerable interest in the topic, from both revenue bodies and external stakeholders, including government auditing bodies;

- A number of revenue bodies have started to intensify their efforts to improve their knowledge and understanding of taxpayers' behaviour and the impacts of their efforts to increase voluntary compliance;

- A few revenue bodies have made a good level of progress in developing an overall compliance monitoring framework, and their approaches and experiences have been used to inform this note, including by way of providing many practical examples of outcome-related measures and indicators concerning taxpayers' compliance.

- A few revenue bodies make public the results of their specific compliance monitoring activities, thus providing valuable insights as to the overall effectiveness to their administration and contributing to increased dialogue and exchanges of experiences on this important tax administration issue.

- Effective management of the tax system, from a tax compliance viewpoint, ideally requires outcome-related measures that are strategic, operational and tactical in nature; within the note, these multiple perspectives are described as '*whole of tax*', '*whole of taxpayer segment' and 'targeted risks';* ideally, a revenue body's compliance monitoring framework should encompass all of these perspectives to inform all levels of planning and evaluation,

- There is sufficient country experience to provide ideas on potential measures and indicators for a compliance monitoring framework, an illustrative example of which has been provided in this note.

- There are indications that revenue bodies are increasingly relying on the deployment of random audit-type activities, conducted to varying degrees of coverage and over varying periods of time, to inform their knowledge and understanding of taxpayers' behaviour and the effectiveness of their strategies in improving taxpayers' compliance;

Recommendations

98 Recognising their important planning and accountability requirements, revenue bodies in member countries are encouraged to improve their understanding of taxpayers' compliance and the effectiveness of their compliance improvement programs by developing a compliance monitoring

framework (if one is not already in place). Such a framework, which can be progressively enhanced over time, should embody a range of measures and indicators for each of the major risk types for the major taxes administered by the revenue body, drawing on the ideas, approaches and practical examples provided in this note and other measures and indicators deemed useful by them

99 In line with the practice of revenue bodies in a small number of countries, revenue bodies are encouraged to document and publish their approaches (and where applicable, any related qualifications and limitations concerning the measures and indicators applied) and the results of their monitoring efforts in this area to promote greater dialogue, understanding and exchanges of experience among national revenue bodies.

Annex 1

Monitoring Taxpayers' Compliance—What Oversight Authorities Have Said

The comments hereunder reflect the wide and growing interest by national oversight bodies of the need for revenue bodies to develop a more 'outcomes focused' approach to performance monitoring and measurement in the area of taxpayers' compliance. They are direct quotes from the sources indicated.

Australia: Since the cash economy is 'hidden' activity and it is difficult to quantify the revenue gap in aggregate, the ATO needs some mechanism to judge the impact of its cash economy compliance projects and activities. Assessing impact involves determining whether compliance work improves overall industry compliance in cash economy areas. The key impact requiring measurement is the effect occurring from particular compliance treatments on the overall level of compliance and behaviour in specific cash economy industries, as demonstrated by tax revenue growth. Another impact that is useful for the ATO to measure is the effect on specific taxpayers who have been subject to compliance activity.

The ANAO found that the ATO's various cash economy activity reports do not allow the ATO to demonstrate reliably the impact of its activities in cash economy industries, over time.

Given the considerable attention and resources allocated by the ATO to cash economy compliance, the ANAO considers that the ATO should enhance the way it assesses its impact on the cash economy. The ANAO suggests that this could involve an evaluation strategy, building on its current approach. The evaluation strategy would: measure underlying movements in revenue collections in the cash economy industries that are being targeted (that is, abstracting from any external factors); measure changes in the attitudes of industry participants and consumers over a period of time (as reflected in changes in behaviour); and compare the tax payments of treated entities with those of non-treated entities (which the ATO already does).

(*The ATO's Strategies to Address the Cash Economy (Australian National Audit Office, February 2006.)*

European Commission (re VAT): Evaluation or performance measurement has become more important because of decentralisation of management and because more emphasis has been put on efficiency, effectiveness and quality of service. Earlier reports recommended first to develop a broad range of performance indicators which measure not only aspects of administrative cost effectiveness but also taxpayers' costs, overall compliance levels, the quality of the services provided, equal treatment of all taxpayers, etc. and second to establish standardised evaluation and reporting tools in order to provide a consistent and accurate information base for the review of performance.

A number of Member States have accordingly identified a range of performance indicators that can be used at central and local level to monitor the success of their plans for control and debt management. Most of the preferred performance indicators compare the number of controls undertaken, the volume of debts resolved or outstanding, and the resources applied in achieving these results, i.e. by analysing the administration's performance in relation to its own costs and to the actual results achieved. There are, however, only a few indicators in use that either measure the costs to traders of meeting their tax obligations or allow a clear assessment of the improvements in voluntary compliance across the total population of taxpayers. The Commission foresees increasing pressures to adapt procedures in ways that minimise the administrative and financial burden on compliant taxpayers.

Thus, notwithstanding the recommendation, it seems that Member States still attach more importance to quantity, i.e. to the number of audits, additional assessments, etc., rather than to qualitative performance indicators. Only a few Member States have made a survey to obtain a representative view of the quality of the tax service as a whole or have performed quality controls....................

The principal conclusions and recommendations of this report largely mirror those of earlier Article 12 reports, while perhaps placing a new emphasis on the importance of proper evaluation by Member States of the functioning of their VAT collection activities, ranging from voluntary compliance, through the control plan and control to recovery of the tax. Such evaluation also requires the measurement of the impact of specific actions by the tax authorities. A proper impact evaluation should have an assessment of the situation before and after the implementation of the actions concerned and use indicators to monitor progress from period to period. It is left to the Member States to choose among appropriate indicators those that best take the specific national situation into account.

(Commission Staff Working Document, Annex to 5th report on VAT control and collection procedures, January 2005)

Canada: To better understand trends in taxpayer compliance and to better measure and report on how effective the processing review and matching programs are, the Canada Revenue Agency should report longer-term trend information on taxpayer compliance;

- explain significant changes in compliance patterns and how it is addressing them;
- report statistically valid information on the estimated tax impact of non-compliance with the rules for reporting deductions and credits, and for reporting income subject to third-party reporting; and
- report on its performance in identifying and assessing the related amounts.

(Canada Auditor General, Verifying the Income tax Returns of Individuals and Trusts, November 2005)

Denmark: The Auditor General in a report from 2005 ("Beretning om ToldSkats indsats mod sort økonomi") recommends that the revenue agency in cooperation with governmental bodies should establish guidelines to reduce the extent of the informal economy. The guidelines/countermeasures should be based on analyses that more systematically detect how the underground economy is distributed across lines of business, sectors and different parts of the country.

France: The need for assessing the global amount of non compliance was stressed in the first part of this report. The main aim is to better understand the phenomenon and its importance so that government can react effectively. Such a measurement would also provide an indication and an element amongst others of the efficiency of fight against fraud and non compliance reduction policies. It would help in drawing operational conclusions, e.g. in audit targeting.

Such an assessment could be done as part of preparation and evaluation of strategic documents for tax collection administrations. As this operation is quite heavy the use of documents valid for a number of years is particularly well adapted, especially since the evaluation could be used as background for discussing the outcomes of previous contract or convention and feed discussions for the next ones. However, taking account of the limitations of this assessment, it is clear that it will be more an element of general background than an evaluation and management tool of tax collection administrations.

It is to the various administrations concerned to define the most convenient method to be used according to the work of their own statistical services. In any case, indirect fraud assessment methods should be avoided taking account of their lack of reliability.

Finally and more generally one can hope that this global assessment will be completed by research work on taxpayers' behaviour and their attitude towards taxes. The achievement of this report has indeed showed the predominance of Anglo-Saxon work in this area. It would be desirable, with a view to design adapted strategies, that tax collection administrations stimulate French research on this topic.

New Zealand: The current public sector management system is based on an output-contracting model. Under this system, the IRD's taxpayer audit is delivering against the targets that the IRD has agreed with the Government. The IRD's annual report, the quarterly reports to the Minister, and monthly internal reports show that, over time, the performance of taxpayer audit is consistently in line with the IRD's Purchase Agreement. Central agencies have confirmed that the IRD has consistently delivered on its taxpayer audit outputs.

In recent years it has been recognised that the output-contracting model is not, on its own, an adequate model for measuring public sector performance. The IRD has been one of the departments involved from the outset in identifying the changes required to expand the model to include outcome measures. It has participated in the Pathfinder Project[1], and was an early adopter of the Statement of Intent. The IRD, together with central agencies, has begun reviewing its performance measures and making changes to ensure that the measures are meaningful and include a clear focus on outcomes.

The IRD's review of performance measures has not yet focused fully on taxpayer audit. The current performance targets for taxpayer audit are still focused on output measures such as audit hours performed and the value of discrepancies identified on individual audits. The IRD recognises that these measures are not capable of demonstrating the performance of taxpayer audit in meeting the IRD's vision – to improve taxpayer compliance – that it set out in *The Way Forward 2001 Onwards. (Inland Revenue—Performance of Taxpayer Audit, NZ Auditor General (October 2003).*

The IRD has introduced a number of mechanisms to assess the impact of taxpayer audits on taxpayer compliance. In our view, the IRD has taken steps to implement our recommendation. However, it is too early to assess the effectiveness of these new measures, as some have not yet been implemented fully, and others have been operational for only a year.

(Inland Revenue Department, Performance of Taxpayer Audit—Follow-up Audit, NZ Auditor General (October 2006).

United Kingdom: To determine the appropriate level of resources and their likely effects in preventing and reducing non-compliance it is important to have robust information on losses through non-compliance. The Revenue are developing such information in relation to particular areas of the tax system, but have not found any reliable measure of the overall difference between 100 per cent compliance and actual compliance (the 'tax gap'), and the proportion of this that is explained by tax fraud. In these circumstances, it is difficult to judge the Revenue's success in tackling non-compliance and fraud. We recognise that the Revenue, in line with other overseas fiscal authorities, are pursuing measurement techniques that provide them with practical information on how and where non-compliance is occurring in particular areas of the tax system. However, we consider there are benefits in terms of overall risk management in having an aggregate estimate of the shadow economy if a reliable and practical technique can be identified. With this in mind we recommend that the Revenue continually review new research on shadow economy measurement techniques (paragraph 1.13).

(UK Comptroller and Auditor General, Tackling Fraud against the Inland Revenue, February 2003).

The Department needs relevant performance measures to assess the impact of its compliance work. For 2005 to 2008, the Department has a Public Service Agreement target to reduce by £3.5 billion by March 2008, the annual under-payment of direct taxes and National Insurance contributions. The Department's primary measure for large business Corporation Tax compliance work, which feeds into the Public Service Agreement target, is intervention yield. However, intervention yield has drawbacks as an indicator. It does not give any indication of the overall level of tax compliance; it captures mostly enforcement activity rather than the outcome of preventive measures that secure compliance; and most importantly, it tends to reinforce a culture of focusing on lower value enquiries, which offer greater certainty, to meet overall yield targets. The Department uses intervention yield in lieu of a robust measure of the tax gap (the difference between the amount the Department collects through routine compliance and the total theoretical liability if all taxpayers were fully compliant with Corporation Tax legislation.) It has undertaken research into estimating a tax gap, but is unable to produce robust results because of the lack of verifiable data. Its management information system, which collates the total maximum estimate of tax under consideration, offers the Department the opportunity to develop an overall measure of compliance.

European Union: The Contact Committee supports the recommendations of the Working Group in the field of the VAT that: 1) SAIs should encourage respective Member States to produce both top-down and bottom-up estimates of VAT losses in order to check the reliability and to allow international comparisons; 2) In the short-term, SAIs should encourage respective Member States to adopt the basic methodology for estimating intra-Community fraud, which is deemed to be the most appropriate also for international comparisons, provided that, at least, another agreed methodology is applied to cross check the reliability of the estimate; and 3) responsibility for preparing estimates should be assigned to Tax Administrations/Fiscal Administrations and Main Statistical Offices.

(Resolution of the Contact Committee of the EU Supreme Audit Institutions, December 2007).

Annex 2

Measuring the Performance of Public Sector Agencies: Definitions of Some Commonly-used Terms

<table>
<tr><th rowspan="2">Terms</th><th colspan="4">Countries</th></tr>
<tr><th>Australia /1</th><th>Canada /2</th><th>United Kingdom /3</th><th>United States /4</th></tr>
<tr><td>Outcome(s)</td><td>The impact sought or expected by Government in a given policy area</td><td>An external consequence attributed, in part, to an organisation, policy, program or initiative. Outcomes are not within the control of a single organisation, policy, program or initiative; instead they are within the area of the organisation's influence.</td><td>The ultimate impacts on, or consequences for, the community of the activities of Government</td><td>A measure of the intended result or impact of carrying out a program or activity. They define an event or condition that is external to the program or activity and that is of direct importance to the intended beneficiaries and/or the general public.</td></tr>
<tr><td>Output(s)</td><td>The actual deliverables—goods and services—agencies produce to generate desired outcomes specified by Government</td><td>Direct products or services stemming from the activities of an organisation, policy, program or initiative, and usually within the control of the organisation itself</td><td>The immediate result of Government activities</td><td>Outputs refer to the internal activities of a program (i.e., the products and services delivered).</td></tr>
<tr><td>Performance measure (s)</td><td>Provide a more precise measure of performance than indicators. They relate to outputs and are used when there is a direct causal link between an action and an easily measurable change in performance</td><td rowspan="2">A qualitative or quantitative means of measuring an output or outcome, with the intention of gauging the performance of an organisation, program, policy or initiative.</td><td>Establishes the basis or means by which performance can be demonstrated against a robust scale</td><td rowspan="2">Indicators, statistics or metrics used to gauge program performance.
Measures should reflect desired outcomes. In some cases where clear outcome measures are not available, comprehensive, or of sufficient quality, it may be acceptable to use output measures, interim milestone outcomes, or proxy outcome measures to judge the program's success in achieving desired outcomes. In these cases it is important to provide clear justification and rationale for why the measures chosen are appropriate, and provide comprehensive and quality measurement.</td></tr>
<tr><td>Performance indicator (s)</td><td>Provide a guide on performance where causal links are not obvious and the changes in performance are difficult to measure directly.</td><td>Provides a proxy, where it is not feasible to develop a clear and simple performance measure</td></tr>
<tr><td>Effectiveness</td><td>The extent to which outputs and/or administered items make positive contributions to outcomes</td><td>The extent to which an organisation, policy, program or initiative is meeting its expected results.</td><td></td><td></td></tr>
</table>

/1. Performance Information in Portfolio Budget Statements (Australian National Audit Office, May 2002) and performance Information Principles (Australian National Audit Office, 1996)
/2. Results-based Management Lexicon (Treasury Board of Canada, 2007 website)
/3. Measuring the Performance of Government Agencies (National Audit Office, March 2001)
/4. US Office of Management and Budget (December 2006)

Annex 3

The Non-Observed Economy

This annex provides a definition of the 'non-observed economy (NOE)'—see Box 5—which often gets raised in a tax compliance context. Also included is a brief example of one country's efforts to test the accuracy of academic efforts to measure the magnitude of NOE activities.

Box 5. What is the non-observed economy?

The term "Non-Observed Economy" (NOE) refers to those economic activities which should be included in the GDP but which, for one reason or another, are not covered in the statistical surveys or administrative records from which the national accounts are constructed. What are these reasons?

First, of course, because these activities are carried out in a clandestine fashion to lower the costs of labor by avoiding the payment of taxes or social charges, to avoid the costs associated with legislation on safe working conditions or protection of consumers' rights. This is usually what most people have in mind when they speak of the "underground" or "hidden" economy. Sometimes the transactions are only partly concealed and may be reported to the tax authorities or to the statistical office at lower than true values so as to reduce rather than entirely eliminate taxes. In other cases, there will be no record of the transaction at all and in such cases the payment will usually be made in cash.

