# APPENDIX B: TAX EXPENDITURE BENCHMARKS AND METHODOLOGIES

## B.1 BENCHMARKS

### WHAT IS A TAX EXPENDITURE BENCHMARK?

In order to identify and measure tax expenditures a benchmark must be specified. Tax expenditures are defined and measured as deviations from this benchmark.

The framework for defining the benchmarks used in this statement is based on two principles.

- The benchmark should represent the standard taxation treatment that applies to similar taxpayers or types of activity. Consequently, a benchmark taxation treatment should neither favour nor disadvantage similar taxpayers or activities.

- The benchmark may incorporate certain elements of the tax system which depart from a uniform treatment of taxpayers where these are fundamental structural elements of the tax system. Such elements could include integral design features; for example, the progressive income tax rate scale for individual taxpayers.

Reconciling these two criteria often involves an element of judgment. In particular, there may be different views on which structural elements to include in the benchmark. Consequently, benchmarks vary over time and across countries and can be arbitrary.

The remainder of this appendix provides details of the key elements of the benchmarks. The discussion focuses on the following elements of each benchmark:

- the tax base — the activities or transactions subject to the tax;

- the tax rate — the rate of tax that applies to the base;

- the tax unit — the entity liable to pay the tax; and

- the tax period — the period in which the activities or transactions are undertaken.

# B.2 EXPENDITURES RELATED TO TAXES ON INCOME

Australian Government taxes are primarily imposed on income rather than commodities. The following sections outline the general features of the benchmark for income tax (both personal and business), superannuation, fringe benefits and capital gains. These different taxes are discussed separately because they have distinct tax regimes that affect how tax expenditures are measured.

## INCOME TAX BENCHMARK

### Tax base

The tax base for the income tax benchmark is based on the Schanz–Haig-Simons definition of income. An entity's income is defined as the increase in the entity's economic wealth (stock of assets) between two points in time, plus the entity's consumption in that period. Consumption includes all expenditures except those incurred in earning or producing income.

The Schanz-Haig-Simons definition of income conforms to the principal criterion of benchmark design: all income is included in the base regardless of the income earning activity.

Under the income tax benchmark, income includes:

- wages and salaries;
- allowances;
- business receipts;
- realised capital gains;
- interest, royalties and dividends;
- partnership income;
- government cash transfers; and
- distributions from trusts.

Expenses incurred in earning assessable income are deductible. Where an expense is incurred for both income producing and private purposes, deductions are limited to the portion of expenses relating to income production.

A number of tax arrangements depart from the Schanz-Haig-Simons definition of income but are structural features of the tax system and therefore included in the benchmark. Key elements of the benchmark are:

- Assessment applies to nominal rather than real income. Expenses incurred in earning income are deductible at historical cost.

- Some taxpayers (typically individuals) recognise income when it is actually received (cash basis) and other taxpayers (typically businesses) recognise income when there is a right to receive benefits or, in the case of financial arrangements, in the period to which it relates (accrual basis).

- Deductions for expenses related to economic benefits that extend beyond the income year in which the expenditure is incurred are spread over the period of the benefits. This treatment also applies to expenditure in advance (prepayments) for services.

- Imputed rent from owner occupied housing is not included in income. Expenditure incurred in earning imputed rent is not deductible.

- The mutuality principle excludes income from dealings with oneself or members of mutual associations and societies. For instance, goods produced by taxpayers for their own consumption, or services performed by taxpayers for their own benefit are generally not included in the tax base.

- Certain gains, such as gains received by way of compensation for damage or any wrong or injury suffered by a taxpayer (where compensation is not solely responsible for the loss of income), or gains or winnings from gambling (where taxpayers are not considered to be carrying on a business of gambling), are not included in income.

- Investment income derived from income bonds, funeral policies and scholarship plans of friendly societies that were issued before 1 January 2003 is not included in income.

  – Income relating to policies issued after 1 January 2003 is included in a friendly society's assessable income.

  – To prevent double taxation of income from bonds, funeral policies and scholarship plans, friendly societies can deduct the investment component of the benefits paid out to policyholders (other than the benefits from scholarship plans that are returned to investors rather than paid to the nominated students).

- Losses are deductible against assessable income for a later income year. Losses generally cannot be transferred to other taxpayers, and some losses may only be claimed against certain types of future income.

