

C — Land and resources taxes

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C1. Charging for non-renewable resources

Key points

Australia has abundant non-renewable resources, which are expected to continue to command high prices driven by demand particularly from China and India.

The community, through the Australian and State governments, owns rights to Australia's non-renewable resources and should seek an appropriate return from allowing private firms to exploit these resources.

Current charging arrangements fail to collect a sufficient return for the community because they are unresponsive to changes in profits. Further, the current arrangements distort investment and production decisions, thereby lowering the community's return from its resources.

The current arrangements should be replaced with a uniform resource rent-based tax, using the allowance for corporate capital method. The tax should be imposed and administered by the Australian government.

A rent-based tax would, over time, earn for the community a greater return from the use of its resources while still attracting private investment. Such a tax would also require the government to accept a greater share of the risks than it currently bears.

To complement the resource rent tax, a cash bidding system should be introduced to allocate exploration permits.

Australian and State government fees and stamp duties on the transfer of interests in resource projects inhibit the efficient transfer of such interests and should be abolished, except those related to administrative costs.

The Australian and State governments should negotiate an appropriate inter-governmental allocation of the revenues and risks from the resource rent tax.

The Australian government should set out a time-frame to implement the resource rent tax and provide guidance at the time of announcement on how existing investments and investment in the interim will be treated. Transitional arrangements for existing projects will be critical and should be managed with an adjustment, as appropriate, to the starting base for the allowance for corporate capital.

C1–1 The community's return from the exploitation of its resources

Non-renewable resources are a significant asset of the Australian community. Australia has the world's largest economically demonstrated reserves of brown coal, lead, mineral sands (rutile and zircon), nickel, silver, uranium and zinc and the second largest reserves of

bauxite, copper, gold and iron ore (contained iron) (Geoscience Australia 2009).¹ Australia's proven oil reserves are the 26th largest in the world. Australia's natural gas reserves are the 14th largest in the world and, under current production rates, could continue to be exploited for the next 65 years (BP 2009).

Treasury expects the strong demand and prices for Australia's non-renewable resources to continue, driven by growth in India and China, and accordingly projects that Australia's terms of trade will be well above its historical average for decades to come (Treasury 2009).

Given the size and value of Australia's non-renewable resource stock and the expected strength of commodity prices, it is important that the community receives an appropriate return from the exploitation of its resources by private business.

Maximising the value of the rents from non-renewable resources

The finite supply of non-renewable resources allows their owners to earn above-normal profits (economic rents) from exploitation. Rents exist where the proceeds from the sale of resources exceed the cost of exploration and extraction, including a required rate of return to compensate factors of production (labour and capital). In most other sectors of the economy, the existence of economic rents would attract new firms, increasing supply and decreasing prices and reducing the value of the rent. However, economic rents can persist in the resource sector because of the finite supply of non-renewable resources. These rents are referred to as resource rent.

The value of a stock of resources is the net present value of the associated resource rent — that is, the expected receipts less expected costs of exploiting the resources, discounted for the required rate of return to compensate owners for the time value of money (the risk-free return) and a premium for the risk associated with investment (the risk premium return for systematic risk). This value can fluctuate over time due to changes in supply (for example, unexpected discoveries) and demand (for example, changes in consumer preferences or the development of substitutes).

The optimal rate for exploiting non-renewable resources is, in theory, determined by the required rate of return (Hotelling 1931). The owner of the resource can maximise the value of their resource stock by extracting quantities at a rate such that the expected value of the remaining resources rises over time at the required rate of return. If the resource rent is expected to rise more than the required rate of return, the owner could increase wealth by postponing production to take advantage of future higher prices or lower production and exploration costs. On the other hand, if the resource rent is expected to rise less than the required rate of return, the owner could increase wealth by bringing forward production and investing the proceeds from the sale of resources into another asset.

The owner of a non-renewable resource would therefore erode the value of the resource if exploitation is either faster or slower than the optimal production rate determined by the market's required rate of return. Arguments for exploration and production faster than this rate can fail to recognise that resources kept in the ground will generate a better return for

1 Economically demonstrated resources are identified according to two parameters: the degree of certainty of the existence (quantity and quality) and the degree of economic feasibility of exploitation (based on commodity prices, operating costs, and capital costs, including the required rate of return).

the owner if higher rents can be obtained in the future (due to future higher prices or lower exploration and production costs). Similarly, arguments to bring forward exploration and production to create jobs can fail to recognise that this may be at the expense of future jobs in the resource sector (as there is a finite stock of resources) and may have an adverse impact on other sectors in the economy from which labour and capital are diverted.

Charging for the exploitation of non-renewable resources

As owners of natural resources on behalf of the community, the Australian and State governments should seek to obtain an appropriate return from resource exploitation under public or private production. In Australia, governments have traditionally allowed private firms to exploit non-renewable resources in return for a charge (see Box C1-1 Alternative ways of capturing a return for the community).

Where governments allow private businesses to exploit non-renewable resources, governments can charge for the resources through either taxes or auctions (also known as 'cash bidding'), or a combination of both. Providing private businesses with the right to exploit the community's non-renewable resources is akin to selling a public asset. Resource taxes and auctions of exploration permits are therefore different from most other sources of tax revenue in that they are a charge for the sale of a public asset.

A well-designed tax will generally be more effective than auctions as a primary way of charging for the right to exploit non-renewable resources. Nonetheless, an auction system is a useful mechanism for supplementing a well-designed tax because auctions can enable the relevant jurisdiction to allocate exploration permits to the most efficient producer without distorting exploration decisions. Further, auctions can be used to collect upfront any expected rent above that anticipated to be collected by a tax. In effect, an auction can serve as a safety valve, mitigating any expected advantage to the winning firm that may arise if the tax system mismeasures the resource return (Danish Hydrocarbon Tax Committee 2001).

Box C1-1: Alternative ways of capturing a return for the community

Governments have a range of options for obtaining a return from resource exploitation under public or private production.

- Public production allows the government to control exploration and production expenditure, but may lower the return to the community if public enterprise is less efficient at resource exploration and production due to a lack of expertise and market discipline.
- Outsourced production allows the government to benefit from market pressure and external expertise, but may suffer from the principal-agent problem as the interests of private producers are not necessarily aligned with the community's.
- Joint ventures with private producers allow the government to benefit from market pressure and expertise, and align the interests of private producers with that of the community by providing private producers with a share of the resource rent. But this lowers the community's share of that rent.

Box C1–1: Alternative ways of capturing a return for the community (continued)

- Auctions of exploration permits collect value (under private production) based on market expectations about the value of the resource rent rather than the actual resource rent. Auctions will not collect the full expected value of resource rents if bids are tempered by concerns that the government will increase taxes in the future or if auctions are poorly designed.
- Resource taxes applying to private production can promote efficiency if they are designed properly. But, like joint ventures, they give away a share of the rent and thereby a share of the community's return. If designed poorly, resource taxes can distort investment and production decisions and thereby erode the return to the community.

Principles

Through the Australian and State governments, the community owns rights to non-renewable resources in Australia and should seek an appropriate return from these resources.

A well-designed resource tax is more effective than an auction as a way of charging the private sector for the right to exploit non-renewable resources. But auctions can complement resource taxation by allocating exploration permits to the most efficient producer without distorting exploration decisions and by collecting upfront any expected rent above that anticipated to be collected by the resource tax.

Addressing exploration spillovers

Exploration can provide benefits to businesses other than the business undertaking the exploration (a positive spillover), in the form of valuable information to holders of exploration permits in neighbouring areas or businesses considering exploration in these areas. These spillover effects may provide an incentive for businesses to delay exploration so that they can benefit from information provided by others. Businesses can overcome this problem by entering into arrangements that share the cost of exploration with holders of exploration permits in neighbouring fields. Alternatively, the government could overcome the spillover problem through the management of exploration permits; for example, by only issuing exploration permits for areas where there are no neighbouring exploration fields. Limited tenure on exploration permits would limit the extent of delay in undertaking exploration.

There can be a 'public good' justification for the government to be involved in the provision of pre-competitive geological data, in collecting and providing public access to geological data flowing from exploration, and in publishing the results of geological research (Industry Commission 1991). Such information assists efficient private exploration and provides input into resource planning and land management.

Beyond this, it is unlikely to be desirable for the government to provide concessions from a resource tax in order to encourage exploration and production faster than the commercial rate or encourage exploration in specific geographical areas. There is no evidence of significant market failures in field exploration (Industry Commission 1991). Providing concessions is likely to reduce the overall return to the community from its natural resources.

Principle

Concessions should not be provided to encourage exploration and production at a faster rate than the commercial rate or to encourage exploration in specific geographical areas.

Choosing the appropriate type of resource tax

There are three main types of tax that can be used to charge for the exploitation of the community's non-renewable resources:

- A **rent-based tax**, under which the government collects a percentage of the resource project's economic rent (see Box C1-2 Rent-based taxes).
- An **income-based tax**, under which the government collects a percentage of a resource project's net income, thereby taxing economic rent as well as the normal return to capital invested in a resource project.
- An **output-based royalty**, under which the government collects either a charge per unit of output (a specific royalty) or a percentage of the gross value of output (an *ad valorem* royalty).

Resource taxes can be evaluated according to three broad criteria: economic efficiency; the size, variability and timing of the return received by the government; and administration and compliance costs.

Economic efficiency

The more economically efficient a resource tax is, the less investment and production decisions are distorted. A more efficient tax is less likely to make an otherwise commercially viable project unviable and less likely to create a bias toward less or more risky investments.

Box C1-2: Rent-based taxes

A rent-based tax imposes a tax on economic rents over time by collecting a share of a measure of profit. Alternative forms of rent-based taxes include:

- A **Brown tax** — a cash flow tax levied at a constant percentage of the difference between receipts and expenditure, or net cash flow (Brown 1948). Where there is a negative cash flow, the government refunds the tax value of the negative cash flow to investors and thereby contributes to its share of the costs of investment at the same rate as it shares in receipts. This allows the government to collect a share of the rent equal to the tax rate (see example in Annex C1 Relationship between the rate of tax on land and a tax on economic rent).
- A **Garnaut and Clunies Ross resource rent tax** — a cash flow tax levied at a constant percentage of the annual positive net cash flow (Garnaut & Clunies Ross 1975). It is similar to a Brown tax, but does not provide a cash refund for the tax value of negative cash flows. Instead, negative cash flows are carried forward with interest (the uplift rate). The petroleum resource rent tax (PRRT) is an example of such a tax.

Box C1–2: Rent-based taxes (continued)

- An **allowance for corporate capital (ACC)** — a cash flow equivalent tax levied on profit measured as net income less an allowance (Boadway & Bruce 1984). The allowance compensates investors for the delay in the government's contribution to the cost of investment due to the slower recognition of expenses through depreciation and the lack of an immediate refund for losses.

These rent-based taxes seek to tax the economic rent associated with the underlying activity, irrespective of the form of financing. They do not therefore provide a deduction for interest or financing costs incurred at the investor level.

Under certain conditions, these taxes provide equivalent outcomes, except in respect of the timing of cash-flows received (and paid) by the government (see Annex C1 Relationship between the rate of tax on land and a tax on economic rent).

A well-designed rent-based resource tax is less likely to distort investment and production decisions. This is because rent-based taxes do not apply to the normal rate of return to investment in projects. The government achieves this by effectively contributing to costs at the same rate as it shares in receipts from resource production.

Essentially, under a resource rent-based tax, the government is a silent partner whose share in the project is determined by the tax rate. However, each partner contributes something additional to the partnership — private firms contribute rents associated with their expertise and the government contributes rents associated with the rights to the community's non-renewable resources. These rents are also shared according to the tax rate.

By contrast, output-based royalties discourage investment and production because they are levied irrespective of the costs of production. Consequently, investors receive a lower post-tax return from a more expensive operation because costs are not recognised for tax purposes. This is particularly important for risky projects. Output-based royalties can therefore result in some economically viable projects not proceeding.

Under an income-based tax, while the government contributes a share of the project's costs by allowing a deduction for the depreciation of assets (where the project has receipts sufficient to cover expenses or where a loss offset is provided), it also taxes the normal return to investment in the project. Taxing the normal return distorts investment and production decisions and thereby erodes the value of the resource rent.

The use of output-based royalties or an income-based tax can be expected to result in fewer discoveries, less output from discovered deposits and earlier closure of projects than otherwise. Therefore, they erode the value of resources for the community while still giving away a share of the resource rent.

Rent-based and income-based resource taxes involve governments accepting risk

The government cannot accurately measure rents by targeting a charge on cash flows above the required return, which varies among projects and is difficult to measure. Instead, the government must, in theory, share in the risk of a resource project in order to correctly tax rent and avoid distorting investment and production decisions in the process. The

government can achieve this by recognising the cost of investment for tax purposes and, in effect, contributing a share of project costs at the same rate as it shares in receipts.