Most clandestine transactions involve the production or exchange of goods and services that are perfectly legal in themselves but, obviously, those which involve illegal goods and services - narcotics and prostitution for example – will also be carried out in secrecy. In addition to the "legal" underground, certain kinds of illegal activities are therefore the second component of the NOE.

A third component is the production of goods for own use. This is usually perfectly legal and there is no reason for producers to conceal their activities. It may be omitted from the national accounts only because there are no observable transactions between sellers and purchasers since they are one and the same. In OECD countries, construction and maintenance of dwellings is probably the most important example of production for own use. In transition and developing countries growing one's own food is another important activity. Following the collapse of Communism in the early 1990s, small scale crop production became an essential survival strategy in most transition countries and may have accounted for up to half of total agricultural output in some countries.

The fourth component of the NOE is sometimes termed the "statistical underground". The statistical surveys and the administrative records that provide the basic data for the national accounts are incomplete. Sometimes this is by design; it may simply be impractical to cover every producer in a survey so a cut-off point is used to exclude the smallest enterprises. In other cases, the problem arises from poor statistical practices. The business register used for the survey is out of date or incomplete; the questionnaires are not returned or come back with missing answers; informal activities such as street trading may not be covered by any survey; inappropriate methods are used to correct for non-response.

Source: OECD's Statistics Brief: *Measuring the Non-Observed Economy* (November 2002).

Some observers use the terms "tax gap" and "non-observed economy" interchangeably. However, in reality, there is a clear distinction, as evident from the following explanation:

"Although they are related, the tax gap is not synonymous with the 'underground economy'. Definitions of the 'underground economy' vary widely. However, most people characterize it in terms of the value of goods and services that elude official measurement. Furthermore, there are some items in the "underground economy" that are not included in the tax gap (such as tax due on illegal-source income), and there are contributors to the tax gap that no one would include in the "underground economy" (such as the tax associated with overstated exemptions, adjustments, deductions, or credits, or with claiming the wrong filing status). The greatest area of overlap between these two concepts is sometimes called the "cash economy," in which income (usually of a business nature) is received in cash, which helps to hide it from taxation.

Equally important, the tax gap does not arise solely from tax evasion or cheating. It includes a significant amount of non-compliance due to tax law complexity that results in errors of ignorance, confusion, and carelessness. This distinction is important even though, at this point, the IRS does not have sufficient data to distinguish clearly the amount of non-compliance that arises from wilful, as opposed to unintentional, *mistakes. Moreover, the line between intentional and unintentional mistakes is often a grey one, particularly in areas such as basis reporting, where a taxpayer may know that his or her reporting is inaccurate but does not have ready access to accurate information. This is an area where additional research is needed to improve understanding*." (Source: Reducing the Federal Tax Gap: A Report on Improving Voluntary Compliance (US IRS, August 2007)

Given the sorts of considerations raised by the issues mentioned in Box 5, a fair deal of emphasis has been given by the OECD and other international organizations to providing guidance to government statistical bodies on methods for estimating different kinds of NOE activities for national accounts purposes and to encourage them to make provision, as far as is practicable, in their estimates of official country GDP for the impact of NOE activities. While it is not the purpose of this note to address the concept of the NOE in any detail it is clearly in the interests of all revenue bodies, as part of their overall compliance measurement approach, to understand how NOE-related activities are taken into account for national accounts' purposes.

Efforts to Measure the Non-observed Economy (NOE) [26]

As noted at para. 45 of this note, there have been numerous efforts made to measure the overall size of NOEs in individual countries or for groups of countries. In the main, these efforts have entailed the use of various macro-model methods. However, as noted these models been found to be unreliable and, for some countries, to produce highly exaggerated results. An example of one country's efforts to validate one such estimate is described in the following paragraphs.

The Likely Magnitude of NOE Activities in Australia?

In 2004, largely in response to the reported findings of some academics' research that suggested that Australia's underground economy could be equivalent to up to 15% of official GDP, the Australian Bureau of Statistics (ABS) completed a study explaining its methods for compiling national accounts and examining the implications of missed underground transactions on the quality of national accounts. By way of background, it should be noted that higher estimates of the underground economy are normally based on monetary models, such as the currency demand model, which estimate the amount of underground activity by examining the amount of unexplained cash circulating in the economy. These models assume that the underground economy works largely on a cash basis to avoid taxation and other administrative checks.

The main conclusions of the ABS's study are set out hereunder:

1. Explicit upward adjustments are currently made in ASNA for the underground economy. They rely on indicative information from aggregated income tax audit data, anecdotal evidence and checks and balances inherent in the national accounting methodology itself.

2. In 2000–01, these adjustments added $8.5b or 1.3% to the level of GDP.

3. Similar percentage adjustments have been made in other years, meaning that there is little or no impact on GDP growth rates.

4. It is estimated that at least 65% of the goods and services included in GDP are either not subject to underground economy transactions or subject only to a very minor extent. The remainder of GDP, which includes the production of small businesses and individuals, is potentially affected to a more significant extent. However, even here the national accounts compilation process adopts procedures that can help capture a significant part of the total transactions that may otherwise go unreported in basic source data.

[26] This part draws heavily on material contained in the OECD's Statistics Brief: *Measuring the Non-Observed Economy* (November 2002).

5. The analysis indicates that the official estimates of the level of GDP are highly unlikely to be understated by more than about 2%.

6. Estimates of missing GDP of the order of 15% as suggested by some researchers are considered implausible.

The study report also noted that the ABS's main concern is the impact of unmeasured transactions on the quality of the national accounts and other business statistics. The focus is not on those transactions that may escape detection by tax authorities. Unreported, undeclared or untaxed transactions are not synonymous with unmeasured transactions in the national accounts..... Income that is not reported to tax authorities may still be recorded in ABS estimates of GDP depending on the measurement methods used.

Source: '*The Underground Economy and Australia's GDP*', National Accounts Branch, ABS (March 2004).

Annex 4

Canada Revenue Agency: Compliance Monitoring Report

Part 1

Taxpayer categories	Compliance risk type	Name of measure/ indicator (all over 3 years)
Individuals	Filing	1. Volume of returns filed, by filing method 2. Participation rate* 3. Timeliness of filing
	Reporting	1. Income composition 2. Reporting compliance indicators* 3. Risk assessment estimates* 4. Random sample estimates* 5. Public opinion survey responses re compliance*
	Payment	1. Proportion paying in full 2. Timeliness of payment 3. Taxes in dispute 4. Collections
Business		
- Unincorporated	Filing	*— Same range of indicators as for individuals—*
	Reporting	
	Payment	
- Corporations	Registration	Registrants with revenue body compared with external measure*
	Filing	*— Same range of indicators as for individuals—*
	Reporting	
	Payment	
- GST	Registration	1. Number of non-registrants detected
	Filing	*— Same range of indicators as for individuals—*
	Reporting	
	Payment	
- Employers	Filing	1. Timeliness of filing end-year reports
	Reporting	1. Results of enforcement programs
	Payment	1. Timeliness of payment
Charities	Registration	1. Number registered and number where registration revoked
	Filing	1. Number filing and incidence of late filing
	Reporting	1. Number not meeting disbursement quota in tax law
Trusts	Filing	1. Timeliness of filing
	Reporting	1. The total tax payable as proportion of taxable income
Aggregate measures of compliance	All	1. Fiscal impact of compliance activities 2. Income tax voluntary disclosures

* These measures are defined elsewhere in this note.

Part 2

A descriptive summary of the factors relevant to socio-economic performance and tax implications, including:

1. Overview of economic performance
2. Business activity- labour market, Canadian dollar, exports, imports
3. Macroeconomic implications
4. Tax implications
5. Household activity- spending, debt, bankruptcy etc
6. Macroeconomic implications
7. Tax implications
8. Public environment and relevant public opinion research findings

Annex 5

Compliance Measures and Indicators Used by National Revenue Bodies

1. *Compliance obligation- to register for tax purposes*

1) Measure: % of eligible businesses registered for VAT

1. Canada Revenue Agency: Rates of Registration for the GST/HST (%)

Indicator	Target	2002-03	2003-04	2004-05	2005-06	2006-07
Canadian businesses /1	90	84.6	86.6	88.8	89.5	93.0

/1. This estimate uses data sourced from Statistics Canada.

Compliance obligation—to file returns due on time

1) Measure: % of returns filed on time

Examples 1-4: Aggregate timely filing (by tax type)
Example 5: Aggregate timely filing for VAT/GST, by category of filing frequency
Example 6: Aggregate timely filing by designated risk segment of taxpayers

1. CRA: Rates of Filing on Time (i.e. % by the statutory due date)

Return category	Target	2002-03	2003-04	2004-05	2005-06	2006-07
Individuals[1]	90	93.1	92.6	92.6	92.8	93.0
Corporations[2] – taxable incorporated businesses	90	87.2	87.1	86	85.9	86.4
Businesses[3] – GST/HST returns	90	91.6	92	92.6	91.8	91.4
Employers – T4 returns	90	96.4	96.5	94.5	94.5	96.0

[1] This estimate uses census data from Statistics Canada.
[2] Source: CRA T2 corporate tax database.
[3] Prior year figures have been restated as a result of improved estimates.

2. France General Tax Directorate: Timely Return Filing (%)- CHECK???

Return category	Target	2002-03	2003-04	2004-05	2005-06	2006-7
Private taxpayers	97.9	97.5	97.8	97.8	98.1	98.1
Businesses – VAT	86.0	84.2	88.5	89.2	89.2	90.7

3. Netherlands Tax and Customs Administration: Timely Return Filing *(%) - CHECK*

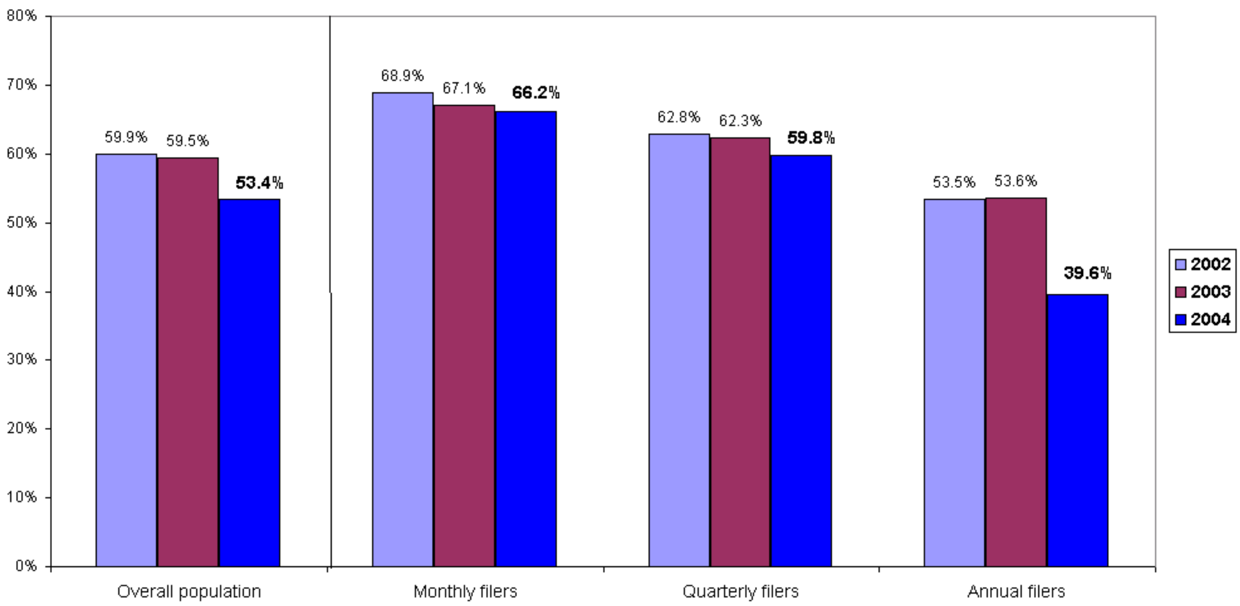
Return category	Target	2002-03	2003-04	2004-05	2005-06
All taxpayers	96.8	97.5	96.9	97.3	

4. United Kingdom Her Majesty's Revenue and Customs: Filing of Returns on Time

Return category	2002-03	2003-04	2004-05	2005-06
% of ITSA/1 returns filed by the due date	90.5	90.6	90.6	90.3
% of ITSA returns filed within 12 months of due date	96.9	97.5	97.8	98.2
% of employers returns by due date	-	80.7	n.avail.	n.avail.
% of employers returns within 12 months of the due date	93.2	97.3	97.8	95.3
% of companies returns filed by the due date	-	76.9	77.1	78.7
% of companies returns within 12 months of the due date	-	87.6	87.7	87.8

/1 ITSA- (personal) income tax self assessed taxpayers

5. CRA: GST/VAT late filing (by filing frequency category)



Explanation: Among filers, the percentage of late filers decreased from almost 60% for both 2002 and 2003 to 53.4% for 2004. A GST registrant is considered a 'late filer' if it does not file on time all the returns it is requested to file for a specific tax year. The late filing incidence varies with the frequency of filing. Two thirds of the monthly filers filed late for 2004, followed by quarterly filers at 59.8% and annual filers at 39.6%. Although the late filing incidence decreased for all filing frequencies over the three years tracked, the only significant improvement (a 26% decrease) was registered by the annual filers.

6. Australian Taxation Office: Filing of high tax level (i.e. tax level 6) tax returns

Risk: High value taxpayers (TL6) failing to file their income tax returns on time resulting in delayed collection of revenue and risk to community confidence levels

Specific compliance strategies: Filing reminder letters to tax agents and their TL6 clients, general tax agent broadcast to all agents, final notices for filing issued shortly after filing deadlines, escalated filing compliance activities (including prosecutions for non- or late filing.

Desired outcomes: These include a modification (i.e. improvement) to filing behaviour, greater general awareness of filing obligations and greater acceptance that ATO will follow through on activities it says it will do, and flow on improvements in the wider community.

1. What indicators were used to gauge the impact of the strategy

The indicators used were 1a) trend in % of returns filed by due date for TL6 population; 1b) trend in the % of repeat filing by the due date by the TL6 population; 2) trend in the % of filing by the end of the fiscal year; 3a) trend in the level of awareness among the tax agent population; 3b) trend in the level of awareness of the targeted population; and 3c) trend in the level of awareness of the wider community.