  - Non-commercial loss rules prevent individuals carrying on unprofitable business activities from claiming deductions for losses arising from such activities against their other income. Losses from non-commercial activities are treated as personal consumption under the benchmark and denial of such losses is therefore part of the benchmark treatment. The Commissioner of Taxation's objective determination of whether a business is commercial in nature, despite making a loss in a given income year, is the basis of the non-commercial losses benchmark.

- Depreciation deductions are made over the effective life of the asset.

- Business capital expenditures not elsewhere recognised within the taxation laws (blackhole expenditures) are deductible over five years.

### Arrangements to prevent double taxation

Arrangements to reduce or eliminate double taxation are integral features of the tax system and are included in the benchmark. For example, the imputation system, which eliminates the double taxation of company profits distributed to resident shareholders, is included in the income tax benchmark.

### International tax arrangements

Australian residents are taxed on their worldwide income under the income tax benchmark. Consequently, residents are taxed on their Australian source and foreign source income. The various international tax arrangements that ensure foreign source income is subject to the appropriate level of Australian tax are included as structural elements of the income tax benchmark.

Features of the international tax arrangements that are incorporated into the benchmark are:

- Resident taxpayers are allowed to claim foreign income tax offsets up to the amount of Australian tax payable on their foreign income. These arrangements ensure foreign source income is not excessively taxed.

- The controlled foreign company and trust rules ensure Australian residents cannot escape or defer taxation of certain income (often passive in nature) by interposing a foreign resident legal entity.

- Transfer pricing and thin capitalisation rules and interest, dividend and royalty withholding taxes aim to tax appropriately Australian sourced income and are included in the benchmark.

- Foreign residents are taxed on their Australian source income only. As part of this benchmark, where foreign income (or foreign capital gains) earned by an

Australian entity is subsequently distributed to a foreign resident, the distribution attracts no Australian tax.

  - Persons in Australia on temporary visas are taxed essentially the same as foreign residents.

- Taxation treaties primarily operate to allocate taxing rights over income between the source country of income and the taxpayer's country of residence. However, some articles (by incorporation into Australia's domestic law) have the effect of imposing taxation or determining source. For distributions of Australian source income to foreign residents, the basic rates of Australian tax (typically imposed as withholding tax) prescribed in these treaties in respect of specified classes of income, such as interest, dividend and royalty income, are included in the benchmark as the applicable tax rates.

  - Under this approach, the benchmark rate of interest, dividend and royalty withholding rates will vary depending on whether the country in question has a tax treaty with Australia.

  - If a tax treaty exists, the benchmark rates of withholding tax for a class of income will be the 'basic rate', where the basic rate is the highest rate specified in the treaty for each withholding tax.

  - Exemptions or reductions relative to the basic rates prescribed in a particular tax treaty will give rise to tax expenditures.

  - If a tax treaty does not apply, any exemptions or reductions from the standard domestic statutory rates will give rise to tax expenditures.

### Tax rates and income brackets

The tax rate under the income tax benchmark is the legislated tax rate that applies to the relevant entity in each financial year.

The personal income tax system includes the tax-free threshold, the progressive personal income tax rate scale, low-income tax offset and the Medicare levy. The progressive income tax rate scale is an integral and longstanding feature of the tax system.

The foreign resident income tax scale is also included in the benchmark. Foreign residents are not entitled to a tax-free threshold on Australian sourced income as they typically receive a tax-free threshold in their home jurisdiction. They also are not entitled to the low-income tax offset nor liable for the Medicare levy. This treatment is also included in the benchmark.

### Tax unit

Individuals and companies are subject to tax. Sole traders, partnerships and trusts are not separate tax units. Income earned by these entities is taxable in the hands of the recipient.

For the personal income tax system in Australia, the benchmark unit is the individual.

For companies, the benchmark tax unit is the company (including the head entity of a consolidated group or a multiple entry consolidated group).

### Taxation period

The taxation period adopted under the income tax benchmark is the financial year (1 July to 30 June). Consequently, measures that defer taxable income to another financial year, such as income averaging for primary producers (B43) or the Farm Management Deposit Scheme (B42), are reported as tax expenditures. Tax deferral arrangements will generally give rise to tax expenditures in the year income is earned, offset by a negative tax expenditure when the income is taxed.

The benchmark also includes arrangements for entities whose accounting period differs from the standard financial year (for example, companies with a substituted accounting period).