Under an output-based royalty, the government does not share in the risk of the project because it does not recognise the costs of investment for tax purposes. Under a typical income-based tax, the government shares in some of the risk associated with the project, but only recognises expenditure where it can be offset by revenue.

By contrast, under a rent-based tax the government shares in the risk of the project. It can do this in two ways. The government can provide an immediate refund for the tax value of expenditure (under a Brown tax). Alternatively, it can allow expenditure (whether in the form of a loss or of a measure of corporate capital) to be carried forward with interest for tax purposes and utilised as a deduction against future income.

Using the second approach, the government would need to compensate investors for the delay in utilising the deduction by effectively paying interest on the value of the expenditure carried forward. The interest rate (akin to the uplift rate of the petroleum resource rent tax or the allowance rate for an ACC) should be set at a rate to make investors indifferent as to whether they receive the tax value of deductions in the current year or later. It therefore needs to compensate investors for the time delay and the risk that the government will not contribute to its share of the costs. If the government promises to provide a refund for the tax value of losses at the time a project is closed (full loss offset), the appropriate interest rate is the government bond rate (see Box C1-3).

Box C1-3: The appropriate rate to compensate investors for the lack of an immediate tax refund under a rent-based tax

The appropriate uplift or allowance rate to compensate investors for the lack of an immediate tax refund is independent of the riskiness of the project where the government promises to provide a refund for the tax value of losses at the time a project is closed or a full loss offset (Fane & Smith 1986).

The uplift or allowance rate does not need to reflect the required rate of return of the project, which includes a risk premium that varies according to the project and is therefore difficult to measure. Where the government provides a full loss offset, the riskiness of the project is irrelevant as the delay is equivalent to a loan from a business to the government.

If a full loss offset is not provided, investors will be uncertain about whether they will receive the full tax credit in the future. In this case, the appropriate uplift or allowance rate would need to include a premium to compensate investors for the risk that they will never receive the tax value of the deduction. The appropriate rate would depend on the 'risk characteristics of the project and the financial structure of the firm only to the extent that these factors affect the probability that the tax credits will never be redeemed' (Fane 1987).

Box C1–3: The appropriate rate to compensate investors for the lack of an immediate tax refund under a rent-based tax (continued)

For example, if the government allows losses to be transferred from one resource project to another within a company but does not allow residual losses to be refunded, the appropriate uplift or allowance rate would need to compensate investors for the risk that a particular *company* will never be able to utilise the value of the tax deduction. A proxy for this is the company's bond rate, which includes a premium to compensate for the risk that the company will default. If the government does not allow losses to be transferred from one project to another nor residual losses to be refunded, the appropriate uplift or allowance rate would need to compensate investors for the risk that a particular *project* will never be able to utilise the value of the tax deduction. A proxy for this is the (hypothetical) project bond rate, which includes a premium to compensate for the risk that the project will default on a loan because it does not have income.

However, it is not practicable to determine the appropriate uplift or allowance rate for each company or, still less, each project. In the absence of this, a uniform allowance rate would over-compensate less risky projects or companies and under-compensate more risky projects or companies. A uniform allowance rate would therefore provide an incentive for successful firms to delay production so that they can carry forward losses to take advantage of the excessive uplift rates. Providing a full loss offset overcomes these problems.

Sovereign risk

Sovereign risk is the risk that investments will be reduced in value by future changes in government policy. Sovereign risk discourages investment by increasing the required rate of return for investment. Therefore, sovereign risk can lead to an inefficiently low level of exploration and production that erodes the value of non-renewable resources.

Sovereign risk may be reduced under a system that investors perceive to be more stable over the long term. A rent-based tax is likely to be accompanied by lower sovereign risk because it collects a constant share of the rent under varying economic conditions. In contrast, output-based royalties have higher sovereign risk as the government has an incentive to make ad hoc adjustments to the royalty rates in response to changes in the value of the resource rent.

Evidence of the stability of rent-based taxes is provided by Australia's PRRT and by Norway's rent-like petroleum taxation system, both of which have been stable over many years compared to other petroleum producing countries.² For Norway, a stable resource charging system appears to have played an important role in supporting petroleum exploration and development activity (Osmundsen 2010). Activity remained strong despite a decline in the prospect of new discoveries in Norway's continental shelf.

2 Norway's petroleum tax system approximates a rent-based tax. Though based on the company income tax system, it applies an uplift to expenditure to exempt the normal return from tax and reimburses the tax value of exploration expenditure for companies in a loss position. Norway imposes a total tax rate on petroleum rents of 78 per cent, consisting of a 50 per cent rent-based tax rate and company income tax of 28 per cent, with no deduction at the company income tax level for tax paid under the rent-based tax.

The size, variability and timing of the return

Governments are concerned with receiving an appropriate share of the return to resource exploitation irrespective of future market conditions, the variability in the stream of revenue collected, and the time lag between production starting and tax revenue starting to flow.

Output-based royalties provide a relatively predictable stream of revenue from the time production commences, but as this does not vary with profits, royalties fail to collect an appropriate share of the return to resource exploitation during periods of high profitability.

In contrast, both a rent-based tax and an income-based tax vary with profits. However, governments should be better able to maximise their return over time with a rent-based tax, as its greater efficiency means that more revenue can be raised without making more marginal projects unviable.

However, a rent-based tax has the longest delay before the government collects revenue because tax is only collected once receipts cover expenses including a normal return to investment. The delay in collecting tax could create a public perception that the resource sector is not paying for its exploitation of non-renewable resources, as projects could be generating significant operating profits but not yet paying tax.

Administration and compliance costs

Output-based royalties typically have low administration and compliance costs because they are calculated as a percentage of the value of production or as a specific charge per unit produced. Hence, output-based royalties may be an appropriate charging mechanism for those non-renewable resources where the administration and compliance costs are likely to outweigh the potential efficiency and revenue gains from a rent-based tax.

An income-based tax has higher administration and compliance costs than output-based royalties, though these may be reduced if the tax is based on the existing income tax system.

Compared with these tax types, a rent-based tax is likely to have higher administration and compliance costs as it requires the calculation of a profit base that measures rent over time, even though it could make use of some aspects of the income tax system.

Principle

For non-renewable resources that are expected to generate significant amounts of economic rent, a rent-based tax is the most suitable charging mechanism, as the potential economic efficiency and revenue gains are likely to outweigh the higher administration and compliance costs of this tax compared with output-based royalties and income-based taxes.

For non-renewable resources expected to generate low rent and where the administration and compliance costs are likely to outweigh the potential efficiency and revenue gains from a rent-based tax, output-based royalties may be an appropriate charging mechanism.

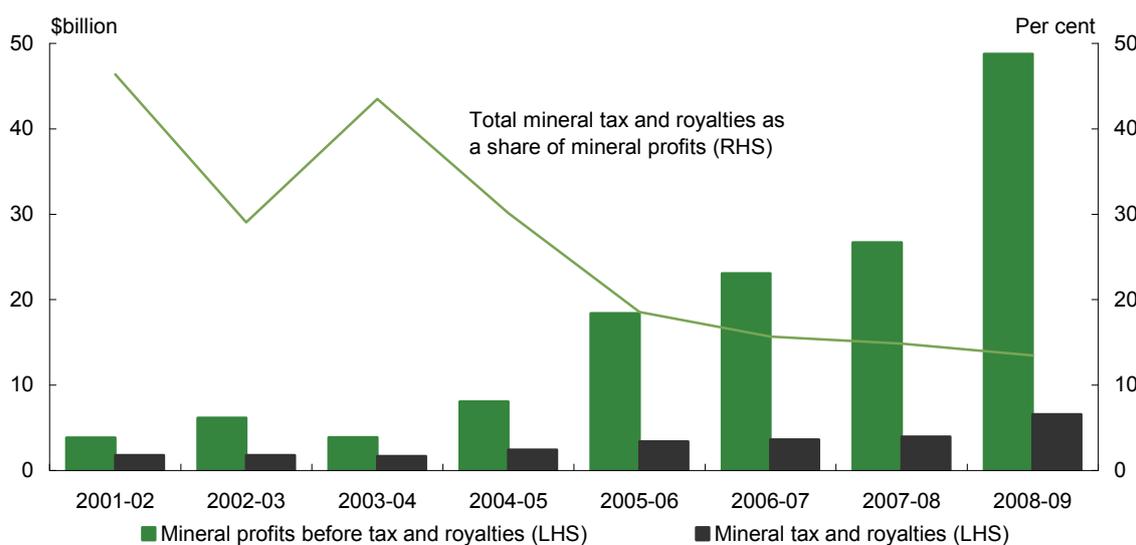
C1–2 Existing resource charging arrangements

Australia underprices its resources

In Australia, governments allow private businesses to exploit non-renewable resources and in return collect a charge for resource production, predominantly through taxation arrangements. The form of tax varies across jurisdictions. While governments have typically adopted output-based royalties, the Australian government also includes a charge on some resource rents.³ The community undercharges for non-renewable resources under both of these systems, though the causes vary.

Output-based royalties collect a greater share of the returns to non-renewable resources when profitability is low or negative and collect a smaller share of returns when profitability is high. This was particularly evident over the period from 2003–04 to 2008–09 when mineral profits increased with higher commodity prices (see Chart C1–1). The strength of prices for Australia's non-renewable resources is expected to continue for decades to come, driven by demand from China and India. While governments can increase royalty rates in response to increases in profitability, and have done so in recent years, this may discourage investment by increasing sovereign risk.

Chart C1–1: Mineral tax and royalties as a share of mineral profits^(a)



(a) Mineral profits before tax and royalties are measured using income less an allowance for corporate capital. Source: Australian Treasury estimates.

The Australian government charges for non-renewable resources extracted in offshore waters.⁴ Petroleum is the only non-renewable resource currently extracted offshore and is generally subject to the PRRT, which is levied at a rate of 40 per cent on the positive annual

3 The Northern Territory government imposes a profit-based royalty on non-renewable resources and the Western Australian government imposes a resource rent royalty on the Barrow Island project.

4 In addition, the Australian government imposes an income-based tax on resources (extracted onshore and offshore) through the income tax system and imposes a royalty on uranium extracted in the Northern Territory.

net cash flow of each petroleum project.⁵ A cash refund is not provided for negative cash flows, but excess deductions are carried forward with an interest uplift to preserve their value. Exploration expenditure can also be transferred from a PRRT project with expenditure exceeding receipts to a PRRT-paying project with common ownership from the time the expenditure is incurred. The payment of PRRT is a deductible expense in the calculation of income tax.

Although the current PRRT collects a more stable share of rents in varying economic conditions, it fails to collect an appropriate and constant share of resource rents from successful projects due to uplift rates that over-compensate successful investors for the deferral of PRRT deductions. For example, an uplift rate of the long-term bond rate plus 5 percentage points (currently 11 per cent in total) applies to general expenditure. On average, this rate is higher than the corporate bond rate, which is a useful proxy to compensate investors in the absence of a full loss offset.⁶ Typically, the corporate bond rate is around 7 to 8 per cent. Furthermore, the uplift rate for exploration within five years of the granting of a production licence (the long-term bond rate plus 15 percentage points, currently 21 per cent) is significantly higher than the average corporate bond rate. However, the uplift rate for exploration more than five years before the granting of the production licence (set equal to the GDP implicit price deflator, currently around 5 per cent) is lower than the average corporate bond rate.

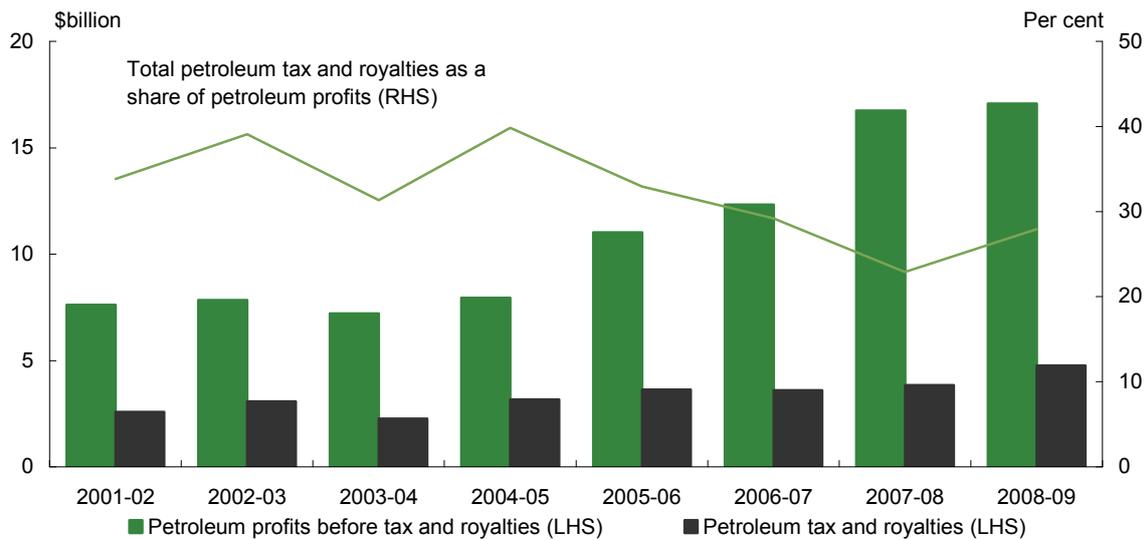
The PRRT may also fail to collect the appropriate share of rents when the gas transfer pricing regulations are applied. The regulations provide a framework for determining the price for gas in the case of an integrated gas-to-liquids project and include a residual pricing method. Essentially, the residual pricing method applies an arbitrary cost of capital allowance uplift (long-term bond rate plus 7 percentage points) and splits in half the rents associated with the integrated process between the upstream and downstream processes.