The results:

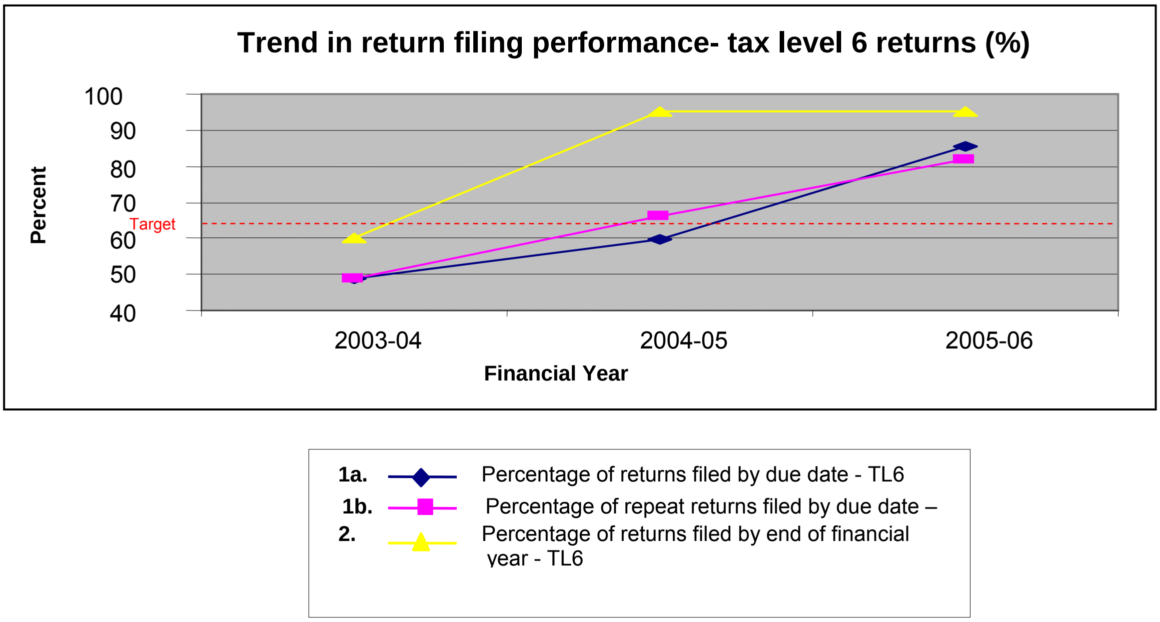
1a) The graph that follows reveals a trend of improved filing rates in both years after use of the treatment strategy- 10.7% in 2005 and 25.6% in 2006.

1b) Improvements in both years observed by repeat filers;

2) The % of returns field by year-end increased substantially in 2005 and by a minor amount in 2006.

3a) and 3b) Anecdotal feedback from consultative working group indicates increased awareness among tax agents and their clients

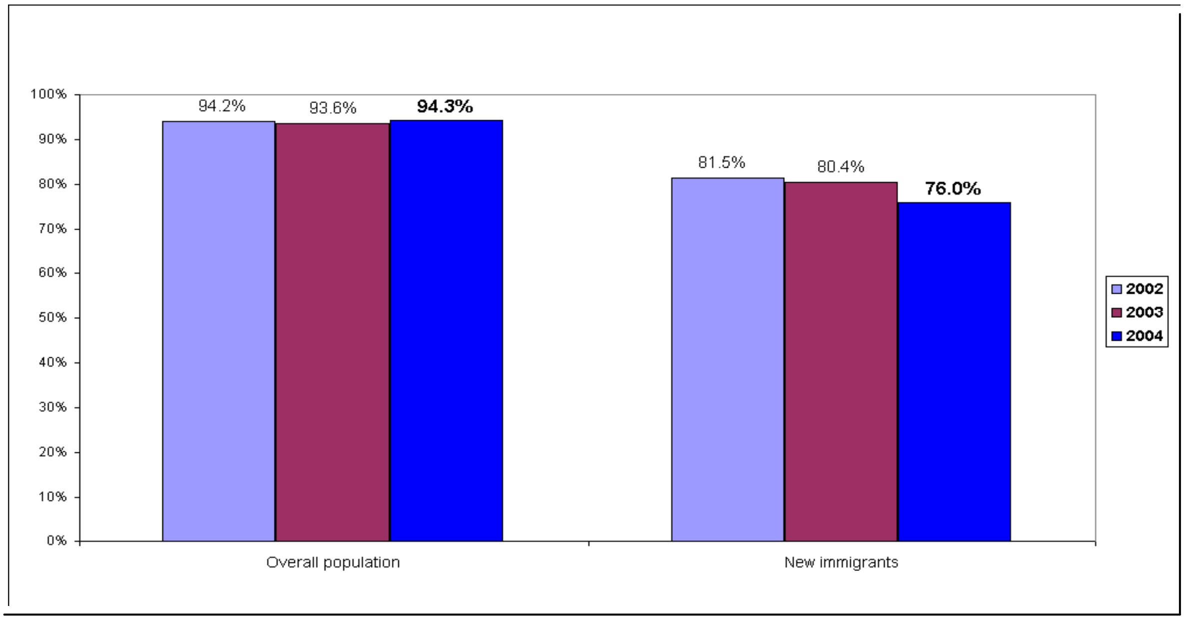
3c) No survey data available.



2) Indicator: Trend in the participation rate (i.e. % of adult citizens filing a tax return)

Country examples

1. Canada- Participation rate (personal tax return filing)



Explanation: The participation rate in the tax system continued to be high, with 94.3% of the potential filers (i.e. all adults over 18 years of age) filing a return for 2004, compared to 93.6% for 2003 and 94.2 % for 2002. As the participation rate was relatively stable despite the increase in the number of T1 returns filed, it is worth noting that during this period there was a significant increase in both the number of requests/demands to file and the number of non-filers identified through enforcement and data-matching activities. Also, as indicated, only 76% of new Canadians filed a return for 2004. Over the three years monitored, their participation rate was lower than the rate for the total filing population, and decreased from 80.4% for 2003 and 81.5% for 2002.

Compliance obligation-to correctly report tax liabilities

1) Measure: The % of tax liabilities that is correctly reported (as measured by random audits)

Example 1: Rate of personal income under-reporting (by major income categories)
Example 2: Rate of aggregate liability under-reporting by self-assessing personal taxpayers
Example 3: Rate of aggregate overall liability under-reporting by medium/small corporations
Example 4: Rate of VAT liability under-reporting by whole trade
Example 5: Personal income tax rate of over-claimed tax deductions and tax credits

1. United States: Income under-reporting rates (2001) (random audits)

Measure	Wages	Dividends/ interest	Capital gains	Self-employed
Under-reporting rate (%)	1.2	4.5	8.6	53.9

2. United Kingdom: Under-reporting by self-assessed individuals (random audits) /1

Measure	2000	2001	2002
Losses due to incorrect returns (£bln)	2.4	2.7	2.8
Compliance yield (£bln)	0.4	0.4	0.4
Non-payment (£bln)	0.1	0.1	0.1
Total tax losses identified (£bln)	2.1	2.3	2.5
Total tax liabilities (£bln)	19.6	19.8	19.2
Proportion of liabilities (%)	10.7	11.6	13.0

/1. The taxes covered are income tax, capital gains tax, and social contributions

3. United Kingdom: Under-reporting by SME (random audits) /1

Measure	2000	2001	2002
Losses due to incorrect returns (£bln)	2.2	2.5	2.0
Compliance yield (£bln)	0.4	0.4	0.4
Non-payment (£bln)	0	0	0.1
Total tax losses identified (£bln)	1.8	2.2	1.7
Total tax liabilities (£bln)	12.6	13.3	13.8
Proportion of liabilities (%)	14.3	16.5	12.5

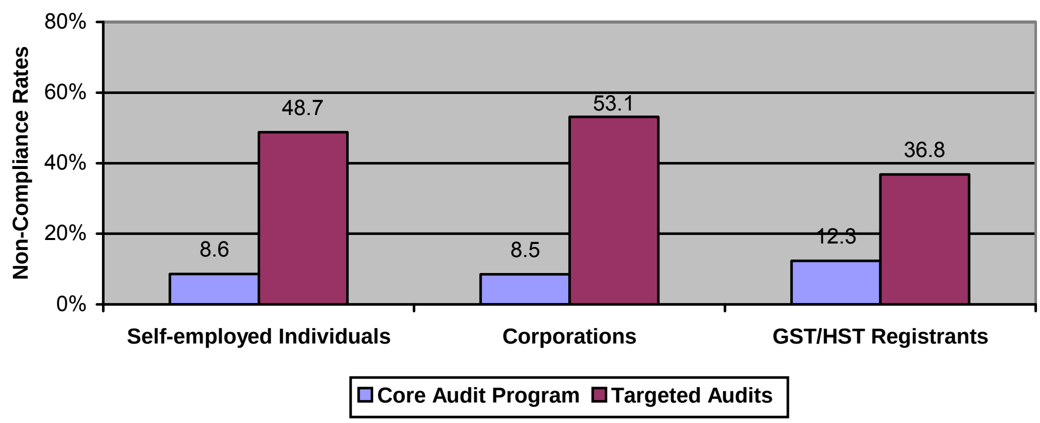
/1. The tax covered is corporations tax (self-assessment)

4. Canada: VAT non-compliance of the SME sector detected by random audits

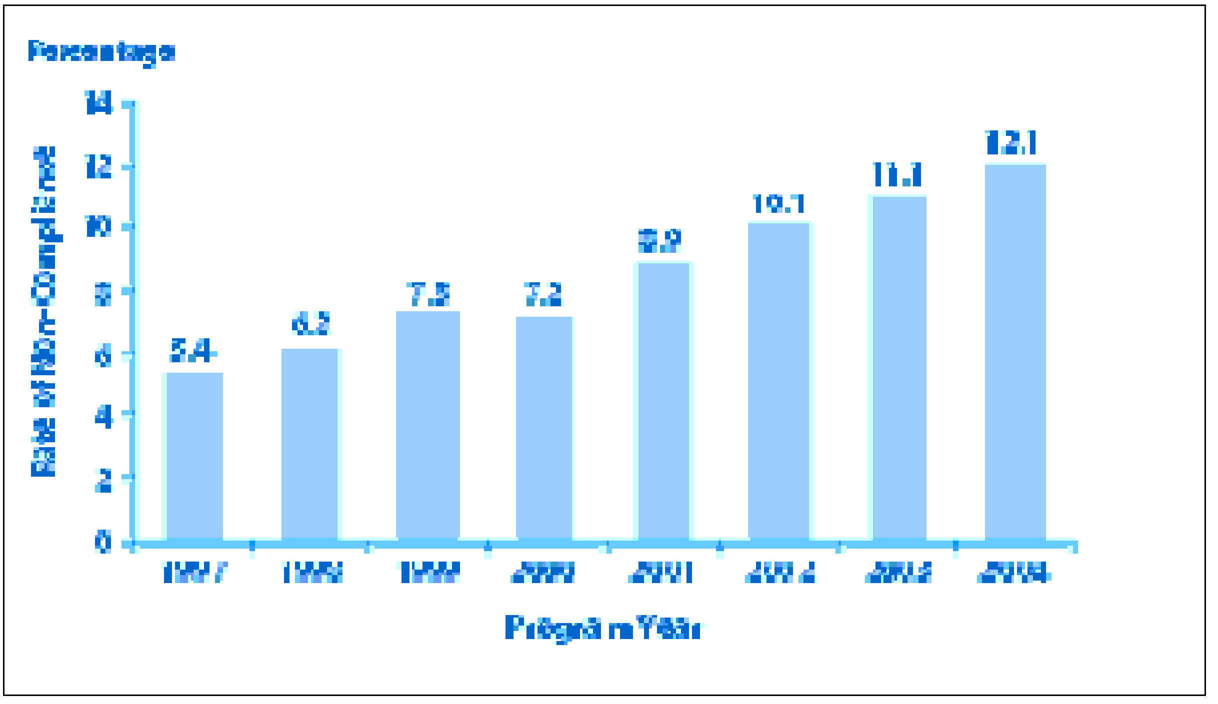
The CRA's Core Audit Program uses statistical methods to select a random sample of tax files for auditing to estimate a reliable compliance rate among small and medium enterprises (SMEs). The program also generates information for validating and refining the risk criteria that are used in the risk assessment system.

The chart provided below shows the baseline rates of non-compliance estimated from the randomly selected audits of SME's that revealed non-compliance of $5,000 or more, and compares them to results of targeted compliance audits from our SME audit program in 2004-2005.

Chart. Comparison of Core Audits to Targeted Audits: Tax adjustments of $5,000 or more



5. Canada: Over-claimed key tax credits and deductions (random audits)



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3) Unreported income from work (based on comparison of income reported for tax purposes and National Accounts aggregates of expenditure (adjusted as necessary)

Description	Comments
This measure relies on use of National Accounts (NA) expenditure aggregates to derive an estimate of unreported income (i.e. income not captured in the income side of the NAs). A number of countries (e.g. Sweden and Mexico) have carried out research to derive a measure of potential unreported labour income from informal work activities. This approach assumes that NA expenditure aggregates are compiled with a high degree of accuracy and that their comparison with NA household income aggregates can produce an approximate indication of the level of unreported/informal work income. A case study describing recent research findings from such work conducted by the Swedish Tax Agency is appended to this note—sees Annex 8.	It is possible that this approach may not be suitable in many countries given the way their National Accounts data is complied and the sources of information used. Revenue bodies contemplating consideration of this measurement approach are encouraged in the first instance to explore its feasibility with their Government Statistical body.

4) Measure: VAT tax gap (i.e. % of theoretical tax base that is not collected)

Description	Comments
This methodology entails deriving an estimate of the theoretical VAT tax liability (VTTL) using national accounts (NA) consumption expenditure data to assess the total amount of expenditure in an economy that is theoretically liable to VAT; estimating the VAT liability on that expenditure based on commodity breakdowns; and deducting any legitimate reductions in the VAT liability occurring through schemes (e.g. the small business registration threshold) and reliefs (e.g. exemptions and reduced rates). The estimated VTTL is then compared with net VAT receipts (with an allowance for collection "lags") to derive an estimate of the VAT tax gap (i.e. the aggregate revenue leakage resulting from all forms non-compliance. (NB: In the case of the UK, an average lag time of three months is assumed between when a tax liability arises and its actual collection.) The methodology used to derive this indicator is explained in detail at Annex 4. Properly executed, this methodology provides a "broad order of magnitude" estimate for the VAT tax gap (i.e. the total amount of VAT revenue not collected as a result of all non-compliance). The reasons for some uncertainty over its accuracy are set out below: [27] 1. NA expenditure data are based on surveys (that may not capture all relevant expenditure including that arising in the NOE); 2. There is a lag in the availability of survey data meaning that any estimates of the VTTL and VAT gap based on forecasted expenditure are subject to revision. 3. NA expenditure data, and hence estimates of VTTL and revenue losses, can be subject to methodological revision; 4. Net VAT receipts in any year do not necessarily relate to liabilities in that year (e.g. collections arising after audits of prior years liabilities and the late collection of taxes). However, these limitations aside, the methodology properly applied (over a number of years) does provide estimates of compliance that are can be used to sufficiently inform a revenue body (and other observers) of the overall state and trend of taxpayers' compliance.	It is also worth noting that this methodology uses National Accounts data on consumption expenditure (which is used for a variety of reporting purposes). The data it requires to take account of legislated reductions in the VAT base are also used in the context of official tax expenditure statements prepared and published by Government.

Examples 1-3: Aggregate measure of VAT tax gap

1. UK Her Majesty's Revenue & Customs: Trend in Estimated VAT Theoretical Tax Liability (VTTL), Actual Net VAT Receipts & VAT Gap

Measure	2002-03	2003-04	2004-05	2005-06 /2	2006-07 /2
VTTL (£bn)	75.8	79.0	83.0	86.3	90.2
Net VAT receipts (£bn)/1	63.6	69.1	72.7	72.9	77.4
Revenue loss (£bn)	12.2	9.9	10.3	13.4	12.8
VAT gap (%)	16.1	12.6	12.4	15.5	14.2

/1 Net VAT receipts are expressed net of payments and re-payments.
/2 A proportion of the VTTL estimate for the final two years is based on a forecast.

[27] See Page 4 of '*Measuring Indirect Tax Losses- 2006*', HM Revenue and Customs (December 2006).

2. Argentina: Trend in Estimated VAT Tax Base, Actual Net Receipts Revenue and Tax Gap (2000-2004) /1

Measure	2000	2001	2002	2003	2004
Estimated base (pesos bln)	24,281	22,651	24,305	31,821	38,542
Net receipts (pesos bln)/1	17,507	15,951	15,836	21,545	28,992
Revenue loss (pesos bln)	6,773	6,700	8,469	10,276	9,549
VAT gap (%)	27.9	29.6	34.8	32.3	24.8

Source: Prepared for the Argentinean revenue body (AFIP) by Maria M. Perez Puente and Dante M. Mancini (July 2005)
/1 Derived from comparison with national accounts data and associated adjustments.