## SUPERANNUATION BENCHMARK

Income contributed to superannuation funds (contributions) and earnings of superannuation funds are classified as income of the fund member under the Schanz-Haig-Simons definition. While such income could be considered under the personal income and capital gains tax benchmarks, the unique (and concessional) taxation treatment of superannuation warrants further detail on how the general income tax benchmark is applied to superannuation.

Conceptually, superannuation may be taxed at three stages:

- when contributions are made to a superannuation fund;
- when investments in superannuation funds earn income; and
- when superannuation benefits are paid out.

The income tax benchmark treatment of superannuation is that contributions are taxed like any other income in the hands of the fund member, earnings are taxed like any other investments in the hands of the investor and benefits from superannuation are untaxed. Any costs associated with superannuation investments are deductible under the benchmark.

## FRINGE BENEFITS TAX BENCHMARK

Fringe benefits are classified as individual employee income under the Schanz-Haig-Simons definition. The tax base for the fringe benefits tax benchmark is the value of fringe benefits provided to an employee or an associate of an employee in respect of the employment of the employee. Fringe benefits include property rights, privileges or services. Payments of salary or wages, eligible termination payments, contributions to complying superannuation funds and certain benefits arising from employee share schemes are excluded.

The benchmark value of a fringe benefit to an employee is taken to be its market value less any contribution the employee pays from after-tax income. Generally, employers may claim the cost of providing fringe benefits and the amount of fringe benefits tax paid as income tax deductions.

The tax rate that applies under the fringe benefits tax benchmark is the employee's personal marginal income tax rate. In all cases, fringe benefits tax is calculated on the grossed up taxable value (that is, the pre tax equivalent value) of the fringe benefit. In some cases, discount valuation methods are available to calculate the taxable value of a fringe benefit. Such methods are reported as tax expenditures.

The employer providing the fringe benefit (rather than the employee receiving the benefit) is the tax unit under the benchmark. This is consistent with the legal incidence of fringe benefits tax, which is payable by employers. The benchmark tax period is the fringe benefits tax year (1 April to 31 March).

## CAPITAL GAINS TAX BENCHMARK

Capital gains are classified as income under the Schanz-Haig-Simons definition.

The tax base for the capital gains tax benchmark is realised nominal gains and losses. The benchmark only includes gains or losses arising from the realisation of property where the realisation is not an aspect of the carrying on of a business. This excludes gains or losses that form part of a business's normal trading activities from the capital gains tax benchmark, for instance, gains or losses on trading stock of a business and gains or losses realised in the business of trading particular assets. These gains or losses are dealt with under the general features of the income tax benchmark.

Capital gains are taxable upon realisation. While the taxation of gains on an accrual basis aligns more closely with the broad Schanz-Haig-Simons definition, taxation on a realisation basis is consistent with longstanding practice and recognises the administrative problems associated with an accrual system.

Consistent with the general features of the income tax benchmark, the benchmark for Australian residents is their worldwide capital gains. In the case of foreign residents,

Australia has limited its domestic and treaty capital gains tax rules to the direct or indirect disposal of interests in Australian land (and similar interests such as mining rights) and branch office assets from 12 December 2006. In respect of both the foreign capital gains of residents and the Australian capital gains of foreign residents, the allocation of taxing rights in the domestic laws and tax treaties is part of the benchmark.

The tax rate and tax unit adopted under the capital gains tax benchmark are the same as that which apply under the general benchmark outlined above.

## B.3 INDIRECT TAXES

The Australian Government imposes taxes on a range of activities that do not directly relate to income. These 'indirect' taxes include:

- taxes on commodities such as fuel (or energy), tobacco, types of alcoholic beverages and motor vehicles;
- miscellaneous taxes such as agricultural levies and the passenger movement charge;
- taxes on the extraction and production of Australia's natural resources;
- the goods and services tax; and
- the carbon pricing mechanism.

Commodity taxes may be either ad valorem or volumetric. Ad valorem taxes are charged as a fixed proportion of the value of the commodity sold. Volumetric taxes are charged as a fixed proportion of the quantity of the commodity sold. Consequently, the tax base for these taxes is generally determined either by the value or quantity of the commodity sold.

The Australian Government imposes volumetric taxes on the consumption of tobacco, fuel, beer, spirits and certain imports, and imposes ad valorem taxes on imports and the consumption of wine and luxury cars. These taxes are imposed at either the retail, manufacture or importation stage. In each case, the tax unit is the entity that has the legal obligation to pay the tax.