The community's share of petroleum rents collected under the PRRT is less than the statutory PRRT rate and declined from 2004-05 to 2007-08 as industry profitability increased (see Chart C1-2). These outcomes may have arisen due to the North West Shelf project being subject to output-based royalties and excessive PRRT uplift rates.

5 Before 1 July 1986, offshore petroleum projects were subject to output-based royalties. These were replaced by the PRRT, except for petroleum extracted from the North West Shelf, which is still subject to output-based royalties. The Bass Strait project was brought into the PRRT regime in 1990.

6 In cases where expenditure is not transferable, the hypothetical project bond rate is a better proxy for the appropriate uplift rate, but this rate is typically unobservable as most debt is issued at the corporate level.

Chart C1–2: Petroleum tax and royalties as a share of petroleum rents^(a)



(a) Petroleum profits before tax and royalties are measured using income less an allowance for corporate capital. There may be differences in the timing of profits using this measure of profit compared to the PRRT measure of profit. Source: Australian Treasury estimates.

Company income tax as a resource rent tax

The company income tax system applies to rents as well as to the normal return on investment. This feature has placed a constraint on the government in setting the company income tax rate. In particular, the benefits of attracting mobile investment to Australia by reducing the company income tax rate must be balanced against the loss of tax revenue that could have been collected from location-specific investments, such as investments in non-renewable resources projects (see Section B1 Company and other investment taxes).

The reduction in the company income tax rate over the past two decades has reduced the combined statutory tax rate on resource rents. The combined statutory tax rate on petroleum resources at the company level has fallen by 9.6 percentage points (from 67.6 per cent to 58.0 per cent) since the introduction of the PRRT in 1987. While the PRRT rate has not changed, the company income tax rate has fallen by 16 percentage points from 46 per cent to 30 per cent.

To the extent resource companies are owned by Australian residents, the company income tax does not act as a final charge due to dividend imputation.

Finding

Australia's current resource charging arrangements fail to collect an appropriate return for the community from allowing private firms to exploit non-renewable resources, mainly because these arrangements are unresponsive to changes in profits.

Investment and production decisions are distorted, further eroding returns

The current resource charging arrangements, and associated mechanisms for allocating exploration permits, distort investment and production decisions and thereby lower the return to the community.

Under output-based royalties, firms are likely to invest and produce less than they otherwise would. The calculation of such royalties does not take production costs into account. This leads to less exploration, lower industry output and earlier closure of projects. In addition, some investments may not be undertaken due to higher sovereign risk – specifically the risk of governments making ad hoc adjustments to royalty rates in response to changes in profitability.

Recent examples include changes to coal royalties in Queensland and NSW. The 2008–09 Queensland budget introduced a two-tier coal royalty, with a 7 per cent rate applying up to \$100 per tonne and a new 10 per cent rate applying thereafter. This followed a change in 2002 that denied deductions for rail and transport costs when calculating the coal price subject to royalty. The 2008–09 NSW mini-budget increased coal royalties by 1.2 percentage points and excluded transport costs in calculating the royalty.

Under the PRRT, firms may invest and produce less than they would otherwise. Successful firms share their returns with government through the PRRT, but unsuccessful firms do not receive refunds from the government for the tax value of their loss. This discriminates against risky exploration and production projects. Further, there is an incentive for successful firms to delay production so that they can carry forward negative cash flows to take advantage of the excessive PRRT uplift rates described above. These delays erode the return to resources available for the community.

Current methods of allocating exploration permits may also erode resource rents

The mechanisms used to allocate exploration permits to private businesses can also erode resource rents, as they may not allocate exploration permits to the most efficient producer or may promote inefficient exploration.

The States typically assess a prospective investor on a first-come first-served basis, with a nominal application processing fee. The first-come first-served basis of allocation creates an incentive for firms to undertake exploration sooner than they would have if property rights had been clearly defined.

The Australian government allocates offshore exploration permits under a work program bidding system. Exploration permits are allocated to the firm with the preferred exploration work program. Work program bidding creates an incentive for exploration expenditure above a commercially sensible level. To win exploration permits, firms may commit to a work program that spends the expected resource rents on over-exploration. Work program bidding can dissipate all the expected rents if bidding is competitive and the tax system is efficient (Fane & Smith 1986).

Irrespective of the mechanism used or jurisdiction, exploration permits and production licences are tradeable. This enables the transfer of these rights so that the most efficient firm can explore and produce resources and thereby increase the resource rent available for the

community. However, the Australian and State governments impose some fees, not related to administration costs, and stamp duties on the transfer of interests. This imposes a transaction cost that inhibits the efficient transfer of rights to projects and may therefore erode the value of the resource rent. (For further discussion of the inefficiencies arising from stamp duties, see Section C2 Land tax and conveyance stamp duty.)

Governments issue exploration permits, retention leases and production licences with a limited tenure. Exploration permits are generally granted for periods of two to six years, with renewals being subject to reductions in the exploration area covered by the permit. Retention leases are generally granted for five years with provisions for renewal and a priority right for a production licence. Production licences can be granted for up to 21 years.

These time limits may create an incentive for firms to inefficiently bring forward exploration and production, but may also serve to restrict the incentive for firms to delay exploration and production in order to gain from the spillover benefit of information generated by activity in neighbouring fields.

Exploration tax incentives

Under the PRRT, exploration expenditure in areas designated as 'frontier' from 2004 to 2009 is eligible for a 150 per cent deduction. This concession was introduced to stimulate exploration activity in frontier areas and increase the likelihood of discovering a new petroleum province. However, the concession only benefits owners of projects that already pay PRRT, because the benefits are only available when the deduction can be used to reduce a PRRT liability. The concession does not appear to correct any market failure.

Exploration expenditure is also favourably treated under income tax. Businesses are allowed to deduct exploration expenditure immediately, regardless of whether the exploration succeeds or fails. However, for businesses without income (typically smaller businesses) the treatment of income tax losses – which are carried forward on a conditional basis and without an uplift – may discourage exploration (see Section B1 Company and other investment taxes).

Finding

Australia's current resource charging arrangements and the mechanisms for allocating exploration permits distort investment and production decisions, further lowering the community's return from the exploitation of its non-renewable resources.

C1–3 Replacing current arrangements with a resource rent tax

Recommendation 45:

The current resource charging arrangements imposed on non-renewable resources by the Australian and State governments should be replaced by a uniform resource rent tax imposed and administered by the Australian government that:

- (a) is levied at a rate of 40 per cent, with that rate adjusted to offset any future change in the company income tax rate from 25 per cent, to achieve a combined statutory tax rate of 55 per cent;
- (b) applies to non-renewable resource (oil, gas and minerals) projects, except for lower value minerals for which it can be expected to generate no net benefits. Excepted minerals could continue to be subject to existing arrangements if appropriate;
- (c) measures rents as net income less an allowance for corporate capital, with the allowance rate set at the long-term Australian government bond rate;
- (d) requires a rent calculation for projects;
- (e) allows losses to be carried forward with interest or transferred to other commonly owned projects, with the tax value of residual losses refunded when a project is closed; and
- (f) is allowed as a deductible expense in the calculation of income tax, with loss refunds treated as assessable income.

Recommendation 46:

The resource rent tax should not provide concessions to encourage exploration or production activity at a faster rate than the commercial rate or in particular geographical areas, and should not allow deductions above acquisition costs to stimulate investment.

Recommendation 47:

Existing projects should be transferred into the proposed system with an adjustment, as appropriate, to the starting base for the allowance for corporate capital. The Australian government should set out a time-frame to implement the resource rent tax and provide guidance at the time of announcement on how existing investments and investment in the interim will be treated under the resource rent tax.

Recommendation 48:

The Australian and State governments should negotiate an appropriate allocation of the revenues and risks from the resource rent tax.

Recommendation 49:

The Australian and State governments should consider using a cash bidding system to allocate exploration permits. For small exploration areas, where there are unlikely to be net benefits from a cash bidding system, a first-come first-served system could be used.

Recommendation 50:

The Australian and State governments should abolish fees and stamp duties on the transfer of interests in a resource project except those related to administrative costs.

A uniform resource rent-based tax

The current resource charging arrangements should be replaced with a uniform rent-based tax legislated for and administered by the Australian government (see Recommendation 45). This would enable the community to collect a greater and constant share of the return on its non-renewable resources. It would also promote an efficient level of output by reducing distortions to investment and production decisions as well as reducing sovereign risk over the long term.

In some areas of Australia, legal ownership of certain non-renewable resources rests with the land owner, and private rather than government royalties are charged. Where private royalties are paid to, for example, Indigenous communities, such royalties should continue unaffected. However, consideration would need to be given to how these private royalties and associated resources are dealt with under the resource rent tax.

The resource rent tax would likely involve greater variability in revenue collections than the current resource charging arrangements. This variability should for fiscal purposes be managed through a revenue stabilisation mechanism to smooth revenue over time. In periods of high profitability some of the returns should be set aside so that they can be drawn down during periods of lower profitability.

A cash bidding system should be used to allocate exploration permits, rather than using a work bidding program system or a first-come first-served system (see Recommendation 49). A cash bidding system would complement a rent-based tax by promoting the efficient allocation of exploration permits and collecting upfront any expected rent above the tax.

The cash bidding system would be operated by the relevant jurisdiction and be triggered when an application for an exploration permit is made. Exploration permits would, as now, be well defined and include environmental protection conditions, including clean-up and rehabilitation requirements.

Governments should not provide concessions to the rent-based tax in order to encourage exploration or production activity at a faster rate than the commercial rate or in specific geographical areas, and should not allow deductions above acquisition costs to stimulate investment (see Recommendation 46). Under a cash bidding system, businesses would pay less to purchase exploration permits for frontier areas where commercial discoveries are less likely and other businesses are less willing to explore.

For small exploration areas, where there are unlikely to be net benefits from cash bidding (due to poor prospects of significant competition), a first-come first-served system rather than the work program bidding system could be used to allocate exploration permits.

Setting the rate of the resource rent tax

The rate of the resource rent tax should be set to achieve an appropriate return for the community for the exploitation of its resources.

Taking into account the quality of Australia's natural resources and other location-specific rents, as well as the expected ongoing strength of Australia's terms of trade, the Review recommends that the resource rent tax be levied at rate of 40 per cent on rents from a resource project (see Recommendation 45a).

The payment of the resource rent tax would be a deductible expense for income tax purposes (see Recommendation 45f). This would result in a combined statutory tax rate on rents (at the corporate level) of 55 per cent (including the tax on rents imposed by a 25 per cent company income tax rate, minus an income tax deduction for payment of the resource rent tax). This is slightly less than the combined statutory PRRT rate and current company income tax rate.

If a rent-based tax is levied at a rate of 100 per cent, it would be similar to the government outsourcing exploration and production to private firms – the government would effectively pay all the costs and, in return, receive all the receipts from a project. This would erode the return to resources because there would be no incentive for private firms to make decisions that maximise the return. Further, a very high tax rate would increase the incentive for private firms to minimise tax by understating revenue and overstating costs. It could also lead to viable projects not being undertaken if the amount subject to tax overstates the rent due to the design of the tax law.

The value of the rent from resource production may also include firm-specific rent that arises from production by a particularly efficient firm. This rent is the value that accrues to the private firm (in excess of its expenses) above the value that would have accrued to other firms if they had undertaken the project. A high tax rate may discourage firms with firm-specific rent from exploring and producing resources in Australia where access to capital is limited and may cause them to relocate to countries that undercharge for the exploitation of their resources.

Under a rent-based tax, private firms share their firm-specific rent with the government, and the government shares its resource rents as well as other location-specific rents with the firm. These are shared according to the tax rate. As such, firms decide where to locate by reference not only to the tax rate but also to the amount of resource rent and other factors such as location-specific rents that they gain from locating in a particular country. These other factors arise from existing infrastructure, political stability, policy stability and regulatory certainty. Such features make Australia an attractive place to locate (Fraser Institute 2008).