3. Chile Internal Revenue Service: Trend in Estimated VAT Tax Gap /1

Measure	2000	2001	2002	2003	2004	2005
Estimated VAT gap (%)	21	19.4	16.6	16.3	13.9	11.4

Source: Chilean IRS Commissioner: Presentation to OECD CFA Working Party 9 (December 2006).
/1 Derived from comparison with national accounts data and associated adjustments and indicated as "preliminary data".

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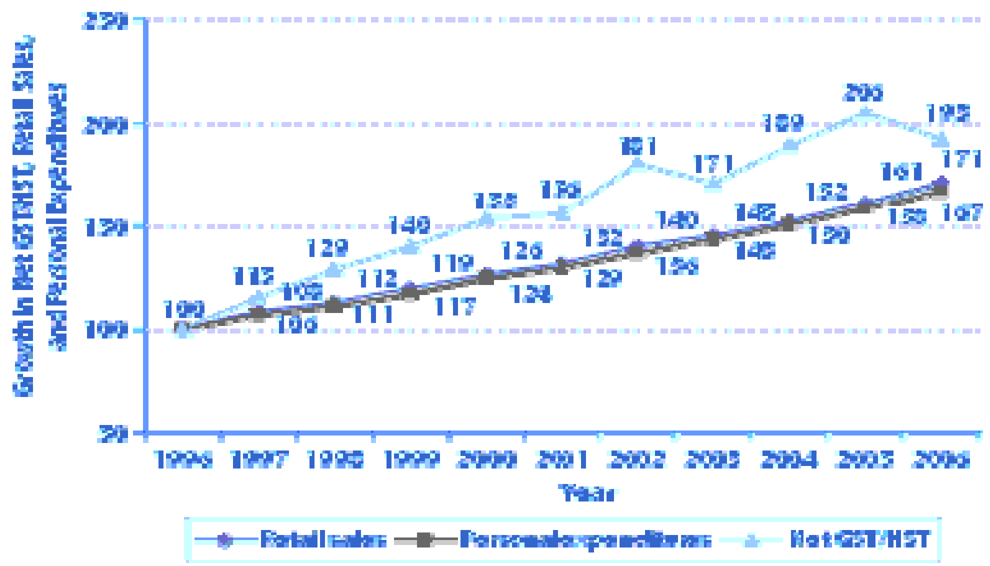
5) Indicator: Trend in growth of net VAT collected compared to retail sales & personal domestic expenditure

Canada: Growth in Net GST Collected Compared to Retail Sales and Personal Expenditures (1996 =100)



Explanation: Growth in GST is seen to be tracking favourably with retail sales and personal expenditures.

6) Measure: VAT Revenue Ratio (VRR)

The VRR is derived from the '*C-efficiency ratio*' originally conceived by IMF officials [28], and was also used by the OECD in its 2006 publication '*Consumption Tax Trends*' to display, in comparative terms, the performance of VATs in OECD countries. The ratio has since been amended and renamed the '*VAT Revenue Ratio*' to more accurately reflect what it measures. The main change has been amending the calculation basis used to assess the potential tax base (i.e. consumption) by subtracting actual VAT revenues, given that

[28] See '*The Modern VAT*' (Bodin, Ebrill, Keen, and Summers), 2001, IMF.

consumption is normally taken from the national accounts and measured at market prices (that include VAT). The VRR is now defined as the ratio between the *actual VAT revenue collected* and *the revenue that would theoretically be raised if VAT was applied at the standard rate to all final consumption expenditure and perfect compliance was achieved:*

VAT revenue ratio (VRR)= (VAT revenue)/ ([consumption–VAT revenue] x standard VAT rate)

In practice, the absolute value of the VRR is influenced by policy design choices (e.g. exemptions, use of non-standard rates) and adjustments, as well as revenue body competence in achieving compliance with the law. Other things being equal, a trend of increasing or declining VRRs over time may reflect positive or negative movements in taxpayers' compliance, but such trend data should be used only as a pointer to further inquiry before drawing any firm conclusions. VRRs for OECD countries are set out below:

VRRs for OECD member countries

Country	Years (and related information)							
					2005			
	1992	1996	2000	2003	VRR**	Standard VAT Rate %	VAT Revenue (mln)	Consumption* (mln)
Australia			46.7	56.1	55.6	10.0	38101	685277
Austria	59.1	57.9	59.8	59.2	59.9	20.0	19466	162578
Belgium	48.9	46.8	50.9	46.8	48.3	21.0	20967	206492
Canada	44.3	47.8	51.6	50.8	52.2	7.0	35708	977941
Czech Rep.	-	44.2	43.7	42.1	58.9	19.0	215118	1921627
Denmark	55.4	57.9	60.3	59.6	62.1	25.0	155177	1000324
Finland	-	54.1	60.7	60.0	61.0	22.0	13720	102301
France	52.6	51.1	49.7	49.1	51.0	19.6	125502	1256142
Germany	61.8	60.3	60.1	55.1	54.7	16.0	140121	1600579
Greece	40.8	38.0	43.7	47.3	47.6	18.0	14946	174336
Hungary	29.6	43.4	52.8	46.0	46.4	25.0	1785317	15394083
Iceland	62.7	53.8	58.5	54.0	63.3	24.5	114181	736711
Ireland	46.3	53.3	65.1	63.0	66.0	21.0	11808	85257
Italy	38.7	40.4	45.3	40.7	40.7	20.0	85155	1045136
Japan	69.9	72.4	69.5	67.6	71.4	5.0	13007985	364265015
Korea	65.9	61.8	64.6	74.0	71.9	10.0	36118028	502284572
Luxembourg	47.3	56.4	68.4	69.6	76.2	15.0	1730	15138
Mexico	34.2	26.4	30.8	31.8	33.4	15.0	318432	6365428
Netherlands	58.8	56.8	60.2	57.1	61.4	19.0	38566	330329
New Zealand	98.1	100.5	100.0	109.5	104.0	12.5	14007	107721
Norway	52.5	60.5	69.5	58.5	59.7	25.0	157202	1053154
Poland	-	41.1	42.3	42.8	44.1	22.0	70395	724970
Portugal	51.2	57.2	62.2	55.6	52.8	19.0	11699	116706
Slovak Rep.	-	-	46.4	47.2	59.8	19.0	113824	1002590
Spain	57.0	44.5	52.8	53.1	55.9	16.0	56382	630317
Sweden	40.7	50.3	52.9	53.7	56.6	25.0	248914	1760212
Switzerland	-	71.1	79.3	75.9	77.3	7.6	18119	308604
Turkey	56.4	55.4	59.1	62.9	53.3	18.0	34357	357857
United Kingdom	48.9	49.5	49.5	50.2	48.9	17.5	83468	976309
Unw. average	53.1	53.8	57.1	56.5	58.4			
*Net to consumption = final consumption expenditure - VAT/GST revenues								
**VRR = [VAT revenues/Final consumption-VAT revenue)] x Standard VAT rate								

Source: OECD Consumption Tax Trends (2008), draft report, final version expected July 2008.

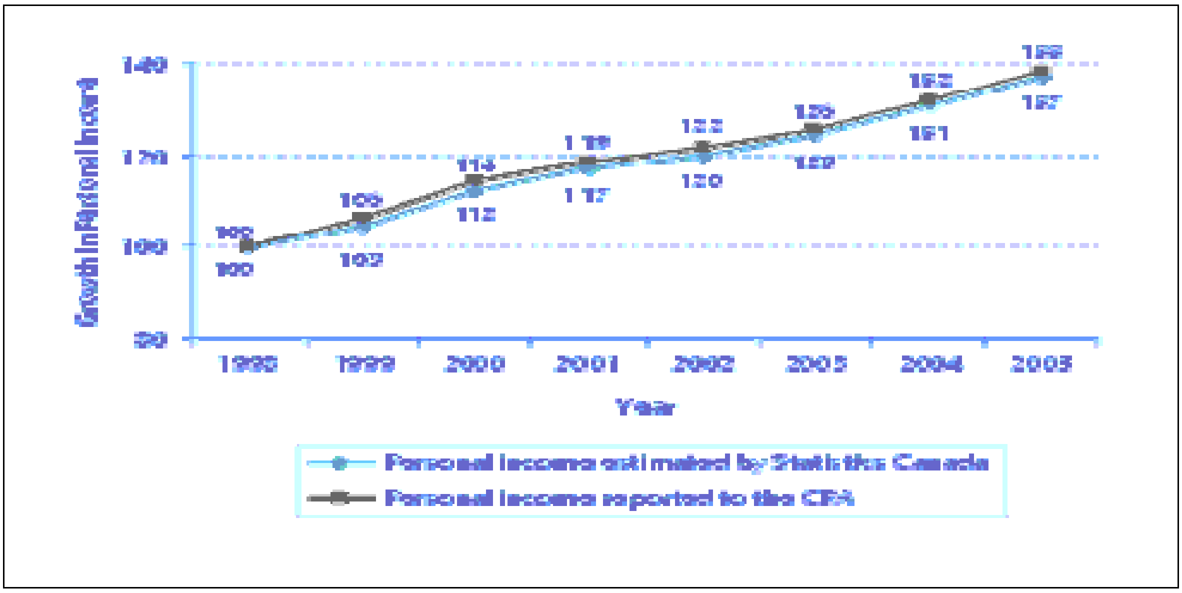
7) *Measure: Excise tax gap (i.e. % of theoretical tax base that is not reported or paid)*

(Readers are directed to:
http://www.hmrc.gov.uk/pbr2007/mitl.pdf?bcsi_scan_3CB14DF0471C3DC0=mQ/D8ggxQqPL0wgPyoFKBwcAAAAe8ZMF&bcsi_scan_filename=mitl.pdf

which provides a detailed account of the measurement methodology used by the UK's HMRC to estimate the magnitude of illicit activity in goods subject to excise (i.e. spirits, cigarettes, hand-rolling tobacco, and hydrocarbon oils).

8) *Indicator: Trend in growth of aggregate personal income reported to the revenue body compared to personal income estimated by statistical bodies.*

1. Canada: Growth in Personal Income Reported to the CRA Compared to Personal Income Estimated by Statistics Canada (1998 = 100)



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9) *Indicator: Trend in the incidence of returns assessed as offending systematic risk assessment criteria*

Description	Comments
This methodology entails the systemic risk scoring of tax returns as they are computer processed. As described by the CRA….. " at the core of the risk assessment systems are risk issues (i.e. Tests or conditions) that have been defined by subject matter experts as indicative of potential tax-at-risk . The total tax at risk for each taxpayer is calculated as the sum of the issue risk amounts as determined for the current and immediately prior years. Tax-at-risk estimates are produced separately for individuals, corporations and VAT registrants twice a year."	The value of this indicator turns on the appropriateness of the scoring criteria and may also be influenced by changes to the risk scoring criteria and the inclusion of new risk issues. All things being equal and accepting the efficacy of the scoring tests, trends in the proportion of returns assessed "at risk" according to some score of the tax-at-risk may indicate changes in taxpayers' compliance. Given the diversity of the taxpayer population for the major taxes, use of such indicators, if feasible, may be most appropriate for individual sub-segments of the taxpayer population (e.g. self-employed).

10) Indicators: Measuring risk treatment effectiveness for a targeted group of taxpayers

Example: Australian Taxation Office: Transfer Pricing (Use of trend in specific ratios (e.g. earnings before interest and tax as a percentage of total income, trend in net income tax payable as a percentage of operating profit (loss) (both compared to peer group) etc.

Risk: Foreign owned multi-national companies consistently under-performing when compared to Australian companies, particularly in the wholesale sector. Under-reporting of company profits by using transfer pricing to shift Australian profits to an offshore related party, resulting in lower levels of tax payable in Australia.

Specific compliance strategies: Transfer pricing risk reviews, targeted audits of high risk entities, encouraging use of advance pricing arrangements (APA's), publication & promotion of tax rulings.

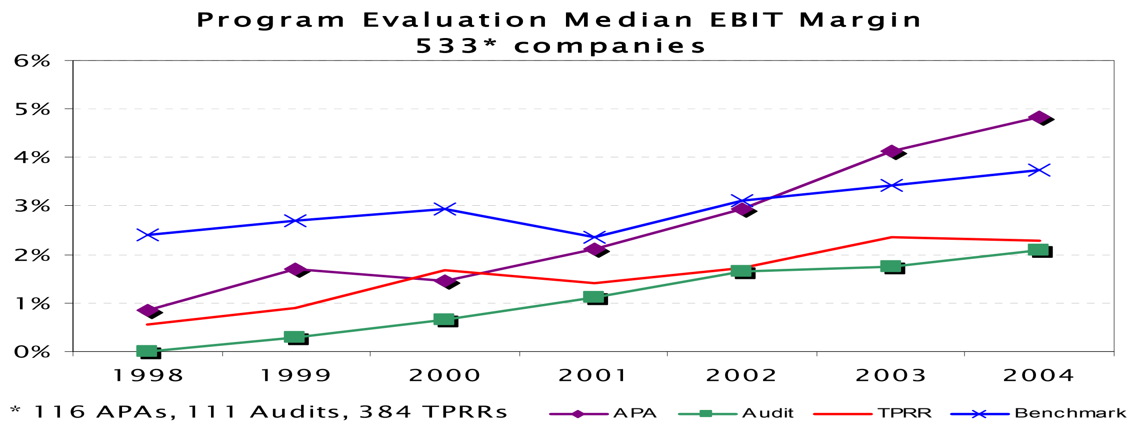
Desired outcome: The principal outcome of this transfer pricing strategy is to ensure that the fair share of profit commensurate with the business activities undertaken is reported in Australia by the targeted groups. Improving the profit outcome of these groups should also improve their tax performance. Consistent with an improved profit outcome in accordance with taxation ruling (TR) 97/20, the tax office is also seeking to improve record keeping in accordance with TR 98/11.

1. What indicators were used to gauge to the impact of the strategy?

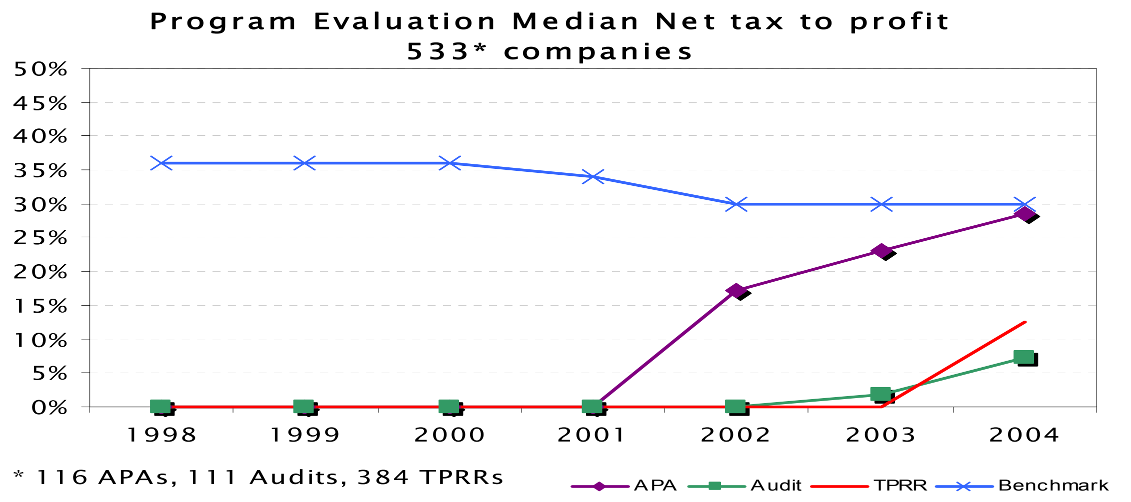
The indicators used were: 1a) Trend in earnings before interest and tax (EBIT) as a percentage of total income compared to peer group; 1b) Trend in net income tax payable as a percentage of operating profit (loss) compared to peer group; 1c) Trend in tax losses carried forward as a percentage of total income compared to peer group; 2) Trend in the percentage of high-risk taxpayers compared to peer group. Those high-risk taxpayers include entities reporting material losses from related party dealings; 3) Trend in the number of completed bilateral and multilateral APA's; 4) Trend in the quality of documentation in accordance with TR 98/11 identified during Transfer Pricing Reviews (tax loss intensity).