### Fuel (or energy)

The tax base for the consumption of all fuel (or energy) is split into two activities:

- fuels consumed in an internal combustion engine (that is, primarily for transport use); and

- fuels consumed for a purpose other than in an internal combustion engine (for example, a product that can be used as a fuel in an internal combustion engine but is used in a solvent application or for heating).

The taxation of these activities reflects longstanding and integral features of the tax system whereby excise rates are dependent on whether the fuel is used in an internal combustion engine.

The benchmark excise rates for fuels consumed in an internal combustion engine are the full energy content based rates for the following bands:

- high energy content fuels, with an energy content of more than 30 megajoules per litre and excise rate of 38.143 cents per litre (such as petrol, diesel, biodiesel and aviation fuel);

- medium energy content fuels, with an energy content between 20 and 30 megajoules per litre and excise rate of 25 cents per litre (such as liquefied petroleum gas (LPG) and fuel ethanol);

- low energy content fuels, with an energy content of less than 20 megajoules per litre and excise rate of 17 cents per litre (such as methanol); and

- liquefied natural gas (LNG) and compressed natural gas (CNG) fuels, with an excise rate of 52.26 cents per kilogram.

Fuels consumed other than in an internal combustion engine are exempt from excise under the benchmark.

### Tobacco

The benchmark for the consumption of tobacco and tobacco products is the excise rate that applies to tobacco by weight of tobacco content.

### Alcoholic beverages

The tax base for the consumption of alcoholic beverages is separated into three components based on the types of beverage:

- the consumption of lower alcohol content beverages (beverages with less than 10 per cent alcohol content) such as beer and ready to drink beverages;

- the consumption of higher alcohol content beverages (beverages with greater than 10 per cent alcohol content) such as brandy and other spirits; and

- the consumption of wine and alcoholic cider.

The taxation of these activities reflects a longstanding feature of the tax system whereby different tax rates apply to beer, spirits and wine:

- The benchmark excise rate for lower alcohol content beverages (for example, beer) is the volumetric excise rate that applies to full strength packaged beer (including the excise free threshold of the first 1.15 per cent of alcohol).

- The benchmark excise rate for higher alcohol content beverages (for example, spirits) is the volumetric excise rate on spirits other than brandy.

- The benchmark rate for wine and alcoholic cider is the ad valorem wine equalisation tax rate.

### Motor vehicles

Generally, motor vehicle purchases are not taxed. Consequently, the luxury car tax is a negative tax expenditure.

### Customs duties

Like goods should be subject to like rates of tax, regardless of their source. Consequently, the customs duty benchmark treats goods imported into Australia as being subject to the same taxes on consumption as domestically produced goods.

Under the customs duty benchmark, goods imported into Australia are free from customs duty, except to the extent that the customs duty imposed is equivalent to taxes imposed on domestically produced goods, such as excise-equivalent customs duties or goods and services tax (GST).

Customs duty, other than excise-equivalent duty and GST collected as a customs duty, collected on certain goods imported into Australia is reported as a negative tax expenditure in this statement.

### Passenger Movement Charge

The Passenger Movement Charge is a charge imposed in respect of the departure of a person from Australia.

The tax base for the Passenger Movement Charge benchmark is the departure of all persons from Australia for any other country, whether or not the person intends to return to Australia, excluding on duty crew members. The tax unit is the relevant carrier.

## Primary industry levies

Primary industry levies provide collective industry funding for activities such as research and development, promotion and marketing, residue testing and plant and animal health programs.

The tax base for primary industry levies depends on the particular levy. The tax base will generally be related to the inputs, outputs or units of value of production of the industry.

Under the benchmark, levies are only applicable to the specific products that will benefit from the activities to be funded by the levies. In addition, levies are only payable in respect of products which are used for income producing purposes by the levy payer; that is, exemptions for products which are unfit for human consumption or exemptions for products used by the producer for domestic purposes form part of the benchmark.

The tax rate is the rate specified in the relevant legislation for each levy. The tax unit is the levy payer.

## Natural resources

The Government announced that it would repeal the Minerals Resource Rent Tax (MRRT), with effect from 1 July 2014. The natural resources tax benchmark for MRRT tax expenditures in this edition of the TES takes account of these changes for 2014-15 and later years.

### *Pre 1 July 2012 natural resources benchmark*

Prior to 1 July 2012, only petroleum (crude oil, natural gas, LPG and condensate) was taxable under the benchmark and the benchmark treatment for petroleum depended upon the date projects commenced.