The nature of the resource rent tax

A rent-based tax with an allowance for corporate capital (ACC) is preferred to other forms of rent-based tax because revenue collections are likely to be more stable and there is likely to be less of a lag before the government receives a (net) payment of tax (see Recommendation 45c). Although the government should be indifferent as to whether it receives a payment soon or a payment later with interest, the delay could create a public perception that the resource sector is not paying an adequate charge for the use of non-renewable resources because projects could be generating significant operating profits but not yet paying tax.

Further, it is likely to be easier for the government to budget for its contribution to expenditure and to audit expense claims under an ACC rent tax because assets are depreciated over time, rather than being allowed as a deduction immediately (as would be the case under a Brown tax).

The ACC base would comprise the resource rent tax value of project assets and unutilised losses associated with a project. A worked example of an ACC calculation is provided in Annex C1 (see Table C1-5).

The treatment of project losses

The economic efficiency and design of the resource rent tax would be improved significantly if a full loss offset were allowed (see Recommendation 45e). Providing a full loss offset means that the government would share in the risks of a resource project in proportion to the resource rent tax rate. This is a marked change from the current royalty arrangements, where the government accepts none of the risk, and from the PRRT, where the government may not accept risk when a project fails.

A full loss offset would ensure a symmetric tax treatment of gains and losses, with the government contributing to costs at the same rate as it shares in receipts. Not providing a full loss offset would lead to the mismeasurement of rent and would discriminate against riskier projects. This would prevent otherwise commercially viable projects from being undertaken and lead to inefficiently low levels of exploration and production.

Not providing a full loss offset would also complicate the choice of the allowance rate, giving rise to distortions in business decision-making. The denial of a full loss offset in the PRRT regime has given rise to a number of concessions and further distortions in the exploitation of offshore petroleum.

A full loss offset can be achieved by allowing the transfer of losses to other commonly owned resource projects or by allowing losses to be carried forward (uplifted at the ACC rate) so that they can be utilised against future income. If losses cannot be utilised against future income in this way, the tax value of residual losses (the ACC base) would be refunded when a project is closed. The ability to transfer expenditure reduces the stress on the full loss offset.

The allowance rate

Under the proposed full loss offset arrangements, businesses should be confident that they would receive the full tax credit for expenses because the tax value of residual losses would be refunded when a project is closed.

An ACC is required to compensate investors for the deferral of the tax credit, which is akin to a loan from investors to the government. The appropriate rate should compensate for the market interest that the government would have to pay for its borrowings, rather than being related to the riskiness of the project. Therefore, where a full loss offset is provided, the ACC rate should be set to the long-term Australian government bond rate (see Recommendation 45c). If a full loss offset is not provided but losses can be transferred, the ACC rate should be set to the average corporate bond rate.

Interaction with company income tax

Resource firms should continue to be subject to income tax on their exploration and production business so that the normal return on investment is taxed in the same way as for other businesses. Otherwise, equity investments in marginal resource projects, which do not generate economic rent, would not pay tax on their normal return.

As well as taxing the normal return on an investment, the company income tax applies to economic rent. To ensure that the combined statutory tax rate on rent is kept at a reasonable level in spite of any mismeasurement of rent, the payment of the resource rent tax should be allowed as a deductible expense in the calculation of income tax. Consistent with this, any refund for losses under the tax should be treated as assessable income in the calculation of income tax (see Recommendation 45f).

To keep the combined statutory tax rate on resource rents collected at the corporate level steady over time at 55 per cent, the resource tax rate should be adjusted to offset any changes in the company income tax rate (see Recommendation 45a). For example, if the company income tax rate is reduced there should be an increase in the resource rent tax rate to ensure that the combined statutory tax rate on resource rent is unchanged.⁷ This would remove a constraint on setting the company income tax rate. The resource rent tax rate would be determined by the formula:

$$t_r = \frac{0.55 - t_c}{1 - t_c}$$

where t_r represents the resource rent tax rate and t_c represents the company income tax rate.

Even with this adjustment, resource companies would still benefit from any future reductions in the company income tax rate as they would be subject to a lower tax rate on the normal return to all their operations and on the economic rent earned in their non-mining operations. Only in relation to rent from a non-renewable resource project would a company not benefit from reductions in the company income tax rate.

Changes to the company income tax base can also lower the community's return from a non-renewable resource. The total tax on resource rent (including company income tax) would fall if items could be deducted for income tax purposes at a value higher than their acquisition costs (such as through an investment allowance). In such cases, it would not be practicable to adjust the resource rent tax rate or base to offset for the concession in the income tax system. If the resource rent tax uses elements of the company income tax rules, any provision that allows an item to be deducted at a value above its acquisition cost should be inoperative in calculating the resource rent tax. This would insulate the resource rent tax from concessions introduced into the company income tax system.

Projects would be taxed separately

The resource rent tax should be calculated for project interests, rather than for each company (see Recommendation 45d). This would disaggregate the company's operations so that rents accruing to other operations would not be subject to the tax. For example, a vertically

⁷ Flexibility could be required as the company income tax rate transitions from 30 per cent to 25 per cent (see Recommendation 27, Section B1 Company and other investment taxes).

integrated petroleum company with extraction and refinery businesses would be subject to the tax only on its extraction business.

Setting the taxing point at the project level would also identify the State where the resource is being exploited. This would enable the revenue from the resource rent tax to be allocated on a State-by-State basis, if this is considered appropriate (see below).

In principle, the taxing point should be a sale of resources as close to the well head or mine gate as possible to ensure that only rents from resource extraction are subject to the resource rent tax. Liability would be calculated by reference to the taxable profit of the project (receipts from the sale of the resource minus allowable deductions). Where the resource is sold at the point at which it is produced, the receipts would be the amounts actually received. Where it is not sold at that point, the market value of the resource at that point would need to be attributed, as is the case under the existing *ad valorem* royalties.

The need to attribute a transfer price can arise if a vertically integrated company both extracts the resource and refines it or subjects it to some further manufacturing process. The bauxite to alumina to aluminium and natural gas to liquid natural gas industries are examples of vertical integration. For integrated companies, transfer pricing requirements would necessarily involve greater compliance costs.

The need to attribute a value may also arise, for example, if the resources were sold 'free on board', with the producer incurring the costs of transporting the resource to port as well as loading costs. The amounts received for the resource would be calculated as actual receipts minus the free on board costs. A number of existing State royalty regimes have similar rules.

There would also be pressure on the resource rent tax from companies engaging in transfer pricing, with both associates and others, to reduce the amount of rent subject to tax. Given the high combined statutory tax rate on resource rents relative to other income tax rates applying domestically, domestic as well as international transfer pricing would be an issue. The existing PRRT legislation includes non-arm's-length integrity rules that deal with attempts to reduce the amount of receipts or inflate the amount of deductible expenditure, with the Commissioner of Taxation able to substitute arm's-length amounts. Similar rules would be required for the resource rent tax.

All project expenditures incurred up to the point where the resource is sold or its value is taxed should be deductible for resource rent tax purposes, including exploration and closing down expenditure. Because the tax value of residual losses would be refunded, a PRRT-style carry-back rule would be unnecessary.

Under the resource rent tax, certain types of expenditure would not be deductible. While requiring further consideration, these would likely include:

- payments of interest and borrowing costs;
- payments of dividends and the cost of issuing shares;
- repayment of equity;
- payments to acquire an interest in an existing exploration permit, retention lease, production licence, pipeline licence or access authority;

- payments to acquire interests in projects subject to the resource rent tax;
- payments of income tax or GST;
- payments of administrative or accounting costs incurred indirectly with the carrying on of the project; and
- payments in respect of land and building not adjacent to the project for use in connection with administrative and accounting activities.

The PRRT has similar exclusions.

What resources would be subject to the resource rent tax?

The resource rent tax should be applied to non-renewable resources other than those expected to generate low rent where the administration and compliance costs are likely to outweigh any gains from a rent-based tax (see Recommendation 45b).

The resources that can be expected to generate net benefits to the community from being subject to the resource rent tax are:

- petroleum (including crude oil, condensate and natural gas, including coal seam gas);
- uranium;
- bulk commodities (black coal and iron ore);
- base metals (gold, silver, copper, lead, nickel, tin, zinc, bauxite);
- diamonds and other precious stones; and
- mineral sands.

Whether brown coal should be subject to the resource rent tax merits further consideration.

The State royalty systems provide a useful guide to identifying other resources that may not merit inclusion, by reference to those mineral resources currently subject to specific (volume-based) royalties.⁸ Table C1-1 lists these minerals, for which the resource rent tax may not be suitable. These resources if excluded could continue to be subject to royalties or other arrangements if appropriate.

⁸ Although bauxite is subject to a specific royalty in Queensland (\$1.50-\$2.00 per tonne), it is subject to an *ad valorem* royalty in Western Australia (7.5 per cent), and the value of resource rents can fluctuate as it is a globally traded commodity.

Table C1–1: Resources that may merit exemption from the resource rent tax

Barite	Fluorite	Potassium minerals and sands
Borates	Gypsum Halite	Pyrophyllite
Calcite	Lime	Quartzite Salt
Chert	Limestone	Sand, gravel and rock
Chlorite	Magnesite	Serpentine
Clays (bentonite, kaolin, structural and cement clay/shale clay)	Magnesium salts	Silica
Dimension stone (granite, marble, sandstone, slate)	Marble	Sillimanate group metals
Diatomite	Mica	Talc
Dolomite	Olivine	Vermiculite
Feldspar	Peat	Wollastonite
	Perlite	Zeolites
	Phosphates	

The transition to the resource rent tax

Existing resource projects should be subject to the new resource rent tax (see Recommendation 47).

Leaving existing projects outside of the new regime would increase administration costs by requiring multiple schemes operating in parallel. Bringing existing projects into the regime would ensure that the future expansion of existing projects would be treated in the same way as the development of new projects. This is important as a significant part of the expected growth in mining industry output is likely to come from the expansion of existing mines.

The resource rent tax would also apply to projects currently subject to negotiated special royalty arrangements, including those in place for iron ore mines, the Argyle diamond mine in Western Australia and Olympic Dam in South Australia.

Transferring existing projects into the resource rent tax system

A move to a rent-based tax would lower the perception of sovereign risk in the long term as the rent-based tax would be more stable than current resource charging arrangements. However, depending on the transitional arrangements, the transfer of existing projects into the new system may increase perceived sovereign risk in the short to medium term.

Other than to address sovereign risk concerns, the case for providing transitional assistance is far from clear. Legally, non-renewable resources remain the property of the Crown until they are exploited. As a consequence, governments have not in the past compensated resource firms for changes to resource charges. Further, investors can be expected to have taken into account potential changes to resource charges when they made investment decisions.

Governments should also not compensate investors for the change in the value of projects or companies associated with resource rights or expected benefits from future expenditure and investment. To the extent the Australian government decides transitional assistance is warranted, assistance should be directed to recognising previous expenditure and investment.

Any transitional assistance should be delivered by providing a starting ACC base, as deemed appropriate, to recognise investment made at the project level. The starting ACC base would effectively operate as a lump-sum transfer to existing projects and consequently would not distort subsequent production decisions (see Recommendation 47). For example, the starting ACC base for PRRT projects could be set equal to the value of carried-forward expenditure.

While it is generally desirable to provide a full loss offset, it may not be appropriate for losses to be refunded or transferred where they are associated with past expenditure recognised in the starting ACC base. This is because fully refunding losses on past expenditure may create an incentive for firms to report expenditure incurred for projects that have already failed. As such, losses arising from past expenditure should be quarantined from other losses and would not be refundable.

Transitional relief should not be provided through adjustments to the tax rate or other design features, or, in general, by providing a period of grace for existing projects. Such approaches would distort investment and production decisions or compromise the long-run improvement in the community's return from non-renewable resources.

The Australian government should set out a time-frame to implement the resource rent tax and provide guidance at the time of announcement on how existing investments and investment in the interim will be treated.

The resource rent tax and the States

Where State royalties are replaced by the resource rent tax, the Review recommends that the allocation of the revenues and risks from the tax be negotiated between the Australian government and the States (see Recommendation 48).

State royalty collections were \$4,756 million in 2007–08. Western Australia (52 per cent), Queensland (29 per cent) and NSW (12 per cent) raise most of the States' royalty revenue. The other States contributed only 7 per cent to the aggregate. The States' apparent reliance on mining royalties also varies, with Western Australia the most reliant (22 per cent of total State revenue), followed by the Northern Territory and Queensland (both 9 per cent). However, the horizontal fiscal equalisation process takes into account the differences in revenue-raising capacities between the States in the distribution of GST revenue (see Section G2 State tax reform). As such, all States effectively share, over time, in total resource royalties.

Options for dealing with existing State royalties on resources that would be subject to the resource rent tax include replacing State royalties or applying State royalties in parallel, with royalties credited against the resource rent tax.