The results:

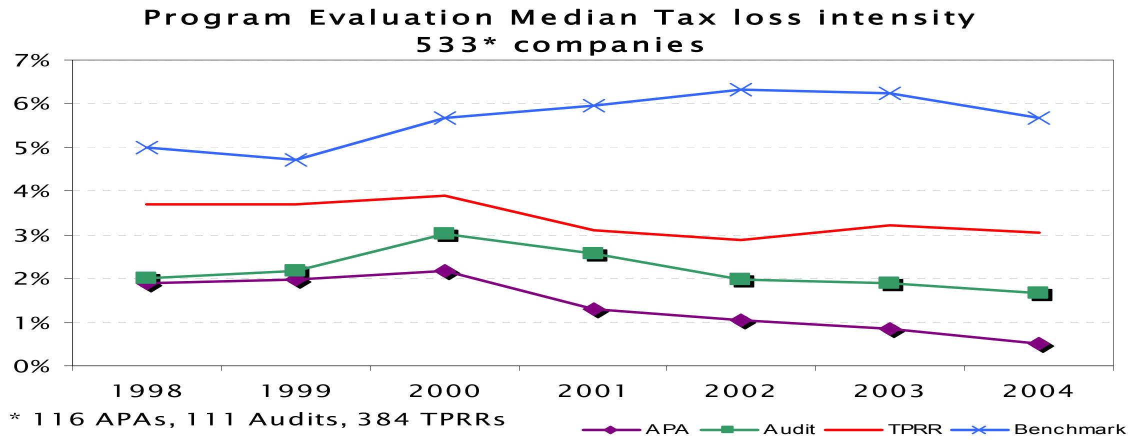
1a. The improvement in economic returns shown by the EBIT margin is clearly visible in the upward trend in performance of taxpayers subject to transfer pricing compliance strategies. The sustained increase in the trend lines shows convergence to the benchmark. Advance pricing arrangements have the greatest impact on increasing profit outcomes to the point where they are now performing above the benchmark.



1b.Trends in net tax to total profit are improving and approaching the benchmarked company tax rate. Improvement is clearly seen in the effective tax rates of taxpayers subject to transfer pricing compliance strategies. Again, the biggest improvement is for the APAs. The longer lag for risk reviews and audits is explained by the utilisation of prior year tax losses.



1c. Tax losses as a proportion of gross revenue have declined across all transfer pricing compliance initiatives. In contrast, the benchmark shows that tax losses actually increased between 1999 and 2004. Improving the profit outcomes as a result of compliance strategies has had the double impact of reducing the overall pool of tax losses and improving the effective tax rates.



2. Was there a ripple effect?

A ripple effect was also detected. In the wholesale industry, the proportion of high-risk transfer pricing taxpayers fell from 31% to 18% between 1998 and 2004. The overall population of taxpayers that lodge the schedule 25A fell by 4% (29% to 25%) over the same period.

3. Was there an increase in acceptance of advance pricing arrangements?

Yes. The number of completed advance pricing arrangements grew by 111% to 38 in 2004–05, with positive growth in four of the six years.

11) Indicator: Public perception survey result findings

1) Australia: Annual taxpayer perceptions survey

Subject area	Examples of perceptions that are tracked by annual survey /1
Cash-related dealings	1. It is unfair to use cash to avoid paying tax. 2. GST (VAT) makes it difficult to avoid paying tax. 3. The Tax Office is keeping the community informed about their efforts in dealing with the cash economy. 4. The Tax Office is effective in dealing with people who do not declare all their cash earnings. 5. Working for cash in hand payments without paying tax is only a minor offence.
Perceptions of Tax Office's administration	6. The Tax Office is effective in dealing with people and businesses that have deliberately avoided paying huge amounts of tax 7. The Tax Office is keeping the community informed about their efforts in dealing with tax crimes like evasion and fraud. 8. The Tax Office is effective in making sure large companies pay their share of tax. 9. The Tax Office is effective in preventing tax avoidance by large companies.

/1. A sample of the 'perceptions' that are tracked in survey research

2) Canada: Annual public perceptions survey

Subject area	Examples of perceptions that are tracked by annual survey
General perceptions and attitudes to taxpayers' compliance	1. Attitude toward declaration of cash income on tax return. 2. Perception of CRA ability to detect cash income if under-declared. 3. Perception of acceptability of tax cheating to other taxpayers. 4. Perception of social acceptability of tax cheating.
Perception of tax cheating trend	5. Proportion of respondents who believe that the number of people cheating on their tax returns is decreasing, about the same or increasing.
Perceived likelihood of getting caught for tax cheating	6. Proportion of respondents who feel it likely that persons cheating on their tax return will get caught.

3) Sweden: Annual surveys of the general population and business

Subject area	Examples of perceptions that are tracked by annual survey /1
General attitudes to compliance	1. Overall, I have confidence in the Tax Agency. 2. On the whole, the extent of tax evasion is a serious problem in the society. 3. Is it acceptable for people to evade taxes. 4. Opinions on the tax investigation system. 5. Tolerance to black work as opposed to other forms of tax evasion.

4) Netherlands: Annual taxpayer attitudes survey

Subject area	Examples of perceptions that are tracked by annual survey /1
General attitudes to compliance	1. Tax evasion is acceptable. 2. Tax evasion is not really an option for me 3. Paying taxes means having to contribute something

Country example

Netherlands. Using taxpayer perceptions and attitudes survey data to monitor compliance

Objectives: One general policy goal and three operational goals have been formulated for the Tax Administration in the 2007 budget. The operational goals are the preconditions for achieving the main goal, i.e. enhancing compliance. The goals are concretised with the use of effect indicators and output indicators. Effect indicators present a picture of the effects of the Tax Administration's policy or the implementation thereof. Output indicators are employed if directly measuring an effect is not possible.

General goal: The general goal of the Tax Administration is formulated as follows: MAINTAINING AND STRENGTHENING THE WILLINGNESS OF TAXPAYERS TO MEET THEIR LEGAL OBLIGATIONS TOWARDS THE TAX ADMINISTRATION (COMPLIANCE).

Table 1: Performance indicators general goal (%)

Perceptions/ attitudes	Realised Value 2005	Realised Value 2006	Figure Budget 2007	Target Value 2011
Tax evasion is unacceptable	84	86	88	+
Personally evading tax is almost non-existent	71	77	75	+
Paying tax means having to make a contribution	52	54	60	+

Explanatory note: Standards and values pertaining to paying or evading tax are annually measured in the Fiscal Monitor. This is a quantitative study carried out annually on request of the Tax Administration, among a representative group of taxpayers (private taxpayers, business taxpayers, Customs clients, shipping agents and tax consultants). The past ten years have seen a positive development. An increasing number of people feel that no one should elude the prevailing laws and regulations. Equality before the law is a cornerstone of compliance. The Tax Administration intensifies its monitoring and investigation practices – in particular concerning unknown and mala fide taxpayers – to ensure that this positive trend will be maintained until the year 2011.

The percentage of taxpayers stating that, for themselves, tax evasion is out of the question, has risen compared with 2005. This involves both the wish and ability to evade taxes. The Tax Administration aims to maintain this positive attitude and to reduce any possibilities to evade tax. It therefore intensifies its monitoring and investigation operations thereby focusing on the improvement of its services. By working as a government authority with basic registration systems and setting up more links with data flows managed by third parties, the possibilities of private taxpayers in particular to evade tax will further reduce.

In general, the public feel quite positive about paying taxes. They perceive this as making a contribution to society rather than having something taken away from them. The indicator suggests that the majority of the taxpayers believe that the tax proceeds are being spent to good use. The Tax Administration elaborates on this willingness and aims to further enhance this positive attitude. On the one hand by improving it services and the mass processes and on the other hand by making bona fide parties more responsible in the framework of the horizontalisation process.

Source: Business Plan (2007-2011), Netherlands Tax and Customs Administration.

Compliance obligation—to pay taxes due on time

1) Measure: % of tax paid timely.

1. Ireland: Average Percentage of Tax Collected by Due Date /1

Tax	2002-03	2003-04	2004-05	2005-06
PAYE	93	93	93	94
VAT	85	85	84	88
Preliminary income tax (non-PAYE)	97	97	97	98
Capital gains tax	98	96	95	97
Corporation tax	90	90	90	90
Relevant contracts tax	n.avail.	66	70	74

/1. The Irish revenue body has reported that compliance is measured for VAT and employer payments by reference to the last day of the due month.

2. France: Tax payments made on time by businesses

Indicator	Target	2002-03	2003-04	2004-05	2005-06
Businesses tax payments /1	98/98.5	98.2	98.5	98.8	

/1. Excludes corporation tax/ payroll tax

2) Measure: % of taxpayers paying taxes on time

1. United Kingdom: Timely Payment of Taxes

Return category	2003-04	2004-05	2005-06	2006-07
% of SA/1 taxpayers who pay by due date	89.8	88.6	88.5	88.5
% of SA taxpayers who pay within 12 months of due date	98.7	98.7	98.2	n.avail.
% of employers who pay by due date	52.8	53.3	61.3	65.7
% of employers who pay within 12 months of the due date	97.7	97.9	n. avail.	n.avail.
% of companies who pay by due date	57.9	60	61.1	61.4
% of companies who pay within 12 months of the due date	92	93.4	94.1	n.avail.

/1. SA- self assessing personal taxpayers

2. Canada: Rates of Timely Payments (i.e. % by the statutory due date)

Indicators	Target	2002-03	2003-04	2004-05	2005-06	2006-07
Individuals	90	93.1	94.3	93.2	93.1	94.3
Taxable corporations	90	93.1	91.0	90.7	88.7	85.4
Employers[2]	90	90.4	90.5	89.2	88.7	87.7

[1] Businesses based in Quebec register with the *Ministère du Revenu du Québec*, which administers GST on behalf of the CRA and remits the net amount due to the CRA.
[2] Prior year figures have been restated as a result of improved estimates.

3. Netherlands: % of taxpayers paying on time

Indicator	Target	2002-03	2003-04	2004-05	2005-06
% of taxpayers who pay on time	92.9	92.9	95.5	95.9	n.avail

4. Ireland: Return/ payment compliance by taxpayer segment (%)

Indicator	2003-04	2004-05	2005-06	2006-07
Biggest cases /1	92	92	93	91
Medium cases /2	86	88	88	87
All other cases	79	80	83	82

/1. Biggest cases: customers paying more than €300,000 per annum for PAYE, VAT or Relevant Contracts Tax (RCT); €200,000 per annum for corporate tax (CT) and income tax (IT).

/2. Medium cases: customers paying more than €120,000 per annum for PAYE or RCT; €108,000 per annum for VAT, or €90,000 per annum for CT or IT.

3) Indicator: The ratio of end-year tax debts to total annual gross or net revenue collections

Examples 1 & 2: Ratio of aggregate end-year debt/ annual net tax revenue collections
Examples 3-4: Ratio of aggregate end-year debt/ annual gross tax revenue collections

1. Australia: Ratio of End-year Tax Debt/ Annual Net Revenue Collections (%)

Indicator	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
% of year-end collectible debt /1 net annual tax receipts	3.25	3.74	3.79	4.47	4.4	4.34

/1. "Collectible debt" is gross end-year tax debt less amounts represented by tax disputes or subject to insolvency action.

2. Netherlands: Ratio of End-year Tax Debts/ Annual Net Revenue Collections (%)

Indicator	Target 2010	2003-04	2004-05	2005-06	2006-07
% of year- end outstanding debt to gross annual tax receipts	2.5	3.7	3.1	3.5	n.avail

3. Canada: Ratio of End-year Tax debts/ Annual Gross Revenue Collections (%)

Indicator	2002-03	2003-04	2004-05	2005-06	2006-07
% of year- end outstanding debt to gross annual tax receipts	5.31	5.54	5.43	5.62	5.79

4. Ireland: Ratio of End-year Tax Debt/ Annual Gross Revenue Collections

Indicator	2002-03	2003-04	2004-05	2005-06	2006-07
% of year-end outstanding tax debt to gross annual tax receipts	3.3	2.5	2.0	1.8	1.9

Annex 6
Country Approaches and Experiences to Overall Tax Gap Measurement

US Internal Revenue Service [29]

Historically, IRS estimates of reporting compliance were based on its Taxpayer Compliance Measurement Program (TCMP). This program entailed line by line audits of random samples of returns, enabling the production of information on compliance trends and allowing it to update audit selection formulae. However, the program came to be regarded as extremely burdensome on taxpayers and the last TCMP audits were done in 1988.

Notwithstanding these difficulties, there continued to be interest in the size and composition of the tax gap in the US, resulting in a renewed commitment to the Congress and to the taxpaying public to resolve the tax gap in the USA. The result of this renewed focus has been the IRS's National Research Program (NRP), a comprehensive and long-term measurement approach, designed to quantify the tax gap, not only for individual taxes, but for all types of taxpayers, including businesses and all types of taxes.

The IRS has reported that in the relatively short time that the NRP measures of reporting compliance have been available it has been able to use the estimates effectively in identifying ways to improve taxpayer compliance and service to the public. The estimates, it is claimed, enable it to make data-driven decisions on directing internal resources to best contribute to resolving the tax gap. The results of the NRP are published on the IRS's website.

The figure provided (see following page) depicts the broad components of the estimated tax gap for 2001 while the accompanying table provides aggregate data on the estimated tax gap and its components. The gross tax gap for tax year 2001, as estimated by the NRP, was $345 billion (which was equivalent to 16.3% of the estimated tax base). The net tax gap, derived by deducting the results of all IRS enforcement programs from the estimated gross tax gap, was estimated to be $290 billion (which was equivalent to 13.7% of the estimated tax base).

IRS officials have indicated that drilling down more deeply into the estimated compliance outcomes gives greater insights as to the main strengths and weaknesses of the US tax administration system:

- Of the estimated gross tax gap, around 82.6 % is attributable to under-reporting of liabilities while the revenue leakage resulting from non-filing and non-payment is relatively small at 7.8% and 9.6% respectively.

- As in previous compliance studies, the NRP data suggest that well over half ($109 billion) of the individual underreporting gap came from understated net business income (unreported receipts and overstated expenses). Approximately 28% ($56 billion) came from underreported non-business income, such as wages, tips, interest, dividends, and capital gains. The remaining $32 billion came from overstated subtractions from income (i.e. statutory adjustments, deductions, and exemptions) and from overstated tax.

- It appears that compliance rates for sections of the Form 1040 (individual income tax) where the most non-compliance occurs have not changed dramatically since the last compliance study for tax year 1988. The amounts least likely to be misreported on tax returns are subject to both third party information reporting and withholding and are, therefore, the most "visible" (e.g., wages and salaries). The net misreporting percentage for wages and salaries is only 1.2%.