The benchmark for petroleum projects that commenced on or after 1 July 1986 is based on the PRRT prior to the 2012 amendments.

- The tax base included receipts from offshore petroleum production (excluding projects located in the North West Shelf) less eligible project expenditures.
  - Under the PRRT any eligible expenditure which is not offset against revenue in the current year can be compounded and offset against future PRRT income. Under the pre 1 July 2012 benchmark, the rate at which expenditure was compounded and carried forward depended on the category of expenditure and when it was incurred. The benchmark uplift rate for exploration expenditure was the long term bond rate plus 15 percentage points and for general project expenditure was the long term bond rate plus 5 percentage points.

- The benchmark tax rate was (and remains at) 40 per cent of the project's profits.
- The benchmark tax unit was (and remains at) the petroleum project.

The benchmark for petroleum projects that commenced before 1 July 1986 (for example, the North West Shelf) was the crude oil excise and was comprised of the following features:

- the barrel equivalent production of crude oil from fields of greater than 30 million barrels as the tax base;
- the rate of tax that applies to crude oil as the tax rate, with applicable rates determined by the date that the field was discovered (that is, new, intermediate or other); and
- the entity that has the legal obligation to pay the tax as the tax unit.

### *Natural resources benchmark for periods 1 July 2012 to 30 June 2014*

From 1 July 2012, the PRRT applies to all petroleum production, onshore and offshore and a MRRT applies to the extraction of iron ore and coal. Consequently, the natural resources benchmark applying from 1 July 2012 is based on the new taxation arrangements.

The natural resources benchmark only applies to the extraction of petroleum, coal seam gas, iron ore and coal. The benchmark does not apply to the extraction of other natural resources. Different variations of the benchmark apply to petroleum and coal seam gas as apply to iron ore and coal.

The benchmark for the taxation of non-renewable resources is a rent-based tax, with a full tax-loss offset. The full tax-loss offset can be utilised by transferring tax losses among commonly owned projects that are subject to the same tax rate.

The benchmark includes immediate expensing of project expenditures. To the extent that losses are carried forward because they cannot be utilised immediately, they are uplifted at the long-term government bond rate (a proxy for the risk-free rate). The uplift rate compensates investors for the delay in the recognition of the tax credit and preserves the value of the tax credit over time.

Under the benchmark, a refund of unutilised tax credits is available when the project closes down.

The tax unit is the project interest. The taxation period is the financial year (1 July to 30 June).

Under the non-renewable resources benchmark, economic rents earned from the extraction of Australian petroleum (crude oil, natural gas, LPG and condensate) and coal seam gas are subject to a 40 per cent tax rate.

- Under the arrangements applying from 1 July 2012, crude oil excise is still payable in respect of certain petroleum production, is creditable against the project's PRRT liabilities. Where this occurs, the crude oil excise paid in a period is treated as a prepayment of the PRRT liability for that period. To the extent that the tax prepayment exceeds the PRRT liability in a year, a negative tax expenditure arises for the year, while credits for overpayments recouped in subsequent years would count as positive tax expenditures in those years.

In addition, under the benchmark, the economic rents earned from the production of iron ore and coal in Australia are subject to a 30 per cent tax rate from 1 July 2012, less the generally applicable 25 per cent extraction allowance (giving an effective benchmark rate of 22.5 per cent). Taxpayers receive a credit for any royalties paid to the States. As royalties are a State tax, the benchmark looks through royalties to the underlying tax treatment. Accordingly, royalties are treated as a prepayment of a Commonwealth tax under the benchmark and the credit for those royalties is not treated as a tax expenditure.

In summary, key features of the natural resources benchmark that has applied from 1 July 2012 include:

- The benchmark for non-renewable resource taxation is a rent-based tax and includes the carry-forward of losses, uplifted at the long-term government bond rate. Tax expenditures are therefore recognised in respect of the increased uplift rates applicable under both the MRRT and the extended PRRT.

- The rent-based tax benchmark includes a refund of any tax credit for taxpayers in a loss position at the completion of a project. This means that a negative tax expenditure will be recognised in respect of the denial of this refund under both the MRRT and the extended PRRT.

- The benchmark for iron ore and coal includes a credit for any royalties paid to the States. This credit is not recognised as a tax expenditure. As royalties are a State tax, there is no entitlement to a refund of State based royalties where these exceed the MRRT liability. As such, no tax expenditure is recognised in respect of the denial of a refund for unutilised royalty credits under the MRRT.