Option 1: Replace State royalties and assign resource rent tax revenues to the States

Revenues could be allocated in proportion to each State's share of gross resource rent tax receipts calculated before the transfer of losses from non-tax-paying projects. This would ensure that a State's share of net revenues is not diminished because of loss-making projects in another State. Transitional arrangements could be considered to help the States manage the impact on their revenue flows of moving away from royalties.

The horizontal fiscal equalisation process would, as now, eventually achieve a more equal distribution of these resource revenues between the States.

The resource rent tax would promote efficient production and would not impose additional compliance and administration costs associated with running two systems in parallel. Each State would continue to receive a share of the revenue that reflects activity in its jurisdiction, though that revenue could be more variable and less certain than now.

Option 2: Apply State royalties in parallel, with royalties credited against the resource rent tax

If the States place a premium on certainty as to their future revenues, their existing royalty regimes could be kept in place. A firm subject to both the resource rent tax and a State royalty would be entitled to a credit for the royalty against the total liability for the tax. If in a period the credit exceeded the resource rent tax liability, the excess would be refunded.

Under this option, the States would continue to receive the revenue stream from their royalty arrangements and could be expected to benefit from increased production due to the efficiency gains from the resource rent tax. The Australian government would take on revenue risks, but benefit from the expected long-term net revenue gain. Because the State royalty payments would be creditable — and, where required, refundable — State royalties would not bias investment decisions. For example, decisions to keep a marginal mine open would have no regard to the cost of the State royalty payment.

The State royalty regimes would need to be fixed at a particular point in time to ensure that the Australian government does not automatically fund future increases in royalties.

While this arrangement would realise the efficiency gains of the resource rent tax, the net gains would be tempered by the compliance and administration costs of running dual regimes. A variant to address this downside would be to remove the need for firms to pay royalties. Instead the Australian government would make regular payments to the States based on notional royalties applied to State-based production data. This option would then be akin to Option 1, but with a different allocation of revenues and risks between levels of government.

Under this option, existing Australian government tax regimes would be replaced.

Abolish inefficient stamp duties and fees

The Australian government and the States should abolish fees and stamp duties on the transfer of interests in a resource project except those related to administrative costs (see Recommendation 50). These stamp duties and fees erode the value of resource rent available for the community because they inhibit the transfer of interests to the most efficient firm.

Annex C1: Rent-based taxes — alternative forms

This annex explains how a Brown tax (cash flow tax) collects a share of rent and how it is generally equivalent to a Garnaut and Clunies Ross resource rent tax and an allowance for corporate capital (ACC) tax.

How does a Brown tax collect a share of rent?

A rent exists where a project's receipts are expected to exceed its expenses plus the required rate of return to compensate investors for the time value of money (the risk-free return) and a premium for the risk associated with their investment (the risk premium return for systematic risk). The value of the resource rent can be measured as the net present value of the project's cash flows discounted by the required risk-adjusted rate of return.

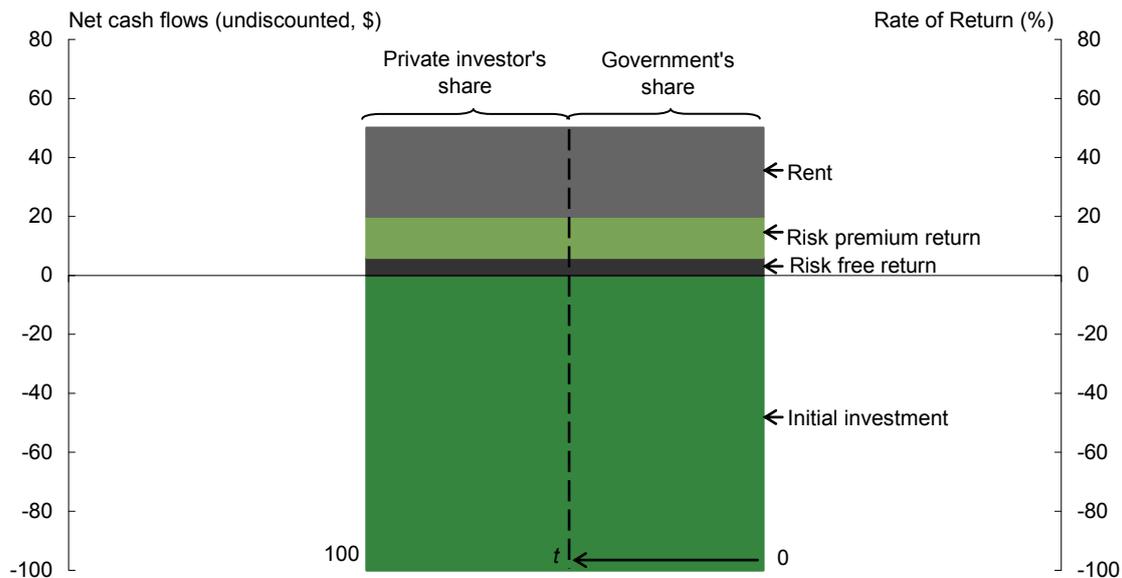
Under a Brown tax, the government is in effect a silent partner in the project, with a partnership interest equal to the tax rate. The government contributes to project expenses and shares in future receipts from the project at this rate.⁹ Consequently, its share of the value of any rent available is equal to the tax rate. In addition, the government receives cash flows associated with its share of the normal return and of good and bad luck associated with the project's riskiness.

Consider an example where an investor makes an investment, i , of \$100 and expects to receive \$150, r , at the closure of the project in one year. Assume the required rate of return for the investment is 20 per cent, comprising a risk-free rate of 6 per cent and a risk premium of 14 per cent. The expected excess return is the expected rent. For ease of exposition, assume the tax rate, t , is 50 per cent.

Chart C1-3 shows these returns from the project's net cash flows and illustrates the effective partnership arrangement established under a Brown tax. The vertical dashed line represents the tax rate, which determines the government's share of the project.

9 This contrasts with an income tax system where the government contributes its full share of expenses only once assets are fully depreciated and the project has had receipts sufficient to cover all recognised expenses. The delay in the government's contribution is equivalent to a loan from investors to the government to purchase its share of the project. However, under an income tax the government typically does not compensate investors for the time value of the loan and the risk that the government will not repay the loan if the project fails to generate enough receipts to cover expenses.

Chart C1-3: Entitlements under a Brown tax



Under a Brown tax, the government and the private investor each contributes to the \$100 investment expenditure (a negative cash flow) in year 1 – the government contributes $i \times t$ (50 per cent of \$100), or \$50, and the private investor $i \times [1-t]$ (50 per cent of \$100), the other \$50.

On their investment of \$50 each, both the private investor and the government can expect to receive a rate of return of 20 per cent, and expect to share in any rent and good or bad luck.

Where the actual return is \$150, the government and the private investor each receives their share of the \$150 receipt (positive cash flow) in year 2 – the government receives $r \times t$ (50 per cent of \$150), or \$75, and the private investor receives $r \times [1-t]$ (50 per cent of \$150), the remaining \$75.

Of the \$75 each partner receives, \$60 compensates for their investment – \$50 is the return of their initial contributions, \$3 is the risk-free return and \$7 is the risk premium return. The excess \$15 each investor receives above the \$60 they required is their share of the rent.

The present value of the government's share of the rent from the project is \$12.50 (\$15 rent received in year 2 discounted by the required rate of return), which is half the value of the project's rent (see Table C1-2). Although the investor made an initial investment of \$100, their net investment in the project is \$50 ($i \times [1-t]$), as the government refunded \$50 ($i \times t$) in year 1 to pay for its share of the partnership established through the tax system.

Table C1–2: Net present value of total investment where investor invests tax refund into an equally risky investment

	Resource project (required return = 20%)			Subsequent investment (required return = 20%)	Total investment
	Project (1)	Private (2)	Government (3)	Private (4)	Private (5)
Cash flow (\$) — Year 1	–100	–50	–50	–50	–100
Cash flow (\$) — Year 2	150	75	75	60	135
Discount rate	20%	20%	20%	20%	–
Net present value	\$25.00	\$12.50	\$12.50	\$0.00	\$12.50

The investor can reinvest the \$50 refund into another investment so that their total net investment is \$100. The table shows the net present value of the cash flows from the total private investments where the private investor reinvests the \$50 refund into another investment with the same required rate of return as the project (20 per cent), but one that does not yield any rent as it is a marginal investment. The net present value of the investor's total investment is \$12.50 (column 5).

Alternatively, the investor could have reinvested the refund into an investment with a different required rate of return, such as a government bond with a required rate of return of 6 per cent (see Table C1–3). In this case, the net present value of the cash flows from total investments remains the same, as the risk-adjusted discount rate for the subsequent investment is also lower.

Table C1–3: Net present value of total investment where investor invests tax refund into a government bond

	Resource project (required return = 20%)			Subsequent investment (required return = 6%)	Total investment
	Project (1)	Private (2)	Government (3)	Private (4)	Private (5)
Cash flow (\$) — Year 1	–100	–50	–50	–50	–100
Cash flow (\$) — Year 2	150	75	75	53	128
Discount rate	20%	20%	20%	6%	–
Net present value	\$25.00	\$12.50	\$12.50	\$0.00	\$12.50

Garnaut and Clunies Ross resource rent tax

Under a Garnaut and Clunies Ross resource rent tax, the government imposes a cash flow tax levied at a constant percentage of the annual *positive* net cash flow from the project. It is similar to a Brown tax, but does not provide a cash refund for the tax value of negative cash flows. Instead, negative cash flows are carried forward with interest (the 'uplift rate') to be claimed as a deduction and utilised against future income. The government limits its risk by not providing a refund for the tax value of expenditure when a project fails. Consequently, the uplift rate should compensate investors for the delay of the tax credit (the risk-free return) and a premium to cover the risk that the government will never repay the tax value of expenditure (or provide a tax credit) at a future date.

There is no uniform uplift rate that could accurately compensate all projects for the risk that the government will never repay the implicit loan. This is because the required uplift rate would depend on the risk that a particular *project* will not be able to utilise the tax credit at a

future date. Where the government allows projects to transfer losses to other resource projects within a company, the appropriate uplift rate would depend on the risk that a particular *company* will not be able to utilise the tax credit.

Consider the previous example again. This time the government will not contribute its share of the cost of investment until year 2 when the project has sufficient receipts to absorb expenses. For the sake of simplicity, assume that it is known with certainty that the project will be able to utilise its receipts in the second year (for example, because the government will allow the project to transfer its expenditure to other resource projects within the company and the investor is certain that there is another project within the company that can utilise the loss in year 2). In this case, the uplift rate should be equal to the government bond rate.

Under a Garnaut and Clunies Ross resource rent tax, the investor's share in the \$100 project will still be \$50 ($i \times [1-t]$) and the government's share of the project will also be \$50 ($i \times t$). However, as the government will not contribute its share of the cost of investment immediately, the investor effectively reinvests the \$50 refund into a temporary loan to the government, which pays the interest at the long-term government bond rate of 6 per cent (which is the required rate of return for investing in government bonds).

Table C1-4 shows the tax calculation for the project. In this case, the project will make a loss of \$100 in year 1. The expenditure from year 1 will be carried forward to year 2. The government allows a deduction for tax purposes in year 2 of \$106 (comprising \$100 for the expenditure that was incurred in year 1 and \$6 for the uplift).

In year 2, the investor will pay the government \$22 in tax rather than \$75 under a Brown tax (a difference of \$53). The government thereby repays the investor \$53 for the temporary loan (\$50) and compensates the investor for the delay of its contribution under the Garnaut and Clunies Ross resource rent tax (\$3, which is equal to the \$6 uplift multiplied by $(1-t)$).

Table C1-4: Garnaut and Clunies Ross resource rent tax — worked example

Description	Item	Year 1	Year 2
Receipts	(1)	0	150
less Expenses	(2)	100	0
less Expenses carried forward from previous year	(3)	0	100
less Uplift (6% applied to prior year's expenditure carried forward)	(4)	0	6
Net profit (item 1 less items 2, 3, 4)	(5)	-100	44
Taxable profit (nil if item 5 is negative)	(6)	0	44
Tax @ 50%	(7)	0	22
Expenses carried forward (item 5 if negative)	(8)	100	0

The investor will therefore make a total investment of \$100 in year 1 and receive \$128 in year 2 (\$150 from the project less \$22 in tax). This is equivalent to the cash flows and net present value shown in column 5 of Table C1-3 where the investor reinvested the tax refund in a government bond.

This shows that the Garnaut and Clunies Ross resource rent tax is equivalent to a Brown tax in apportioning the value of the rent if the uplift rate is equal to the government bond rate and if the investor is certain they can utilise the tax value of expenditure at a future date. In the absence of this certainty, the uplift rate should also compensate for the risk that the government will never repay the tax value of the investment. Given the difficulty in

determining appropriate compensation for each project or company, equivalence breaks down.