[29] Much of the information in this part is derived from the IRS's background paper prepared for this work.

Figure: Federal U.S. TAX GAP MAP for Tax Year 2001 (in $ Billions)

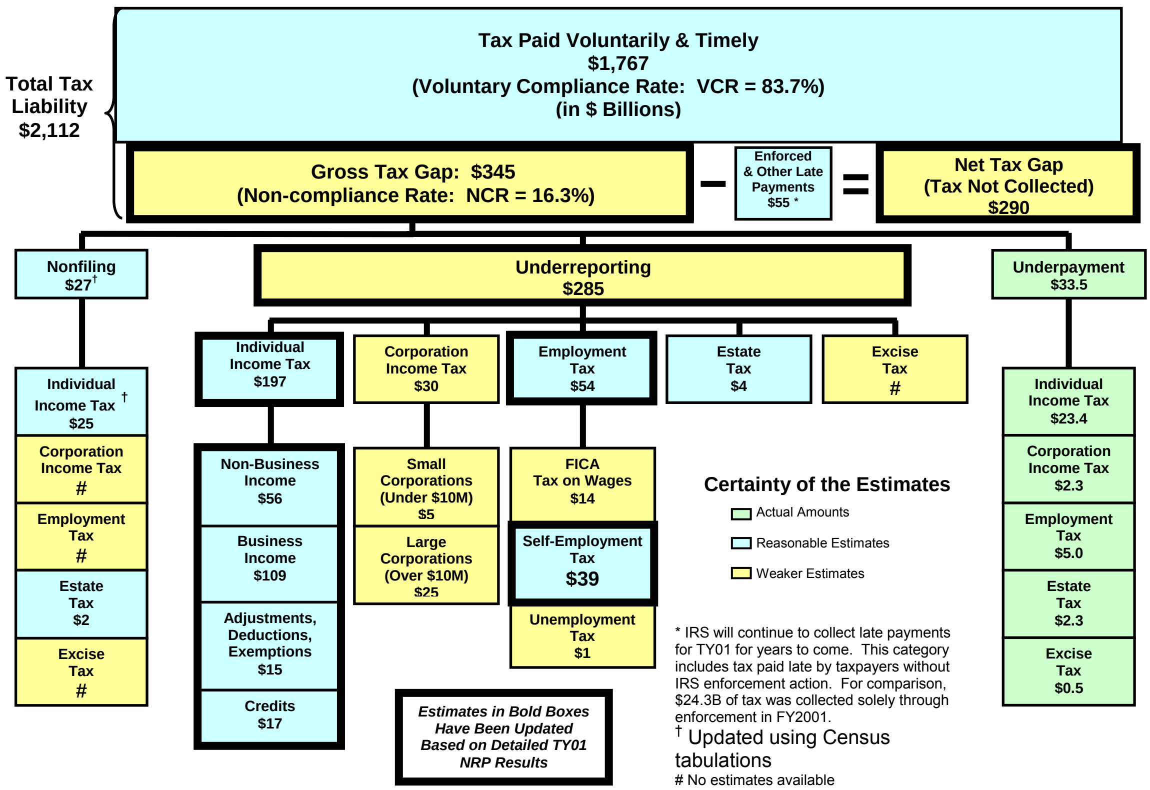


Table: NRP-based Tax Gap estimates, Tax Year 2001		
Tax Gap Component	*Gross Tax Gap ($ billions)*	*Share of Total Gap*
Individual income tax underreporting gap	**197**	**56%**
Understated non-business income	56	16%
Understated net business income	109	31%
Overstated adjustments, deductions, exemptions and credits	32	9%
Self-Employment tax underreporting gap	**39**	**11%**
All other components of the Tax Gap	**109**	**33%**
Total Tax Gap	**345**	

- Amounts subject to third-party information reporting, but not to withholding (such as interest and dividend income), exhibit a somewhat higher misreporting percentage. For example, there is about a 4.5% misreporting rate for interest and dividends.

- Amounts subject to partial reporting by third parties (e.g., capital gains) have a still higher misreporting percentage of 8.6%. As expected, amounts not subject to withholding or third party information reporting (e.g., sole proprietor income and the "other income" line on form 1040) are the least "visible" and, therefore, are most likely to be misreported. The net misreporting percentage for this group of line items is 53.9%.

In September 2006, the US Department of Treasury developed and prescribed the IRS's proactive approach and broad base for further actions to reduce the tax gap. The strategy is described as aggressive and is a clear indication of the Administration's emphasis on resolving an issue which it labels as "unacceptable." This strategy is driven by four key principles (all of which require knowledge about the taxpayer segments which are non-compliant):

1) Both unintentional taxpayer errors and intentional taxpayer evasion should be addressed;

2) Specific segments of non-compliance should be targeted;

3) Enforcement activities should be combined with a commitment to taxpayer service; and

4) Policy positions and compliance proposals should be sensitive to taxpayer service and maintain an appropriate balance between enforcement activity and imposition of taxpayer burden.

Treasury's base of action goes further by defining seven high-level components for integration into the IRS's strategies for addressing the tax gap. The IRS is responsible for the extensive, detailed plans necessary to implement each component: 1) Reduce opportunities for evasion; 2) Make a multi-year commitment to research; 3) Continue improvements in information technology; 4) Improve compliance activities; 5) Enhance taxpayer service; 6) Reform and simplify the tax law; and 7) Coordinate with partners and stakeholders.

Finally, these actions are intended to be complemented by a range of tax policy proposals that strategically target areas where NRP research reveals the existence of significant compliance problems, improvements will burden taxpayers as little as possible, and the changes support the IRS's broader focus on identifying legislative and administrative changes to reduce the tax gap.[30]

In anticipation of the success of the abovementioned activities, the IRS Oversight Board has set, as a strategic goal, an overall voluntary compliance level of 86% by 2009 (which can be contrasted with the figure of 83.7% estimated for 2001).

Current and future research efforts

The IRS has advised that these research efforts are continuing with particular emphasis being placed on expediting the availability of research program results. The current NRP study will be the first of an ongoing series of annual individual studies using an innovative multi-year rolling methodology. Started in October 2007, the study will examine around 13,000 randomly selected tax year 2006 individual returns. Similar sample sizes will be used in subsequent years. The IRS has indicated that an advantage of using this method, which combines results over rolling three-year periods, is that it will be able to make annual updates to compliance estimates and develop more efficient workload plans on an annual basis, after the initial three annual studies. Previous studies started from scratch, drew tax returns from a single tax year and involved examinations of more than 45,000 taxpayers.

[30] For a detailed description of the plan developed, including legislative proposals, see '*Reducing the Federal Tax Gap: A Report on Improving Voluntary Compliance*' (IRS, August 2007) located on the IRS's website.

In addition to the NRP for individuals, the IRS is in the final stages of a compliance research project examining reporting compliance of S corporations. This research encompasses approximately 5,000 returns filed for tax years 2003 and 2004. Since the income and expense items for S corporations flow through to individual shareholders, this study will also help refine the tax gap estimates for individual income tax

Swedish Tax Agency

The Swedish Tax Agency (STA) conducts a periodic assessment of the overall tax gap and its composition—described as a 'tax gap map'—using a variety of data sources/ methodologies. Swedish officials indicated that the main reason for preparing the 'tax gap map' was to construct a simple and pedagogic overview of what is known of the tax gap to facilitate internal and external communication and to identify areas where deeper knowledge is required. The STA regularly publishes the results of its tax gap assessments in its annual report.

On the basis of all available information on tax fraud and other errors made by taxpayers, the STA in 1998 made an attempt to estimate the total tax error, defined as the gap between the theoretical tax revenue and the total tax bill. This estimate applied to 1997. Given the variety of data sources and methodologies employed, the calculations were surrounded by a great deal of uncertainty. However, the purpose of this exercise was not to produce a precise measure for the tax gap that might be used to monitor progress year by year, but rather to indicate its broad order of magnitude. A further estimate was made in 2000, taking the 1997 estimate and adjusting it for GDP growth and a lower rate of tax on company profits. The results of this work are shown in the table below.

Swedish Tax Agency. An estimate of the total tax error 1997 and 2000

Areas of non-compliance	1997	2000 (updated calculation)
Estimated tax due on undeclared income and assets:		
(1) Tax on undeclared income (income tax, social security contributions and VAT)	60.4	56.0
(2) Tax on financial investments abroad.	-	7.5
Subtotal	60.4	63.5
Estimated tax due on other errors detected by audits		
(3) Estimates based on random audits of wage earners, private firms and small companies	20.8	25.3
(4) Coordinated audits of the biggest groups of companies	20.0	16.0
(5) Less correction of tax fault, double calculation	-20.4	-20.7
Subtotal	20.4	20.7
Estimated excise duties due on unreported imports and sales		
(6) Alcohol, tobacco, oil	3.0	3.4
(7) Loss of VAT through e-commerce.	-	0.5
(8) Plain fraud, e.g. claiming VAT repayments	-	-
Subtotal	3.0	3.9
Total	83.8	88.1
• Total tax error (% GDP): (BSEK 1,800 (1997) & 2,083 (2000)).	5%	4%
• Total tax error (% public sector taxes (BSEK 950 (1997) & 1,100 (2000))	9%	8%

Source: Swedish Tax Agency, 9th Edition of the Statistical Year Book (January 2007)

In 2007, the STA completed new research to provide updated estimates of the tax gap in Sweden. These indicated that approximately SEK133 billion in tax revenue (net of enforcement-related revenues) was being lost each year due to different types of fraud and errors made by taxpayers—refer table below. This corresponds to roughly 5 percent of GDP and 10 percent of total tax revenues (settled tax). Some of the results of this work are shown in the following tables:

Swedish Tax Agency: Tax Gap Map (by Taxpayer Segment)

Taxpayer segment	Non-compliance category and amount (SEK millions)			
	International	Black work	Other	Total
Individuals not in business	10	9	3	22
Micro-businesses	7	43	2	52
Small/medium businesses	14	5	7	26
Large companies	15	2	8	25
Public sector bodies	<1	1	<1	2
Not allocated	-	6	-	6
Totals	46	66	21	133

Source: Tax gap map for Sweden, Report 2008: 1B (Swedish Tax Agency), February 2008.

Swedish Tax Agency. Tax Gap Map (by tax type)

Tax type	Total (SEK millions)	% tax
Income tax- earnings	20.4	5
Income tax business	31.9	33
Tax on capital	10.9	65
Social security	30.2	8
VAT	35.3	14
Excise	4.2	5
Totals	132.9	10

Source: Tax gap map for Sweden Report 2008: 1B (Swedish Tax Agency), February 2008.

The largest part of the estimated tax gap—SEK66 billion—consists of "black" work, of which two thirds was attributed to micro-businesses. The tax gap related to international transactions was estimated to SEK 46 billion with medium sized and large companies representing the larger parts. The remaining tax gap was estimated at SEK 21 billion.

To calculate the tax gap related to black work a recent study exploring the size of the black economy has been used[31]. (Also see Annex 8.) In this study, the total level of black work has been identified through a macro-method using the discrepancy between income and household consumption in the national accounts. This method indicates that black work amounts to approximately SEK 115-120 billion. With the help of various micro methods, such as results from audits, surveys to both buyers and sellers of black work and surveys of different business sectors, the content of the black work has been assigned to different groups of tax payers. In this way most of the content of black work has been explained. The remaining part is defined as "black work not allocated". For the two other areas, "international" and "other", there has been no macro-models available. Instead, the estimates build on various micro methods such as the results from random tax controls, the results of targeted tax audits and different risk analyses. Where possible, several calculations and sources have been compared to verify the accuracy of the estimates. In a few cases, where no basic data were available, experts instead assessed the reasonableness of the estimates.

The underlying data was gathered from different years and covers the major taxes (i.e. income tax, social contributions, VAT, and excise). The 'tax gap map' is, therefore, not a snapshot at a specific point in time, but should rather be viewed as the STA's current knowledge of the tax gap. Since the estimates are based on data from a number of years (mainly the prior two completed fiscal years) it can not be used to follow the development of the tax gap over time.

[31] See *'Purchasing and Performing Undeclared Work in Sweden, Part 1: Results from Various Studies, Report 2006:4B, The Swedish Tax Agency'*. This report adopts a wide definition of "black income from work": 1) a payment work for carried out; 2) that should be subject to tax in Sweden; but 3) has not been declared to the STA.

The STA acknowledges that its estimates of the tax gap come with a fair degree of uncertainty….
"It should be noted that the uncertainty in the estimates is large overall. The lowest level of uncertainty can be found in estimates based on results from random controls. The highest level of uncertainty can be found in the international area and in the estimates of the tax gap for large companies. Due to the high level of uncertainty in many areas the tax gap map should be used with caution."

United Kingdom

As mentioned earlier in this note, HMRC's compliance measurement work has a strong focus on understanding the nature and extent of the tax gap, and the impact of its intervention on it. Commencing with detailed work in 2001 for indirect taxes which has been carried through and reported on each year, more recent efforts have focused on direct taxes. The results of this work are published on HMRC's website, and referenced at various parts of this note, including Annex 9 which concerns the UK VAT system. To date, this work has encompassed:

- Indirect taxes—VAT: Aggregate tax gap estimates for each year from 1991 to 2007;
- Indirect taxes—Excise: Aggregate tax gap estimates for major products for each year from 2000 to 2007;
- Direct taxes—Personal tax and National Insurance Contributions (NICs): Aggregate gap estimates for 2000 to 2002;
- Direct taxes—Corporations Tax/ Small and Medium-sized businesses: Aggregate gap estimates for 2001 to 2003; and
- Direct taxes—Withholdings of personal income tax and NICs.

Denmark

The Danish Tax and Customs Administration has recently reported that it has embarked on a comprehensive compliance measurement exercise for its major taxes (i.e. personal income tax, corporation tax, and the VAT). The measurement program will be based on the results of a program of random audits entailing some 11-13,000 audits conducted in the latter half of 2007. The program is being used to gather a broad array of data on taxpayer compliance, including the nature and magnitude of taxpayer errors and regional/local compliance patterns, that will be used to refocus and redesign compliance strategies.

Annex 7

United States: Implementation of the NRP: Challenges and Innovations

Overview – Historical Perspective and Major Components

Historically, IRS estimates of reporting compliance were based on the Taxpayer Compliance Measurement Program (TCMP), which consisted of line by line audits of random samples of returns. This provided the IRS with information on compliance trends and allowed it to update audit selection formulae. However, this method of data gathering was extremely burdensome on the taxpayers who were forced to participate. As a result of concerns raised by taxpayers, Congress, and other stakeholders, the last TCMP audits were done in 1988.

The National Research Program which has been used to estimate the IRS's most recent tax gap updates was born out of the desire to find a less intrusive means of measuring tax compliance. It used a focused statistical selection process that resulted in the selection of approximately 46,000 returns, somewhat fewer than previous compliance studies, even though the population of individual tax returns had grown over time. Like the compliance studies of the past, the NRP was designed to produce data that IRS can use to measure overall reporting compliance, update existing audit selection formulas, and identify potential ways to improve voluntary compliance. Under the NRP, IRS will review randomly selected individual tax returns to determine whether the taxpayer has complied with statutory income, expense, and tax reporting requirements.

The major components of the program include: 1) a random sample of individual tax returns large enough to meet program objectives; 2) a specially trained cadre of examiners; 3) an assortment of case building tools to verify as many items reported on tax returns as possible without contacting the taxpayer; 4) a tax return classification process for determining the level of audit, if any, that a return warrants and which items must be verified; and 5) an examination process that uses structured procedures and managerial reviews.

Unlike the TCMP audits, the NRP did not involve line-by-line audits. The sample design, case building tools and classification process reduced the burden imposed on taxpayers. IRS has also developed a data analysis plan to use the data to address each of the program objectives.