- Under the benchmark, taxation is limited to the economic rents earned from the extraction of Australian petroleum, coal seam gas, iron ore and coal. Accordingly, a tax expenditure does not arise in respect of other resources which are not subject to taxation under the MRRT or the extended PRRT.

The benchmark tax rates are the rates that apply under the MRRT and the extended PRRT. This means that a tax expenditure does not arise due to the lower tax rate under the MRRT or from the 25 per cent extraction allowance which applies to all MRRT taxpayers. This is consistent with other benchmarks in the TES.

#### *Natural resources benchmark for periods 1 July 2014 onwards*

The Government is committed to repeal the MRRT from 1 July 2014. Consequently, the natural resources benchmark rate applying to the MRRT tax expenditures (codes G1 to G5) from 1 July 2014 is set to zero.

The benchmark for the eight petroleum tax expenditures (codes G6 — G13) applying from 1 July 2014 will be the same as the benchmark applying from 1 July 2012 to 30 June 2014.

## Goods and services tax

The goods and services tax (GST) is an indirect, broad based consumption tax charged at the rate of 10 per cent. While the economic incidence of the GST is primarily on the final supply provided to a private consumer, the legal incidence is at each step in the supply chain, with registered entities (that is, entities carrying on an enterprise) including GST in the price of goods and services they sell. If the recipient of the supply is a registered entity, it will normally be able to claim a credit for the amount of GST in the price.

The tax expenditures relating to GST are generally connected to supplies which are GST-free or input taxed (the latter case includes the expenditure associated with allowing reduced credit acquisitions). If a supply is GST-free, there is no GST payable on the supply and the supplier is entitled to claim credits for the GST payable on its related business inputs. If a supply is input taxed, no GST is payable on the supply, but the supplier generally cannot claim input tax credits (ITCs) on its related business inputs. In the case of reduced credit acquisitions, however, the supplier may be entitled to claim reduced input tax credits on its related business inputs.

#### *Tax base*

Under the GST benchmark, the tax base for the GST is the value of household final consumption expenditure plus the value of private dwelling investment where these are supplied in the course of an enterprise.

There are structural elements of the GST system that are included in the benchmark. These elements are:

- Non-commercial activities of governments are exempt from GST under the benchmark.

- Exports and other supplies for consumption outside Australia are not subject to GST. This is a fundamental element of the benchmark and is not treated as a tax expenditure.

- Goods and services supplied to oneself are not subject to GST. This treatment is included in the benchmark and is not treated as a tax expenditure.

- ITCs are provided to registered entities in respect of the GST they pay on business inputs. The provision of ITCs to businesses is a fundamental design feature of the GST and is not treated as a tax expenditure.

- Imputed rent from owner occupied housing is not subject to GST. Owner occupied housing is effectively treated as input taxed. To ensure neutrality between owner occupiers and investors, supplies of residential accommodation and long-term commercial residential accommodation by landlords are also generally treated as input taxed supplies, meaning landlords are not entitled to claim ITCs and do not charge GST on the rent paid by tenants. The input taxation of supplies of residential accommodation is included as a structural element of the benchmark.

  – The sale of new residential premises and the value of alterations, additions and improvements to residential premises are subject to GST. The subsequent resale of residential premises is an input taxed supply. These features of the GST system are included as structural elements of the benchmark.

### *Tax unit*

While the economic incidence of the GST is primarily on the final recipient of a supply (generally the final private consumer or an input taxed business), the tax unit responsible for remitting GST is the supplier of the goods or services concerned. The principal exception to this is in the case of 'reverse charging', where the recipient is liable to pay GST.

- Reverse charging occurs in certain situations where the importation of a supply from overseas can be taxable. This may apply, for example, where an overseas registered supplier itself imports goods into Australia and installs them in Australia. The overseas supplier and an Australian recipient may agree that the GST should be paid by the recipient, not the supplier.

### *Taxation period*

The taxation period adopted under the goods and services tax benchmark is the financial year (1 July to 30 June).

## Carbon pricing mechanism

The Government announced that it would repeal the carbon tax, with effect from 1 July 2014. The carbon pricing mechanism benchmark is only relevant for the related tax expenditures for 2012-13 and 2013-14.

Key features of the carbon pricing benchmark are:

- full coverage of the emissions covered by the Kyoto Protocol to the United Nations Framework Convention on Climate Change; and

- a fixed price of $23 per tonne of carbon dioxide equivalent in the year 2012-13, increasing to $24.15 in 2013-14.