Allowance for corporate capital tax

Under an ACC, the government contributes its share of project expenses at a slower rate than under a Brown tax. This delay occurs for two reasons. First, the government does not recognise expenses for assets immediately; instead assets are depreciated for tax purposes in line with their effective life. Second, the government does not contribute to expenses when the project is making a loss. The delay in the government's contribution to expenditure is equivalent to a loan from investors to the government. Under an ACC, the government compensates investors for this delay by effectively paying interest on undepreciated assets and unutilised losses through an allowance arrangement.

An ACC tax is only equivalent to a Brown tax where the interest payment compensates investors for the required rate of return associated with the implicit loan to the government, rather than the required rate of return for the project. The required rate of return on the implicit loan would comprise a risk-free return and a risk premium return to compensate investors for the risk that the government will never repay the tax value of the cost of the investment.

Under a full loss offset, the government promises to contribute its share of project expenses eventually, whether or not the project fails. The government could make this promise by refunding the tax value of losses (including undepreciated assets) when an unsuccessful project is closed. The government would then only need to compensate investors for the delay by paying the interest associated with government borrowing. This would compensate investors for the time value of money and the risk that the government will default on its guaranteed borrowing. A proxy for the appropriate rate is the long-term government bond rate.

Where the government does not provide the assurance of a refund, there is no uniform allowance rate that could compensate all projects for the risk that the government will never repay the implicit loan.

Consider the previous example again. This time the government will not contribute to its share of the investment until year 2, when the project's assets have been depreciated for tax purposes and the project has sufficient income to absorb expenses. A full loss offset is provided when the project is closed.

Under an ACC tax, the investor's share in the \$100 project will still be \$50 ($i \times [1-t]$) and the government's share of the project will also be \$50 ($i \times t$). However, as the government will not contribute immediately to its share of the investment, the investor effectively reinvests the \$50 refund into a temporary loan to the government, which pays an interest allowance at the long-term government bond rate of 6 per cent (which is the required rate of return for investing in government bonds).

Table C1-5 shows the ACC calculation for the project. In this case, the government allows \$60 of the \$100 expenditure for the project to be claimed as a deduction for depreciation in year 1 and the remaining \$40 to be claimed in year 2.

The project will make a loss of \$60 in year 1. This loss will be carried forward with undepreciated assets, \$40, to make the ACC base \$100 in total. In year 2, the project utilises the depreciation deduction (\$40) and losses carried forward (\$60) as well as the allowance (\$6).

The investor will pay the government \$22 in tax in year 2 rather than \$75 under a Brown tax (a difference of \$53). The government thereby repays the investor \$53 for the temporary loan (\$50) and compensates the investor for the delay of its contribution under the ACC (\$3, which is equal to the \$6 allowance multiplied by $(1-t)$).

Table C1–5: Allowance for corporate capital — worked example

Description	Item	Year 1	Year 2
Revenue	(1)	0	150
less Expenses (such as depreciation)	(2)	60	40
less Unutilised losses from previous year	(3)	0	60
less Allowance (6% applied to prior year's ACC base)	(4)	0	6
Net ACC profit (item 1 less items 2, 3, 4)	(5)	–60	44
Taxable ACC profit (nil if item 5 is negative)	(6)	0	44
Tax @ 50%	(7)	0	22
Utilised losses (item 5 if negative)	(8)	60	0
Undepreciated assets	(9)	40	0
ACC base (items 8 + 9)	(10)	100	0

The investor will therefore make a total investment of \$100 in year 1 and receives \$128 in year 2 (\$150 from the project less \$22 in tax). This is equivalent to the cash flows and net present value shown in column 5 of Table C1–3 where the investor reinvested the tax refund into a government bond. This shows that the ACC tax is equivalent to a Brown tax in apportioning the value of the rent provided that the allowance rate is equal to the government bond rate if a full loss offset is guaranteed. Similar to a Garnaut and Clunies Ross resource rent tax, if the full loss offset were not guaranteed, the allowance rate should also compensate for the risk that the government will never repay the tax value of the investment.

C2. Land tax and conveyance stamp duty

Key points

Land has the potential to be an efficient tax base for the States capable of delivering significant and sustainable revenues. Land is an efficient tax base because it is immobile; unlike labour or capital, it cannot move to escape tax. This means that economic growth would be higher if governments raised more revenue from land and less revenue from other tax bases. However, this efficiency is harmed if there are significant exemptions from land tax that encourage people to change how they use land.

Stamp duties on the transfer of commercial and residential land and buildings are a significant, though volatile, source of State tax revenue. Stamp duties are poor taxes. As a tax on transferring land, they discourage land from changing hands to its most valuable use. Stamp duties are also an inequitable way of taxing land and improvements, as the tax falls on those who need to move.

Existing land taxes are narrow, which make them less efficient and fair than they could be. Levying higher taxes on larger holdings discourages investment in land by institutional investors in rental housing. Since owner-occupied housing is exempt, land tax on residential investment properties is probably passed through to renters as higher rents.

Stamp duties on conveyances are inconsistent with the needs of a modern tax system. Land tax needs to be reformed. Broadening the base of land tax would provide a reliable and stable source of revenue to State governments. Land tax rates should be based on the value of a given property, so that the tax does not discriminate between different owners or uses of land.

C2–1 Land is (potentially) an efficient tax base

Taxes change the prices that consumers or businesses face. But a price change is not the source of the efficiency cost of a tax. The efficiency cost depends on whether people change their behaviour in response to the change in price. For example, the measure of the inefficiency of a labour tax is not how much it raises the wage cost to firms, but how many workers are not employed as a result. That is, the cost to society is the value of the activity deterred by the tax.

Land value tax is efficient because the tax reduces the price of land but does not affect how it is used, or how much is used.

Unlike capital and some labour, all land is immobile. If returns to capital or labour are higher elsewhere, those factors of production will tend to move toward those returns, but land cannot do so. This means that, in response to changes in demand, it is only the price of land that is affected, not how much it is used. The more (less) people are willing to pay to use the land, the higher (lower) the value of the land.

When a land value tax is introduced, the existing owners of land bear the burden of the tax as a reduction in land values. Potential buyers of land will reduce how much they are willing to pay for land by the value of the expected land value tax payments. That is, the value of land reflects the future after-tax earnings on land — with a tax in place, people will buy land only when they can pay less for it. Potential buyers will expect to get at least the same risk-adjusted return from land as they could from alternative investments. That is, land value tax reduces the value of the land to equalise the after-tax return to land with the return to other investments. This means that land tax does not distort investment decisions.

Someone must use the land, though; because it is immobile, it cannot be shifted out of supply. This makes land an efficient tax base. While lowering the price of land, a broad land value tax does not change how land is used. Since land value tax is paid by the owners of land regardless of what they do with it, the use of the land is not affected by the tax. The landowner cannot reduce their tax liability by changing land use — an empty block pays the same tax as an identical developed block since both blocks accrue the same 'economic rent' over time (see Chart C2-1 and a technical exposition at the Annex C2 to this Section).

Nor does land value tax change how other productive resources are combined with land. If a landowner were to try and 'pass forward' the tax to users of the land, some users (particularly highly mobile international investors) would simply reduce their use of land, lowering the demand and price for the land. When broadly applied across all uses of land, the introduction of a land value tax should not affect whether land is used for agriculture, housing or manufacturing. Even if a business (such as a farm) uses a disproportionate amount of land to produce goods and services, it will not be affected since the price of land is commensurately lower.

Land value tax therefore differs from taxes on other productive resources: taxes on labour reduce people's work effort; and taxes on capital can cause the capital to be employed elsewhere (particularly overseas). In contrast, a broad land value tax is borne by landowners and the supply of land is unchanged. Land value tax falls on the owner's 'economic rent' (see Box C2-1).

The relative efficiency of land value tax is supported empirically. A recent OECD report found that a 1 per cent switch to land or property tax (but not to taxes on transactions) away from income tax would improve long-run GDP per capita by 2.5 percentage points (Johansson et al. 2009). This study did not assess taxes on the economic rent from natural resources, which are also potentially efficient tax bases (see Section C1 Charging for non-renewable resources).

Box C2-1: Land value tax as a tax on economic rent

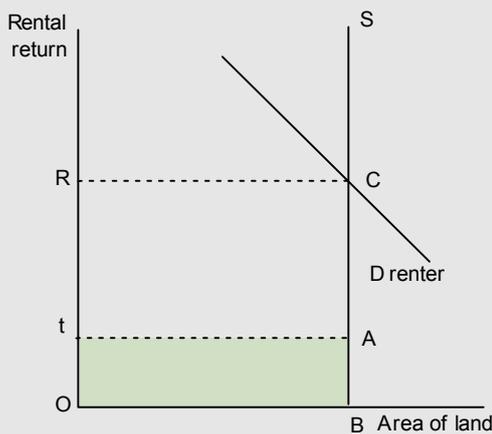
Because land is immobile, it is 'fixed in supply' (S in Chart C2-1).

The returns to the landowner tend to be made up of economic rent (area ORCB in Panel A). Changes in the price of land — that is, the annual rental return — do not change the supply of land. The demand for land (D) sets the rental return from the land (R) and the amount of economic rent accruing to the owner.

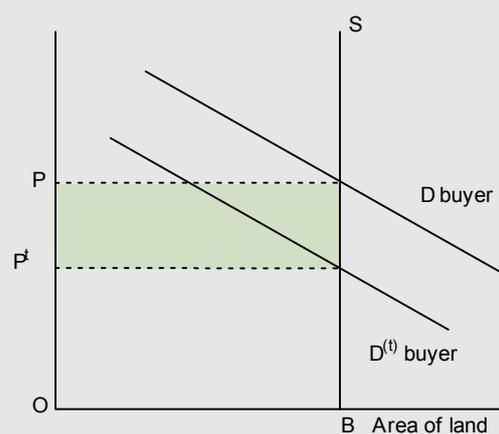
Economic rent is the return to the owner above that needed to keep the land in its current use. That is, it is the return once the owner has been compensated for the capital and labour they employ on the land. Economic rent therefore flows from the efforts of others, or simple luck. In particular, the economic rent of an owner's land increases as surrounding land increases in economic productivity (for example, from new roads built nearby), rather than the owner's investment in the productivity of their own land. Land rent is likely to increase in line with future population and economic growth, which increase demand for a fixed supply of land.

Chart C2-1: Effect of an annual land value tax

Panel A: Rents (cost of land) not affected



Panel B: Price of land falls



If an annual land value tax of t is introduced, based on the value of the land (which amounts to the same thing) then the total revenue is shown as $OtAB$ in Chart C2-1 Panel A. Since supply is fixed, the same amount of land, B , is still available at the same rent (R) — the users of land are unaffected. However, the owner now has a lower after-tax rental return of Rt .

As the capital value of the land is equal to the discounted present value of all the future expected rental returns, a lower rental return implies a one-off fall in the value of all land. Owners of land bear the incidence of the land value tax even if they sell their land in response to the tax.

Panel B shows the impact on the price of land for sale (rather than its rental return). Since the buyer knows they will be subject to land tax, their demand falls commensurately ($D^{(t)}$). As the supply of land is fixed, the present value impact of the tax is realised as a fall in price (from P to P^t). The effective rate of tax levied on owners is discussed in the Appendix.

C2–2 Some policy implications of a broad land value tax

A broad-based land value tax has a number of policy implications.

First, it is the owners of existing land that bear the burden of land value tax in the form of a one-off fall in land values when the tax is introduced. Subsequent landowners may remit land value tax, but they do not bear the expected value of the tax liability since the price of the land was lower by the estimated value of these payments when they bought it. This is relevant for how land tax reform interacts with other tax reforms and the design of transitional schemes.

Second, land value tax does not apply to the value of a property attributable to buildings and other forms of capital improvements. This means that the land valuation does not rise if a business owner builds a better factory, or a homeowner builds an additional family room. If, instead, these improvements were taxed, the tax would discourage investment and be less efficient (see Section B1 Company and other investment taxes). By not taxing improvements on land, land tax does not affect the owner's decision to invest in the productivity of their land. Instead, only the economic rent from the land is taxed. By levying a land tax, the community effectively shares in the benefit that would otherwise flow to the landowner.

Third, to be efficient land value tax must have few (if any) exemptions. The efficiency benefits of land value tax depend on the base being broad. Land value tax is efficient because land is fixed in supply. The only substitute for land is other land. However, exemptions from land tax provide some choice to owners of land on what to do with their land (and whether to pay land tax or not). If landowners can choose to use their land in an exempt activity and not pay land tax, the supply of *taxable* land is no longer fixed. This means that users of land subject to land tax will need to share some of the land tax liability if they want to use the land. For example, owners of investment properties subject to land tax need an inducement to continue letting their property, as they could otherwise sell it to someone who wants to live in it themselves and not pay land tax. This inducement comes by effectively sharing some of the burden of the tax with the tenant, who may be a business or private renter. When this occurs, the incidence of land tax does not fall only on the holders of land — it also falls on the users of the land. A narrow land tax may therefore be relatively inefficient, and arguably, inequitable.