The Challenges of Implementation

Implementing this compliance measurement program presents a number of challenges to the IRS. These include resource alignment, direct and indirect impacts on other compliance enforcement efforts, and the diversion of budgetary funds.

Resource alignment

The IRS designed the NRP sample so that the results are representative of the population of individuals and self-employed taxpayers who filed tax year 2001 Form 1040 tax returns. As a random sample of the population of taxpayers, the NRP study did not align geographically with the examination skills and talent necessary to complete the examinations. To overcome this geographical misalignment, IRS devoted resources to training existing personnel, employed remote examinations and incurred increased travel for program completion.

Impact on Enforcement Efforts

The second challenge in implementing the NRP study is its direct and indirect impact on other enforcement efforts. During an NRP examination, an examiner verifies the accuracy of information reported on the tax return that could not be substantiated by other data sources. In an operational examination, an examiner investigates only those items they deem large, unusual and/or questionable. Accordingly, an NRP examination is more comprehensive than an operational examination. To complete these comprehensive examinations and the associated data collection requires greater time per case than would normally be devoted to a similar case in operational conditions. This increased time translates into fewer taxpayer contacts with the same examination resources. While examiners devote their efforts to NRP examinations, they are not devoting their time to other, generally more noncompliant, examinations. This difference in non-compliance dollars represents the opportunity cost of conducting the NRP study.

Budget Demands

Another challenge is the budgetary commitment that a program such as the NRP demands. Execution of the National Research Program requires a commitment of examination, research, training, automation and administrative resources. This commitment represents a long-term investment in maintaining the integrity and fairness of our tax system. IRS recognizes the importance of this investment and is committed to it for the foreseeable future; however, it is still a diversion of resources that the IRS could otherwise apply to direct enforcement efforts. Without budgetary funding separate from enforcement resources, any compliance measurement program is at risk during budget prioritization.

Innovations and Operational Benefits Realized through Implementation

In addition to the challenges presented by the implementation of the NRP, there are also a number of benefits realized in addition to an assessment of the overall compliance level as measured by the tax gap. These benefits include: 1) the systematic integration of case building tools; 2) a "classification" process for study returns; 3) automated integration of issue-level data, and 4) enhancements to workload delivery.

Case building

The NRP study included using case building tools to aid examiners in determining whether IRS needs to have any contact with taxpayers to verify the accuracy of information reported on their tax returns. Case building is the process of adding information from a variety of systems and data sources to the case file, both from within IRS and from non-IRS sources, prior to the examiner contacting the taxpayer (if necessary).

Many of the case building tools used by the NRP were not new, but have been successfully used by various areas of the IRS. What is new and unique about NRP case building is that the data sources are collectively applied to each return in the sample as an investigative tool that facilitates improved analysis and enhanced decision making by NRP examiners. NRP examiners received the necessary training to understand and use these tools, along with management support and sufficient time to maximize use of the data. Without these tools, an NRP examiner is less likely to be able to confirm the accuracy of the return without increasing taxpayer burden through correspondence or audit. Paramount in the access and use of taxpayer data by NRP examiners is that taxpayer privacy is maintained, and that only the data necessary to help make a compliance determination can be used.

The NRP study used the following items in its case building efforts:

- The sample year tax return and printouts of the tax return from the 3 previous years—this allowed the examiner to develop an overall picture of the taxpayer's return characteristics, including any trends and patterns.

- Information Return Transcripts, providing the most up-to-date W-2 and 1099 information for the sample year and 2 previous years—allowed the classifier and examiner to identify discrepancies between the information return and the taxpayer's return, including sources of income.

- Currency and Banking Retrieval System—reports large, individual banking transactions greater than $10,000.

- Dependent Database—contains data identifying custodial parents, from the U.S. Department of Health and Human Services, and could impact the Earned Income Tax Credit on returns.

- Master File Data—contains all account information including filing and payment history for the sample year and 3 previous years.
- An external (public) asset database—provides information on real estate and personal property transactions.

The data quality checks of all NRP case building tools were reviewed to ensure the accuracy of the data. It is important to note that examiners used these data sources as investigative tools, and relied on them as one of several information sources. These case building tools provided valuable hints for classifiers when looking at a return, but examination adjustments were only made after facts were developed during the audit. In effect, these data allowed the IRS to focus its efforts where the return information could not otherwise be verified. This pioneering approach was so successful it is being expanded into the IRS's regular operational audit programs.

Classification Process

A second major NRP innovation was to introduce a "classification" process, whereby the randomly-selected returns and associated case-building data were first reviewed by experienced auditors, referred to as classifiers, who identified not only what issues needed to be examined, but also the best way to handle each return in the sample.

In this way, each return was either: (1) accepted as filed, without contacting the taxpayer at all (though sometimes with minor adjustments noted for research purposes); (2) selected for correspondence audit of up to three focused issues; or (3) selected for an in-person audit where there were numerous items that needed to be verified. In addition, the classifiers identified compliance issues that the examiners were required to evaluate, though the examiners had the ability to expand the audit to investigate other issues as warranted.

Of the 46,000 examinations, 41,000 involved face-to-face audits; 2,000 were investigated through correspondence with the taxpayer; and 3,000 returns were accepted as filed based on third party documents filed with the IRS.

Automated Integration of Issue-Level Data

For returns needing an audit, classifiers specified which item(s) needed verification and determined whether the additional information needed to be obtained through correspondence or a face-to-face audit. If a classifier determined that some line item information could not be verified with case building materials or simple correspondence, the line items were noted on an electronic check sheet along with a brief explanation and sent for a face-to-face audit. The automated check sheet maintained the issues identified during classification and automatically fed into the Report Generation Software (RGS) system to capture NRP results. Included in the database of NRP results were the examiners' determinations of the reasons for any non-compliance that they found. IRS examiners used the RGS menu of 46 reason codes to categorize reasons for taxpayer non-compliance. NRP examiners also prepared electronic work papers attached to each RGS case file to aid researchers using the NRP database. The RGS case files, including these work papers, are archived in a database.

Enhancements to Workload Delivery

Completion of the NRP study has enabled the IRS to re-engineer its workload identification process for the first time in over 20 years. Two major enhancements in workload delivery are the new workload identification formulas (DIF) and restructuring of examination classes. The new examination classes distribute the population of individual taxpayers along major areas of non-compliance: 1) Earned Income Credit Taxpayers (EIC); 2) Non-Business Taxpayers; 3) Business Taxpayers, and 4) High Income Taxpayers.

The new workload identification formulas enhance the Service's ability to identify the non-compliant taxpayers within each of these areas. Together, the new examination classes and the new workload identification formulas enable SB/SE to refocus its enforcement efforts to areas contributing the most to the tax gap while minimizing the disruption on compliant taxpayers. Employing these two enhancements in the workload delivery process should achieve a lower no-change rate (that is, examination of fewer compliant returns) and a higher yield per return.

Detection-controlled estimation[32]

Estimating the individual income under-reporting tax gap has typically consisted of three components: 1) estimates based on errors detected by examiners during random audits; 2) adjustments for unreported income that examiners were unable to detect; and 3) average marginal tax rates applied to the components of income and offsets to income.

Prior to estimating the Tax Year 2001 tax gap, estimates of the amount of income not detected during the random audits consisted of multipliers based on a comparison of 1976 TCMP audit results where examiners did not have use of information reporting (IRP) documents with the income reported on those documents. The results of the comparison showed that, for every $1 detected without the use of IRP documents, another $2.28 went undetected. This resulted in the use of a 3.28 multiplier, with some variations depending on type of income. For purposes of estimating the Tax Year 2001 tax gap, IRS wanted to update the methodology for estimating undetected income and contracted with Dr. Brian Erard and Professor Jonathon Feinstein to implement a methodology originally developed by Professor Feinstein known as Detection-Controlled Estimation (DCE).

DCE is an econometric technique that when applied to tax compliance typically estimates two equations jointly; 1) a noncompliance equation which models the amount of detected and undetected underreported income; and 2) a detection equation that models the detection rate. The intuition underlying the DCE methodology is the idea of modeling the differences in the abilities of examiners to detect income. Because examiners play a significant role in the methodology, ideally, there would be a relatively large group of examiners who each examined a large number of returns and line items on those returns. If, instead, there are only a small number of examiners who audited multiple returns, then there may be challenges with using the DCE methodology. In other words, the allocation of returns to examiners and the extent of the audits play an important role in determining the level of detail and reliability of the estimates that DCE can provide.

The decision to spread the sample over multiple years has implications for implementing the DCE methodology. For Tax Year 2006, approximately 13,200 returns will be selected. Following past NRP procedures, these returns will go through classification and essentially be assigned to one of three categories: 1) accepted as filed or with adjustments; 2) correspondence exam; or 3) face-to-face exam. The first implementation of the DCE methodology for estimating the Tax Year 2001 tax gap was limited to using the results of the face-to-face exams. Assuming the same scenario holds for future analyses, fewer than the 13,200 selected returns will actually be available to use with DCE. Ideally, these returns will be efficiently assigned to a cadre of examiners who will primarily handle NRP audits, thereby potentially increasing the reliability of DCE by concentrating the returns and lines examined. By moving toward annual studies, essentially institutionalizing the NRP individual studies, the likelihood of developing a cadre of examiners may be increased. Even with a greater concentration of returns among examiners, there may not be enough observations to employ DCE during the first or second years of the study. However, if the annual studies are extended beyond Tax Year 2008, then annual updates with DCE methodology may be possible by pooling the previous 3 years of NRP results.

Other Innovations

Other NRP innovations included streamlining the collection of data, providing auditors with new tools to detect non-compliance, and involving stakeholders (including representatives of tax professional associations) in the design and implementation of the study. As mentioned earlier, the more focused

[32] See '*National Research Program—Methods and Plans*', The IRS Research Bulletin, Proceedings of the 2007 IRS Research Conference.

selection process resulted in the NRP sample including around 46,000 returns—somewhat fewer than previous compliance studies, even though the population of individual tax returns had grown over time. Clearly, the NRP approach was much less burdensome on taxpayers than the old TCMP audits, which examined every line item on every return. At the same time, the data collected through the NRP reporting compliance study is about the same quality as that collected under TCMP.

Organizational Structure Supporting the NRP

The NRP Program Office is responsible for program management and oversight, and ensures the delivery of all NRP components. This Office occupies a prominent position within the IRS's Research, Analysis, and Statistics (RAS) organization - whose Director reports directly to the Commissioner. This Office has formed the approach being taken to compliance measurement using the following principles:

- minimize taxpayer burden as data is collected;
- involve the IRS Operating Divisions as partners in the design and implementation of the program, as well as customers of the results; and
- solicit external stakeholder ideas and support in the design of the program.

Even though the NRP Office was created to ensure a single point of accountability and responsibility, the NRP Office relies on multiple IRS organizations to help implement the program. Consistent with the guiding principles above, various organizations within IRS have been involved directly in the development of the NRP.

The NRP Office began to involve the IRS Operating Divisions and other interested IRS offices by consulting them throughout the design and implementation of the program regarding:

- information they would like collected as part of the NRP study—particularly reporting compliance;
- roles each organization would play in the program; and
- resources each organization would contribute to the NRP.

The NRP integrated the following two components into its program to structure the cross-functional relationships vital to the NRP: the NRP Executive Steering Committee (ESC), and the Examination Advisory Committee (EAC), which has become the NRP Implementation Team. These groups, described below, include members from various IRS Operating Divisions and organizations and each supports the NRP at a different level.

> The ESC is comprised of top-level officials from the NRP's internal partners and customers, other internal stakeholders such as the Privacy Advocate and Treasury, and external stakeholders such as the IRS Oversight Board. The ESC provides strategic guidance, serves as a governing board for major implementation decisions and makes multi-functional decisions for the NRP.
>
> The NRP Implementation Team was established to complete a number of critical tasks necessary to support implementation. Team members are typical of the employees and managers who will do NRP work, including representatives from Operating Divisions, the NRP, Research and the National Treasury Employees Union. They have a broad collective knowledge of the classification and examination processes, as well as prior efforts to measure compliance and other issues. The Implementation Team developed case building, classification, examination and quality review guidelines and procedures.

External stakeholder involvement is also reflected in the guiding principles and is vital to the success of the NRP. The NRP progressed beyond the conceptual stage only with the approval of the Administration including OMB, and the IRS Oversight Board and especially Treasury. On December 21, 2001, Secretary O'Neill endorsed the NRP and this support was publicized in a press release issued January 16, 2002. In addition, multiple practitioner organizations and taxpayer advocate and advisory groups have partnered with the NRP Program Office.

Annex 8

Swedish Tax Agency: Applied Research Findings — Measuring the Informal Sector[33]

Another part of compliance measurement is research or deeper evaluation activities. The STA has, for instance, during 2005 and 2006, carried out a comprehensive investigation of the informal sector.

When doing so, a large number of investigations have been carried out. The aim was to get a more general view of the extent and scope of black work in Sweden today, the reasons for it, and to get a basis for ideas of what can be done to counteract illicit work.

Gross Domestic Product (GDP) is measured in the Swedish National Accounts (NR). GDP shall include also undisclosed production such as income from work The NR estimate of black income from work is based on the discrepancy between reported incomes and reported expenditures in the household sector. This discrepancy has, for year 2002,,been calculated to SEK 115-120 billion, which corresponds to some 10 percent of total income from work. This discrepancy has been the starting point for the Swedish Tax Agency's study – how much of the discrepancy can be explained by other methods?

A deep analysis has been made of tax audits carried out during recent years. The tax audit method can reveal SEK 71 billion of which amount 85 percent can be attributed to small companies with total wages of less than SEK 1 million. Half of this sum is undeclared income from employment (pay or benefits) and the other half is undeclared business income for self employed. This result receives confirmation from three other surveys.

1. Established self-employed business owners compared with employees in the same sector have considerably lower "white" declared income (comparisons of median income in the two groups).

2. Other living standard indicators, including home size and car ownership show that entrepreneurs have a standard of living that is commensurate with a considerably higher income than is officially declared.

3. An estimate of the true income in an entrepreneur household, compared with that for a wage earner based on foodstuff consumption, provides results in respect of under-declaration among business owners that is comparable with the auditing method.

In an interview survey aimed at the general public, the Swedish Tax Agency has made separate assessments of the extent of illicit work carried out and of the purchase of services in the informal sector. In respect of goods, a separate investigation was carried out concerning the purchase of untaxed goods. The surveys recently performed were the most detailed carried out anywhere in Scandinavia.

Interview surveys of this type only reveal a smaller part of the total illicit work, namely that part of which ordinary private individuals are aware and that is based on both purchaser and vendor agreeing that a price shall be without tax. The extent of the illicit work that was revealed by the surveys is estimated to be SEK 15 billion, of which SEK 10 billion is illicit work carried out for households, and SEK 5 billion for companies. Seen as a whole, the amount of illicit work caught by the interviews with the public accounted for 1.7 percent of the total working time in Sweden.

From the number of people who admitted that they had worked in the informal sector, it is estimated by projection that there are about 800,000 altogether, and that this illicit work is the equivalent of 66,000 complete fulltime jobs, of which 25,000 is for companies. In respect of working for households, illicit work on the homes represents a total of about 21,000 complete fulltime jobs of work, and for other household services 20,000 complete fulltime jobs of work.

[33] See 'Purchasing and Performing Undeclared Work in Sweden, Part 1: Results from Various Studies, Report 2006: 4B, Skatteverket

There is a considerable difference, e.g. depending on occupation, whether one has worked in the informal sector during the previous year. Among students and national service soldiers the proportion is highest, at 25 percent compared to the general population (aged 18-74) where the proportion is 13 percent. The largest category which has worked in the informal sector is trade workers, equivalent to an estimated total of 266,000 people. In general it can be said that among those who perform illicit work, there is a higher proportion of younger people, and those on a low income, while the purchase of services in the informal sector is over-represented by people with higher incomes and those who own their own homes.