In addition, some aspects of the carbon pricing mechanism (CPM) are included in the benchmark as integral design features that do not give rise to tax expenditures. These include:

- the use of Kyoto compliant, Australian carbon credit units (ACCUs) issued under the Carbon Farming Initiative. In general, ACCUs can be used for up to 5 per cent of liable entities' obligations;

- the arrangements to impose an effective carbon price on emissions from liquefied petroleum gas and liquefied natural gas in 2012-13 and synthetic greenhouse gases manufactured or imported after 1 July 2012 through the taxation system rather than the CPM; and

- the non-imposition of a carbon price on emissions from liquid fuels and gaseous fuels used for on-road transport. These fuels generally already face other taxation that significantly exceeds tax under the carbon tax benchmark. In some cases an effective carbon price is imposed via other mechanisms, such as adjustments to fuel tax credits (which are expenses in the Budget and beyond the scope of the TES) or, in the case of aviation fuel, through an increase in the excise rate (which is shown as a reduction in tax expenditures shown against the indirect taxes benchmark).

Measures reported as expenses in the Budget that relate to the CPM, such as the allocation of free emissions units to assist emissions-intensive trade-exposed activities or the reduction in fuel tax credits in the transport sector, are not included as tax expenditures in the TES. Direct expenditures are accounted for separately in the Budget.

Tax expenditures relating to the CPM are related to exclusions from coverage. Certain sectors of the economy are not covered by the carbon price and, consequently, entities in these sectors are not required to buy emissions units to cover their emissions.

### *Tax rate*

The carbon price will be set at $23 per tonne of carbon dioxide equivalent in 2012-13 and $24.15 per tonne in 2013-14.

### *Tax base*

The tax base for the carbon pricing benchmark is the total $CO_2$-e emissions produced by entities in Australia of the six greenhouse gases covered under the Kyoto Protocol: carbon dioxide, methane, nitrous oxide, sulphur hexafluoride, hydrofluorocarbons and perfluorocarbons, except to the extent certain emissions have been excluded from the benchmark as design features (as noted above).

### *Tax unit*

While the economic incidence of the carbon price is generally on the final recipient of goods and services, the entity producing the emission of the greenhouse gas is the tax unit under the benchmark.

Some emissions under the benchmark are covered indirectly with liability falling on entities upstream from the point of final emission. For example natural gas retailers may be responsible for emissions from the use of natural gas by their customers. In these cases, the upstream entity is the tax unit.

### *Taxation period*

The period for liability under the carbon pricing mechanism is the financial year (1 July to 30 June).

## B.4 MODELLING TAX EXPENDITURES

This section provides an overview of the various modelling techniques used in the TES to estimate the value of tax expenditures.

The methods used to calculate the estimates of individual tax expenditures in this statement vary. The appropriate approach is determined by the nature of the tax benchmark, the particular tax concession examined and the availability of data. Data availability is a major factor influencing the reliability of the estimates, and in many cases estimates are not provided owing to data limitations.

The approaches used to estimate tax expenditures include aggregate modelling, distributional modelling and microsimulation. The approach most commonly used is distributional modelling.

## AGGREGATE MODELLING

This approach involves using information on the aggregate volume of transactions to calculate the value of a particular tax concession. Aggregate modelling is an appropriate approach for measuring tax exemptions or concessions where the impact can be represented as a simple proportion of the total transactions concerned. Data sources suitable for aggregate modelling include national accounts data, trade and production statistics, and aggregates derived from administrative databases (such as taxation records).

Aggregate modelling is used to estimate tax expenditures for fuel excise. Tax expenditures for exemptions or reduced excise rates can be estimated from statistics on the aggregate volume of fuels produced.

## DISTRIBUTIONAL MODELLING

This approach involves using discrete aggregate data to calculate the impact of tax concessions on particular segments of the economy. Distributional modelling is an appropriate approach for measuring concessions that vary according to the characteristics of the taxpayer. Data sources suitable for distributional modelling include survey data and data derived from administrative databases.

Distributional modelling is used to estimate tax expenditures for personal income tax concessions when the cost is related to a taxpayer's taxable income. For these concessions, data on income distribution and tax concessions by grade of taxable income can be used to estimate the cost of tax expenditures for those concessions.