Some exemptions from land tax may be motivated by equity concerns. In general, land tax is not a good tool for achieving vertical equity objectives. As land holdings are just one asset in a wealth portfolio, they are not a comprehensive mechanism for assessing means. Exemptions based on use are also unlikely to target equity well, as they will reduce tax for people regardless of their means. The income tax transfer system is a more effective and targeted means of achieving vertical equity between Australian residents than exemptions from land tax.

Land value taxes are relatively unusual as they are based on the underlying value of land, rather than the cash flow it generates. The value of land is dependent on the expectation of a flow of cash in the future. The method for assessing land values need to be robust to ensure land tax is efficient and fair. Much of the criticism of land tax centres around perceived arbitrary and inconsistent valuations. Land taxes can particularly appear to be inequitable where changes in land valuations appear out of step with price movements — for example,

where land tax liabilities are increasing even when market values are falling. Confidence in the system requires up-to-date, transparent and consistent assessments.

Taxes based on values can cause payment difficulties for landowners who have high value land holdings with limited cash flows. Owners may be able to use financial arrangements – such as loans or even reverse mortgage facilities – to meet land value tax liabilities. There is a role for governments to provide liquidity relief provisions that allow the deferral with interest of land value tax liabilities until the land is sold. Such arrangements currently exist for some local government rates.

As land is an immobile base, it is an appropriate source of revenue for States and local government. It is also a base where States can exercise some fiscal autonomy in setting rates.

Finally, land is likely to become an increasingly important base as the world continues to globalise. Land is a highly visible and immobile base and the tax is difficult to evade. Indeed, land tax is one of the only taxes that if levied on foreigners, is not shifted to domestic factors of production (as discussed in greater detail in Section B1 Company and other investment taxes).

Principles

Reflecting the principle that taxes for revenue-raising purposes should be on broad and immobile bases, increased use should be made of tax on unimproved land values.

Land value taxes should not include building values or be triggered by transactions as both of these can affect the use of land, which reduces the efficiency of the tax, and can be inequitable.

Land value tax rates and thresholds should generally not be varied to achieve vertical equity objectives, which are better targeted through the personal tax and transfer system.

C2–3 Current taxes on land

There are currently three taxes on land in Australia. The first is property conveyance duties (stamp duties) levied on the transfer of land and buildings. In 2007–08 they raised \$14.4 billion for State governments. A significant proportion of this revenue is raised on the transfer of building values, rather than of land. The second is local government rates levied on land (and also on building values by some councils). They raised \$10.2 billion in 2007–08. Finally, State government land tax (mostly levied on unimproved land values) raised around \$4.3 billion in 2007–08.

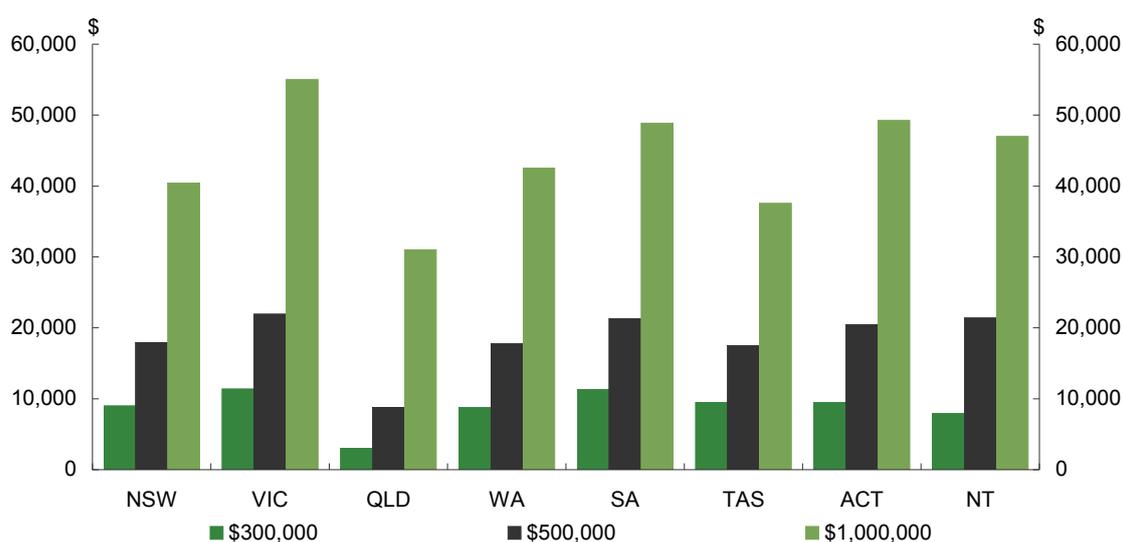
Stamp duty

Each of the States levies stamp duty on conveyances (the transfer of property), both residential and commercial. The duty is usually remitted to the State Revenue Office by the purchaser of the property, based on its reported sale price (or the market price, if that is deemed to be a fairer representation of the value). The value of the property includes the value of land and buildings.

The average rate of stamp duty across States has risen from 2.45 per cent in 1993 to 3.25 per cent in 2005, largely due to the non-indexation of the scales in the face of property value appreciation. However, rates are variable across States and different types of property. The highest rate of stamp duty is 7 per cent for residential properties valued above \$3 million in New South Wales.

Each State sets different rates and thresholds for stamp duty on conveyances, and within the one State, different rates and thresholds can apply to the purchase of different types of property. For example, the purchase of non-residential property may be treated differently to the purchase of residential property. The States adopt a progressive rate scale for stamp duty; as the value of the property increases, so does the average rate of stamp duty. Chart C2-2 shows for each State the stamp duty payable on residential properties valued at \$300,000, \$500,000 and \$1,000,000.

Chart C2-2: Stamp duty payable by State and property value



Note: Assumes residential property and that the purchaser is not eligible for a concessional rate of stamp duty.

There are programs in each of the States that provide discounted rates for first home buyers, often limited to less expensive homes. In NSW, for example, the First Home Plus Scheme provides eligible purchasers with an exemption from stamp duty on homes valued up to \$500,000 and concessions on duty for homes valued between \$500,000 and \$600,000. There are other programs that provide concessions and exemptions for particular groups, such as pension card holders.

Stamp duty is a simple tax

Stamp duty is a relatively simple tax to collect, since it is levied on the sale price, which is easily observable. Administrative simplicity was one of the main reasons why stamp duties were first introduced. The maintenance of a property right system by governments — for example, the maintenance of title deed offices — made it administratively simple to levy a tax on transactions, particularly since land values needed to be reported (see Box C2-2). However, now that broad-based taxes on income and consumption are available, the relative simplicity of stamp duty is not a strong justification for retaining the tax.

Box C2–2: A brief history of stamp duty

A stamp duty is any tax levied on a legal document, like a contract for sale of a business or land. In Australia, stamp duties were first levied by the colonial governments before federation. A physical stamp had to be attached to or impressed upon the document to denote that stamp duty had been paid before the document became legally effective. This included documents relating to many items including wages, unemployment insurance, beer, cheques, cattle and pigs. Most of these duties have now been removed. Those on the transfer of a business or real property, the registration of a motor vehicle and insurance contracts are the only significant duties remaining. While the use of adhesive stamps on documents has now been abolished, the related tax obligation has not.

Stamp duty stamp used in Queensland in the 1950s

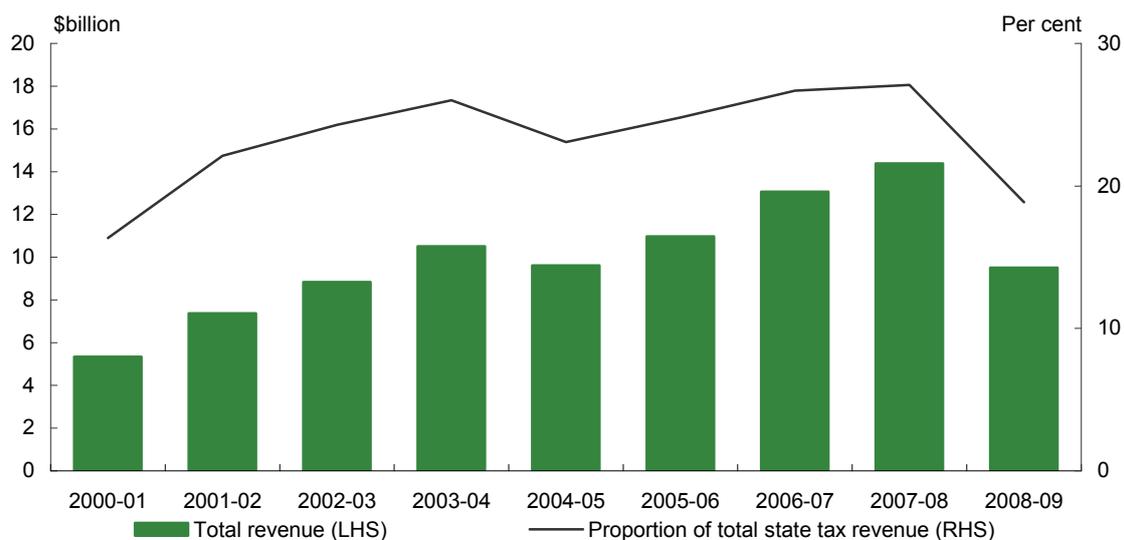


Source (image): Dave Elsmore, ozrevenues.com.

A large but volatile revenue source

In recent years, stamp duties on conveyances have been a significant source of revenue for the States. Indeed, in some States, stamp duty revenues have sometimes been the main source of revenue. As a proportion of gross domestic product, taxes on financial and capital transactions in Australia, which mainly comprise stamp duties, are twice the average of OECD countries.

Revenue from stamp duty is volatile. This is because the tax base is determined by two variables that can be subject to significant swings in short periods of time: the value of properties being transferred and the number of properties being transferred. For instance, around 52,000 established properties were turned over in Sydney in 2007, but only 42,000 in 2008, a fall of 19 per cent. The progressive nature of conveyance duty rates can add to this volatility. Chart C2–3 illustrates stamp duty volatility, both in terms of actual revenue and as a proportion of total State tax revenue, over the past decade.

Chart C2-3: Revenue from conveyance duty

While Chart C2-3 shows the aggregate for all States, recent experience suggests that the housing cycle can move at different times in different States, so the chart masks the volatility in revenue that can arise for individual States. For example, revenue from conveyance duty in Western Australia is expected to decrease from \$2.3 billion in 2007-08 to \$1.1 billion in 2008-09, a fall of over 50 per cent.

A tax on transferring property, not on land

Section C2-1 outlined how a tax on land value can be efficient because it is levied on an immobile base and is difficult to avoid. Stamp duties do not have these properties.

Stamp duty is triggered by the sale of a property. This creates the possibility for people to avoid stamp duties by choosing not to buy or sell property, which can result in people not living in the house they really want to live in or staying too long in a house that could be better used by somebody else. This probably results in a poor allocation of the housing stock. Though the efficiency impact of transactions taxes are difficult to estimate, one study suggests that stamp duties have efficiency costs more than ten times as great as those of a recurrent tax on the market value of houses (O'Sullivan et al. 1995).

Since stamp duty applies to the whole property value, to some extent it taxes the capital used to improve land. While land is immobile, the capital used to improve it is not. Discouraging capital owners from investing in property improvements — particularly improving and selling property — is particularly inefficient.

The most obvious way stamp duty biases decisions is that it discourages people from moving. The effect of stamp duty on the decision to move is determined by the size of the tax in comparison to the non-tax costs of moving, such as real estate agent fees, removal costs and search costs. Stamp duty can double these costs. Indicative estimates of the effective tax on the decision to sell one median sized home and buy another are depicted in Table C2-1 (based on a similar table in Hird 2007). Because stamp duty rates are progressive, the effective rate of tax is generally higher in cities with higher house prices.

Table C2–1: Stamp duty expressed as a tax on moving in capital cities

	Value of median home, June 2009 (\$)	Stamp duty payable (\$)	Other moving costs (\$)	Total cost of moving (\$)	Effective tax rate on moving (%)
Sydney	544,000	19,970	21,320	41,290	94
Melbourne	441,900	18,484	18,257	36,741	101
Brisbane	419,000	5,915	17,570	23,485	34
Perth	450,000	15,390	18,500	33,890	83
Adelaide	359,000	14,280	15,770	30,050	91
Hobart	336,000	10,990	15,080	26,070	73
Canberra	458,000	18,240	18,740	36,980	97
Darwin	537,100	26,586	21,113	47,699	126

Note: Other moving costs assume real estate agent fees of 3 per cent on the value of the home as well as a flat \$5,000 cost in all States. Stamp duty payable assumes that the buyer is not entitled to concessions such as first home buyer assistance. These estimates overstate the monetary non-tax costs of moving for those vendors who choose not to engage a selling agent or professional removalists.