Much of the illicit work is carried out by relatives, neighbours and friends. About half of the compensation for illicit work in the household sector is provided in other ways than with money. Cash payment is more common in city areas. The degree of cash payment varies a great deal. For example looking after pets pays about SEK 7 per hour, cleaning SEK 69 per hour and construction work SEK 135 per hour. On average a person who works in the informal sector and is paid in cash gets about SEK 19,000 per year, but when working for a company this rises to 29,000 in cash per year. Every fifth household has bought services in the informal sector in recent years, and paid cash. On average a household has paid SEK 7,000, but for half the households the purchase sum amounts to less than SEK 3,000.

When comparing the extent of illicit work that was paid for in cash there was a difference between those who did the work and those who bought it. If you discount looking after pets, the volume of the purchased work was SEK 1.3 billion greater than that carried out. There are several possible explanations for this. One is that when we asked about illicit work performed, this was limited to people aged between 18 and 74 who are resident in Sweden. The purchasers, on the other hand, answered with the extent of all their purchases, regardless of who had done the work. The interview survey described above covered services purchased in the informal sector. But goods can also be purchased in the informal sector. To get some idea of the extent, in the autumn of 2005 the Swedish Tax Agency commissioned a survey to investigate "the purchase of goods in the informal sector" by private individuals. The problem when it comes to buying goods in the informal sector is that it can be difficult for the purchaser to decide what is informal or not, since it is usually up to the vendor to manage the accounting. The Swedish Tax Agency questions were therefore formulated so that the purchaser "had good reason to believe that the sale of the goods was not declared" and the interviewees were asked to respond to a number of different categories of goods, such as beverages, eatable farm products, construction material, forestry products, art objects, etc. 25 percent of Swedes admitted buying goods in the informal sector in the previous 12-month period. Those who bought goods in the informal sector had on average paid SEK 1,900. Nationwide, the purchase of goods in the informal sector extrapolates in cash paid to about SEK 3.1 billion.

Of the discrepancy in the national accounts, mentioned above, that indicates an informal sector amounting to SEK 115-120 billions, only SEK 90 billions can be accounted for i.e. the methods used can "explain" 75 percent. However, we cannot say that the discrepancy in the national accounts is at an incorrect level. On the one hand there is a general uncertainty in the estimates we have made. And on the other hand, there are a number of reasons why there ought to be an unexplained remainder, of which the primary ones are:

- not everything is brought out in interviews;
- not everything can be revealed in tax audits; and
- some people don't know what can be classed as illicit work.

If the completed investigation had been able to explain the entire discrepancy, the conclusion thus would be that the national accounting probably under-estimated the concealed income or that there was a fault in our investigations.

These findings have resulted in a catalogue of suggestions of different treatments (mostly changes of legislations). The findings and the suggestions has been presented in the media and to the government and received positive interest from both.

Annex 9

Measuring Aggregate VAT Revenue Losses—Her Majesty's Revenue and Customs (HMRC) Agency in the United Kingdom

The information in this Annex has been obtained largely from public UK sources,[34] and is presented in high level terms. Parties interested in ascertaining more detailed information should access the referenced texts, all of which are available on HM Treasury's website as part of the official Pre-budget and Budget papers of the UK Chancellor of the Exchequer for the years indicated.

Measurement approaches in general

Two approaches to estimating VAT revenue loses have and continue to be employed by HMRC—these are described as the ***'top-down approach'*** and ***'bottom-up approach'***:

- The ***top-down approach*** entails estimation of VAT revenue losses as the difference between the theoretical VAT liability (i.e. total VAT receipts with full compliance) and actual VAT receipts. This is a global 'gap' measure based on statistical data independent of HMRC's administration.

- The ***bottom-up approach*** uses HMRC's operational and intelligence data as well as other sources of information to produce estimates of revenue losses from specific forms of non-compliance (i.e. tax avoidance/planning, missing trader intra-community fraud, failure of businesses to register and collect VAT when operating above the VAT turnover threshold, and other general non-compliance).

The measurement strategy emphasizes that any overall estimate of VAT revenue losses from either the top down or bottom up approaches is of use primarily in generating an assessment of the scale of the revenue loss problem, and in developing and monitoring the impact of a strategy to reduce those losses.

Top-down Estimate of VAT Losses

The top-down approach for estimating VAT loses employs a gap analysis technique which involves the following steps:

- Assessing the total amount of expenditure in the economy that is theoretically liable for VAT.

- Estimating the tax liability on that expenditure based on commodity breakdowns of the expenditure data.

- Deducting any legitimate reductions in the VAT liability resulting from schemes and reliefs (e.g. flat rate farmers, businesses operating below the VAT registration turnover threshold) to arrive at the VAT theoretical tax liability.

- Deducting actual VAT receipts.

- Assuming the residual amount—the gap—is the total VAT loss due to any cause, including non-compliance, avoidance, and fraud.

In practical terms, this approach mirrors the essential elements of a standard VAT revenue forecasting model which ministries of finance and/or revenue bodies in many countries have developed for formal budget revenue estimation purposes. Typically, such revenue estimation models make an allowance for revenue leakage that is attributable to all forms of non-compliance, and which is calibrated annually in the light of newly available data.

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[34] In particular, see ***'Measuring Indirect Tax Losses'*** (November 2002) HM Customs and Excise.

Use of national accounts data

HMRC readily acknowledges that there are limitations with the national accounts data upon which calculating the VAT theoretical tax liability depends. In particular, there are time lags in the availability of some data, some are subject to revision, and the approach assumes that the national accounts are an exhaustive measure of economic activity. Concerning this last point, HMRC's reports note that national accounts contain adjustments for shadow economy activities that aim to be comprehensive, but this is an inherently difficult exercise.[35] Each of these matters is elaborated on further in HMRC's public estimating methodology.

For all these sorts of reasons, HMRC regards the national accounts data as most useful from the viewpoint of establishing trends over time rather than absolute levels of expenditure.

Other elements of the gap calculation

There are a number of other elements of the calculation for which there are brief comments:

> *Businesses that make exempt supplies:* Businesses in this category cannot claim the VAT paid in respect of the expenditure that relates to these supplies—in the UK context, this is described as 'sticking tax'. Typically, this relates to the Post Office, banking and finance, insurance, real estate, health, education, clubs, gambling, and funeral trading bodies. HMRC uses a variety of sources (including a one time survey for the financial sector) for estimating the impact of this issue on the overall calculation of the theoretical liability. They recognise that this is one of the more difficult parts of the measurement.
>
> *Deductions:* Having calculated a theoretical VAT liability, some adjustments are needed to take account of amounts that are legitimately not collected. In addition to small traders operating under the VAT threshold who do not charge VAT on sales (see below), there are businesses (largely government-related) that pay VAT on certain purchases but are then able to claim it back. These include government departments in respect of specified contracted out services acquired for non-businesses purposes, all Northern Ireland government departments, all purchases by the BBC and ITN). The adjustments required to take account of these amounts are sourced from audited accounts.
>
> *Traders below the VAT registration threshold:* Most industries comprise a number of unregistered small businesses that operate below the VAT registration threshold - around €83,000 taxable turnover - and are thus not required to charge VAT on sales. As expenditure on the output of these businesses is picked up in the estimate of the theoretical liability and an amount of VAT imputed, an adjustment is required. In the UK context, there are audited assessments made for this factor for particular businesses (e.g. hairdressers, construction) are produced as part of the UK's Own Resources Account (prepared for determining country payments to the EU) that assist with this computation.
>
> *Matching tax receipts with tax liabilities:* To obtain an approximate matching of receipts and liabilities bearing in mind the extent of collection lags inherent in any VAT system, a one-quarter time lag between the relevant economic activity incurring VAT and its collection by HMRC is assumed. The VAT base is therefore calculated on a calendar year basis, while receipts are calculated on a fiscal year basis. In practice, lags may be more complex than provided for by this simple rule, this creating some volatility in the receipts and therefore the gap. To compensate in

[35] The national accounts are compiled under two main pieces of European legislation—the European system of Accounts (ESA 95) and the GNP Directive. ESA 95 requires any economic transactions between consenting parties, hidden or illegal, to be included in the accounts. Under the GNP Directive, there has been an exhaustiveness programme under which all member states accounts have been audited by Eurostat and the Court of Auditors to ensure that they comply with the law.

part for this, some smoothing of receipts is carried out where the volatility caused by particular year-end effects can be quantified.

Results of applying the top-down approach

The table below shows HMRC's calculations of the theoretical VAT base, actual receipts, and a computed gap for the financial years 1991-2007[36]:

Financial Year	Net Theoretical VAT base (£bn)	Net VAT receipts (£bn)	VAT Gap (£bn)	Gap as a percentage of estimated base
1990/91	34.2	30.9	3.3	9.7
1991/92	39.7	35.2	4.4	11.2
1992/93	42.5	37.2	5.3	12.4
1993/94	44.4	39.2	5.2	11.7
1994/95	47.3	41.7	5.5	11.7
1995/96	50.0	43.1	6.9	13.8
1996/97	53.8	46.6	7.1	13.2
1997/98	56.9	50.6	6.4	11.2
1998/99	60.5	52.5	8.0	13.2
1999/00	64.1	56.2	7.9	12.4
2000/01	68.5	58.5	10.0	14.6
2001/02	72.1	61.0	11.3	15.4
2002/03	75.8	63.6	12.2	16.1
2003/04	79.0	69.1	9.9	12.6
2004/05	83.0	72.7	10.3	12.4
2005/06	86.3	72.9	13.4	15.5
2006/07	90.2	77.4	12.8	14.2

Sources: 1) 1991 to 2000: Measuring and Tackling Indirect Tax Losses (December 2004) HM Customs and Excise.
2) 2001 to 2002: Measuring Indirect Tax Losses- 2006 (December 2006), HMRC.
3) 2003 to 2007: Measuring Indirect tax Losses- 2007 (October 2007), HMRC

Limitations of the top-down approach

HMRC acknowledges certain limitations in the top down approach:

- as a global estimate, it provides little diagnostic information about the nature of losses and therefore does not help address how to tackle them;
- the national accounts data have a margin of error, are not completely up to date, and are subject to revision; and
- as well as final demand, it is necessary to have detailed data on intermediate sales of businesses for some parts of the calculations; this information is harder to derive and less reliable than the main national accounts aggregates.

11. Notwithstanding these limitations, in HMRC's view the top-down approach offers the best overall estimate of VAT losses, the best illustration of trends in their overall growth, and the best baseline for monitoring the future development of the overall losses, and the impact of any strategy to tackle them.[37] Consistently applied over time, the methodology should provide a reasonable idea of the trend of

[36] These estimates are revised annually in the light of newly available national accounts data. Estimates for prior years may be impacted by revisions of national accounts data and hence may be different from previously published estimates

[37] Ibid footnote 1.

compliance, of particular importance to a revenue body that has embarked on a major program of compliance improvement activities. As noted by the UK National Audit Office[38]…………

"Customs have done well to estimate the scale of losses on VAT and are leaders in Europe in this type of work. They have determined how they need to respond to the problem, the resources needed and set targets for reducing the loss. Customs' estimates are necessarily subject to a margin of error because of the number of assumptions made and the reliability of the data used. Research by our consultants established that Customs have used appropriate methods to estimate the VAT losses and have made the best use of the data available, even though these are subject to uncertainty. Customs have estimated the trends in losses for VAT missing trader fraud and are carrying out further work on estimating other losses to determine whether their response is proportionate to the risks."

Bottom-up Estimates of VAT losses

12. In order to corroborate, or otherwise, its top down estimates of VAT revenue losses, HMRC also regularly produces a series of bottom up estimates of revenue losses for the major areas of non-compliance.[39] As explained hereunder, these estimates are drawn directly from HMRC's operational experience. HMRC's acknowledges that there are limitations to these bottom-up estimates owing to the uncertainties, limitations and subjective judgments involved, and accordingly the information should be interpreted with these qualifications in mind:

- ***Missing trader intra-community fraud:*** HMRC make public only a partial account of their methodology for estimating total revenue losses in this area as it considers that putting more information in the public domain would undermine its ability to deal effectively with this fraud.

  Unlike the other fraud assessments carried out, the assessment for the revenue loss from VAT missing trader intra-community fraud is expressed in terms of a range rather than a mid-range figure. This is a consequence of the particular methodology employed to estimate the scale of this type of fraud.

  The maximum figure in the range is based principally on comparing statistical data on sales to the UK declared in other Member States with purchases from other member states declared in the UK. This figure is viewed as a maximum because it is likely to include contributions from data mismatches due to submission of incorrect statistical information by some of those traders who only occasionally acquire goods and are, thus inexperienced in this area. The minimum figure is based on a sub-set of the data used to generate the upper limit and while it is considered to include only fraud (to a good approximation), it may not include all fraud and is therefore a minimum.

- ***Tax avoidance:*** Estimates of the revenue foregone due to tax avoidance schemes/ arrangements are based on HMRC's own estimates of business spending on VAT planning, deferral, and avoidance. For 2001-02, it was estimated that such spending ranged from £250-300 million per annum and that this expenditure represented around 10 percent of the associated tax revenue. These judgments led to an estimate of aggregate revenue loss of between £2.5-3.0 billion.

- ***General Non-compliance:*** This category relates to all other forms of non-compliance, resulting from a variety of behaviours, including deliberate and unintentional errors in declaring liabilities, failure to pay taxes due, and failure to file returns.

  Aggregate revenue losses for this non-compliance were put in the range of £2.5-4.0 billion per annum. These estimates were derived from an evaluation of operational data from VAT trader records and from HMRC's compliance testing program—a program of assurance visits by VAT

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[38] See 2 of '*HM Customs and Excise: Tackling VAT Fraud*'. Report by the Comptroller and Auditor General (March 2004).

[39] The information provided for this part has been obtained from the C&E document ***'Measuring Indirect Tax Fraud'*** HM Customs and Excise (November 2001).

officers to a random sample of traders. Results from the random assurance program enable C&E to produce representative estimates of compliance for all traders. This aggregate also included provision for an estimated 125,000-180,000 businesses operating above the VAT threshold that should, but had failed to, register for VAT purposes.

The estimates for tax avoidance and general non-compliance are intended as broad indicators of scale and are not suitable for constructing trends, but work is ongoing to improve them or replace them with better measures.

Aggregate revenue losses using bottom-up approaches

A summary of estimated revenue losses for 2001-02 using the bottom-up approach is set out below:

Type of non-compliance	Estimated revenue losses (£ billion range)
Missing trader fraud	1.7 - 2.75
Tax avoidance	2.5 - 3.00
General non-compliance	2.5 - 4.00
****Total**	**6.7 - 9.75**

14. In aggregate, the bottom-up estimates produced a range estimate of revenue losses of around £7-10 billion per annum. In HMRC's view, the upper range of this estimate provided a useful corroboration of the 2001-02 estimate of the overall VAT gap using the top-down approach described (i.e. £10.4 billion), from which the losses as a percentage of the theoretical tax base have been derived.

15. Since 2002, there have been revisions of some of the estimates mentioned in paragraph 13. In its most recent assessment of VAT revenue losses, HMRC indicated that revenue loses resulting from Missing Trader Intra-community (MTIC) fraud were likely to be in the region of £1.12—1.90 billion for 2005, a substantial downwards revision of the previous estimate for 2002, and suggesting that inroads were being made in reducing this form of non-compliance.

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