## MICROSIMULATION

This approach involves examining detailed datasets, such as taxpayer records, to determine the value of taxable transactions for each taxpayer. The value of the tax expenditure is the difference between the tax paid on those transactions under the concession and the tax that would have been collected under the benchmark. Microsimulation modelling requires either a comprehensive database of all taxpayers or a detailed sample that is representative of the population. The data must provide sufficient detail on the value of transactions affecting the calculation of tax liabilities to allow the required calculations.

Microsimulation modelling is used to estimate tax expenditures that closely target particular taxpayer groups (for instance, benefits subject to detailed eligibility tests) and concessions where the payment rate varies considerably according to taxpayer behaviour or circumstance.

Microsimulation modelling can also be used to derive key information, such as average effective tax rates, which can be used in other models that employ aggregate or distributional modelling. This is appropriate for situations where detailed datasets are not available for all items.

## B.5 NOTES ON THE METHODOLOGY USED TO ESTIMATE CERTAIN TAX EXPENDITURES

### TREATMENT OF IMPUTATION

The value of some concessions reported in this statement is partially offset as a result of the imputation system. For example, concessions that reduce company tax may be clawed back through the subsequent taxation of dividends in the hands of shareholders. The estimates in this statement generally make no allowance for this clawback owing to the practical difficulties of doing so.

### INCOME TAX CLAWBACK

In addition, the value of some tax expenditures can include an income tax clawback. An income tax clawback will occur when a taxpayer's taxable income is impacted by the operation of a particular tax expenditure.

For example, an income tax clawback can occur in respect of taxes that are deductible for income tax purposes and that are not passed on to final consumers through higher prices. That is, while a tax expenditure may offer a concession to a group of taxpayers or type of activity, if that concession were removed, there would be a resulting increase in deductible expenses and decrease in income tax paid that would partially offset the additional tax liability.

Tax expenditure estimates for consumption taxes generally do not include an income tax clawback as consumption taxes are usually assumed to be passed onto final consumers, resulting in no change to the taxable income of the taxpayer. Tax expenditure estimates for other taxes can include an income tax clawback where the tax is assumed to be borne by the taxpayer.

### CAPITAL GAINS TAX ESTIMATES

Under the CGT benchmark, nominal capital gains are fully taxable upon realisation. The most significant tax expenditure against this benchmark is the 50 per cent discount for capital gains realised by resident individuals and trusts, which affects most capital gains realised by these entities.

Individuals and trusts may also be eligible for other CGT concessions. The revenue forgone methodology that is generally used in this statement implies that estimates for these other CGT concessions should be calculated against the benchmark of full taxation of nominal capital gains.

To avoid double counting, the values of tax expenditures for other CGT concessions are reduced by the CGT discount component and the discount component of these other concessions is included in the tax expenditure for the CGT discount (E17). This modification to the tax expenditure methodology provides more realistic estimates of the value of the benefits taxpayers receive from capital gains concessions in aggregate, though it has the effect of understating the value of individual CGT tax expenditures other than the discount.

## B.6 ACCRUAL ESTIMATES

Tax expenditure estimates are prepared on the same revenue recognition basis as the budget estimates. Since the 2006-07 Budget, the basis for reporting revenue in the budget has changed. The changes are outlined below and apply to estimates in the TES from 2006-07.

### Revenue recognition methodology

Accrual accounting was introduced by the Australian Government in the 1999-2000 Budget. The Australian Accounting Standards and Government Finance Statistics standards for accrual accounting require that taxation revenue be recognised in the reporting period in which the taxpayer earns the income that is subsequently subject to taxation — this is known as the Economic Transactions Method (ETM). But the standards also permit government reporting using an alternative approach when the ETM approach would generate unreliable measures of taxation revenues.

Because ETM is an unreliable measure for several significant revenue heads — and these account for the majority of total revenue — all taxation revenue was recognised using the Tax Liability Method (TLM) in all accrual budget related documentation from the 1999-2000 Budget to the *Mid-Year Economic and Fiscal Outlook 2005-06*. Under TLM, taxation revenue is accounted for at the time a taxpayer makes a self assessment or when an assessment of a taxation liability is raised by the relevant authority.

Commencing with the 2006-07 Budget, the Australian Government adopted ETM revenue recognition for all revenue heads where the measurement issues are not material, but retained TLM revenue recognition where ETM measurement issues may be material. The taxation revenues that continue to be recognised on a TLM basis are:

- individuals and other withholding taxation;
- company income taxation; and
- superannuation taxation.