Leigh (2009) finds that a 10 per cent increase in the level of stamp duty reduces the numbers of properties exchanged by 4–5 per cent if the increase is sustained over a three year period. This suggests that current rates of stamp duty prevent a substantial number of mutually beneficial housing exchanges. Reduced turnover of housing can have a significant impact on people's lives (see Box C2–3).

Box C2–3: The real-world effects of stamp duty

Making housing transactions more expensive means that people tend to move less (Van Ommeren & Van Leuvensteijn 2005; Van Ommeren 2008). This can have a range of efficiency and equity effects, including:

- People may commute more, creating greater road congestion (Larsen et al. 2008).
- People who want larger houses may choose to renovate, rather than move; or they may buy a larger house than they need in anticipation of eventually needing the space. This could lead to a housing stock that is larger than necessary, which may have environmental consequences.
- Making housing transactions more expensive may lead to higher unemployment, as people are less likely to move to get a job, and to lower productivity, as there is greater impediment to shifting to a better-paying job (Van Ommeren 2008).
- Some groups may have less access to the housing market since they need to save to pay the stamp duty.
- Stamp duties may discourage older Australians from moving to a smaller home and reduce the amount of equity withdrawn from a home if they do downsize (Wood et al. forthcoming).

Stamp duties are a particularly bad tax on business

Stamp duties tax transactions in property, but also the value-add from capital investment. Stamp duties are a particularly inefficient tax when levied on business. This is because businesses face incentives to minimise their transactions and investment in property. For example, a business has incentive to use existing buildings rather than moving to a lower cost region and buying a new property. As businesses are more likely to be mobile than consumers, stamp duties are likely to be particularly inefficient. Consumers are worse off in

two ways — goods and services are provided using less efficient processes, and higher tax rates apply to those goods and services that disproportionately depend on property for their production.

Stamp duties are particularly complex for many businesses. Most residential properties involve one transaction within a single State jurisdiction. Business transactions in property (involving land and non-land assets) can involve changes in the ownership of people indirectly related to a transaction (such as unit dealings in a unit trust). Such complexities involve dealing in high-value commercial property transactions. For example, there are many differences between State corporate reconstruction legislation and how to treat unit trusts that are complex and influence business investment.

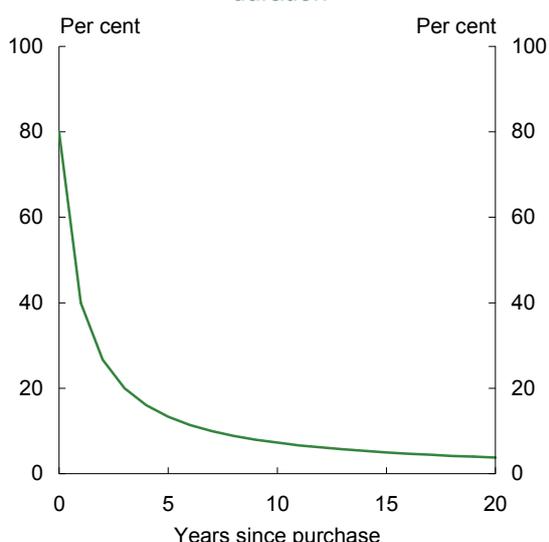
Stamp duty is inequitable

Given that higher valued properties are often purchased by people with higher incomes, it may appear equitable that the average rate of stamp duty increases as the value of the property increases. However, as property is just a part of a household's consumption and wealth, stamp duties are a poor mechanism for improving equity. The tax instead falls most heavily on people with a preference for housing consumption. For example, one person of considerable means might buy an expensive house and pay more tax, while another does not because they prefer an expensive motor vehicle.

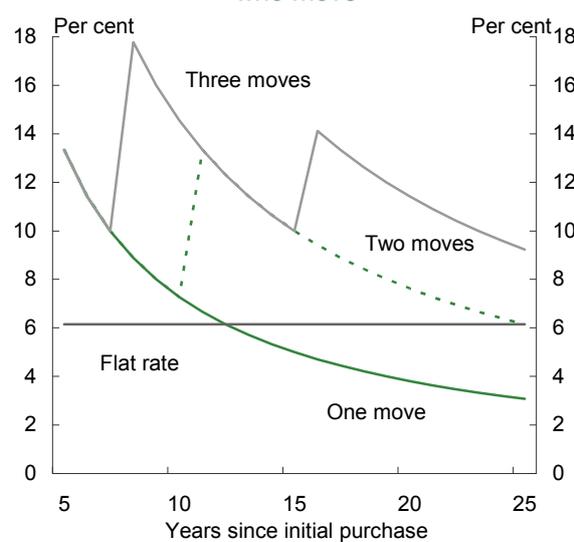
A further equity dimension to stamp duty is that it will always result in a differential tax burden depending on people's desire to move. Chart C2-4 illustrates how the effective rate of stamp duty on housing differs according to the length of time spent in a property and the frequency of moving. The stylised chart shows the effective tax rate of stamp duty as a proportion of the cumulative imputed rent (the value from living in the home) over time. The effective rate of tax declines over time as the up-front cost of stamp duty is spread over more years of occupancy. If a household sells their house and purchases another, the cycle starts over again — meaning that people have an incentive to stay in the same house.

Chart C2-4: Stamp duty effective tax rate^(a)

Panel A: Effective tax rate falls with occupancy duration



Panel B: Increased tax rate on people who move



(a) The effective tax rates are calculated as the ratio of stamp duty (assumed to be \$20,000) to the value of imputed rent over the period the property is owned (assumed to be \$25,000 per annum). In Panel B, the 'flat rate' reflects a constant tax on imputed rent, with the rate equal to the effective rate faced by a person making two moves in 25 years (which is not average but intended to be indicative).

Source: Treasury estimates.

While around half of owner-occupiers have occupied their house for nine years or less, 18 per cent of owners have brought within three years and 26 per cent stay in their home for at least 20 years. People who have to move more frequently because of their work or large changes in their life (for example, birth of children, divorce, or a new partner) will face higher rates of tax, regardless of their means.

Stamp duties also make it more difficult for credit constrained potential home buyers to access the market. For example, Wood et al. (2006) found that stamp duty accounted for around 23 per cent of up-front cash costs of renters who may be potential home buyers. Though stamp duty is an unnecessary impediment, its removal would not be likely to lead to a large increase in access to owner-occupied housing for renters of limited means.

Finding

Existing State stamp duties on property conveyancing are highly inefficient, distorting both residential and business use of property.

Stamp duty encourages people to stay in houses when they would prefer to move, contributing to longer commuting times, larger average home sizes and lower labour mobility.

Stamp duty is also inequitable as people who move more regularly – such as those needing to change homes for work – pay more tax than those who do not. Stamp duties also directly reduce access to housing for people who are credit-constrained.

Council rates

Council rates are broad-based, low-rate taxes levied on the value of land. They raised \$10.2 billion in 2007–08. Council rates are administered by local governments to fund certain services they provide, such as sanitation and planning administration (see Section G3 Local government for more details).

Land value is generally not directly observable from vacant land transactions. Valuation methodologies differ from council to council and can also differ from the method used to value land for State land tax (see Box C2–4). Some councils base the tax on the value of the land only, while others base the tax on total property value (land and buildings).

Box C2–4: Different approaches to levying ongoing land value taxes

Methods of valuing land for tax purposes vary from State to State. There are subtle differences in base definitions of value in each State, but the following broad categories are indicative.

Measures of the value of land itself

Unimproved value, unimproved capital value, land value and site value are currently the bases on which land-only taxes are determined. Each of these bases is the value of the land without ‘improvements’ (for example, buildings as well as, in some bases, draining, levelling or filling). Site and unimproved capital value are similar, as both include the value of merged improvements (such as draining) in their values, though do not include building values. All of these valuations are influenced by the effects of nearby infrastructure (such as access roads, schools and parks).

Measures of land and buildings

Capital value and capital improved value include the total market value of the land, including any buildings or other improvements.

Annual value, annual assessed value and gross rental value estimate the sum of all rental payments that are paid to the landlord in a year or would be if the property was rented. These measures give a similar tax result to capital improved value. However, they do not allow for the deduction of the costs a landlord would incur in maintaining the land.

Net annual value is also the rental value of the property but allows the deduction of landlord’s costs, including land taxes and maintenance costs.

Table C2–2: Current valuation methodologies for council rates and land tax

	NSW	VIC	QLD	WA	SA	TAS	NT	ACT
Council rates	LV	SV, NAV, CIV	UV	Rural: UV Non-rural: GRV	CV, SV, AV	LV, CV, AAV	UCV, AV, ICV	UV
Land tax	LV	SV	UV	UV	SV	LV	Not levied	UV

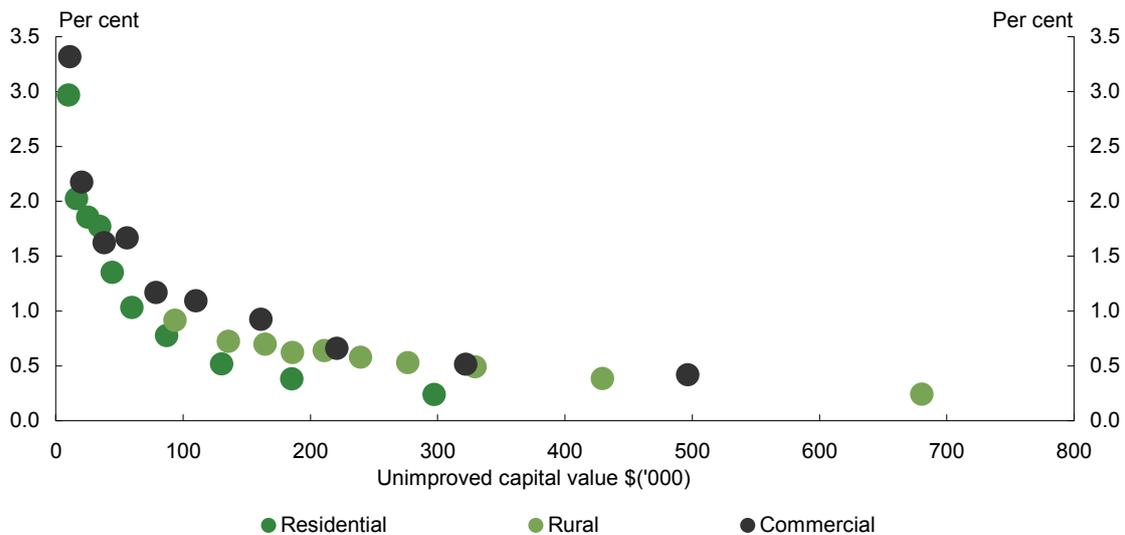
Notes: AV = Annual value, AAV = Assessed Annual Value, LV = Land Value, CV = Capital value, CIV = Capital Improved Value, GRV = Gross Rental Value, NAV = Net Annual Value, SV = Site Value, UCV = Unimproved Capital Value, UV = Unimproved Value, ICV = Improved Capital Value.

Sources: Productivity Commission (2008); Mangioni (2006); NSW Treasury (2009).

Overall, council rates are relatively efficient, simple and fair taxes. This is consistent with the indicative modelling of efficiency costs of taxes calculated for the Review (see Part 1.7). Rates are generally applied to all land uses with limited exemptions and apply equally to all properties within the council area.

However, the efficiency of council rates is likely to be reduced in councils that use improved values to assess the tax, as this discourages capital improvements. Further, councils often levy rates based on the zoning of land, with higher rates for commercial, compared to residential and rural property (see Chart C2–5). While these differential rates may be used as a proxy for imposing higher rates on higher value land, a direct method could achieve the same result without the risk of influencing the zoning process. Further, a segmented approach to land value taxation is more likely to result in the tax burden being passed to users rather than being borne by landholders. This reduces the efficiency of the tax.

Chart C2–5: Effective property rates
Rates by decile of property value (2004–05)



Source: Productivity Commission 2008.

The variation in valuation bases and methods from State to State and from council to council may be a source of complexity for landholders across different jurisdictions. For most payers, however, rates involve minimal compliance effort. The State governments' Valuer-General typically generates the valuation, the State Revenue Office (SRO) generates the assessment and, as long as the taxpayer pays the assessment, there is no risk of penalty. The low rates, lack of thresholds and limited range of concessions provide limited tax planning opportunities.

Local government rates are also a stable revenue source. This is especially when a moving average of recent valuations is used to determine the tax base, which minimise short-run fluctuations in land values. They are also a sustainable base as land values tend to climb steadily over the long run.

Land value taxes are a good base for local governments as there is a direct connection between the level of services delivered and the residents who benefit (see Section G2 State tax reform).

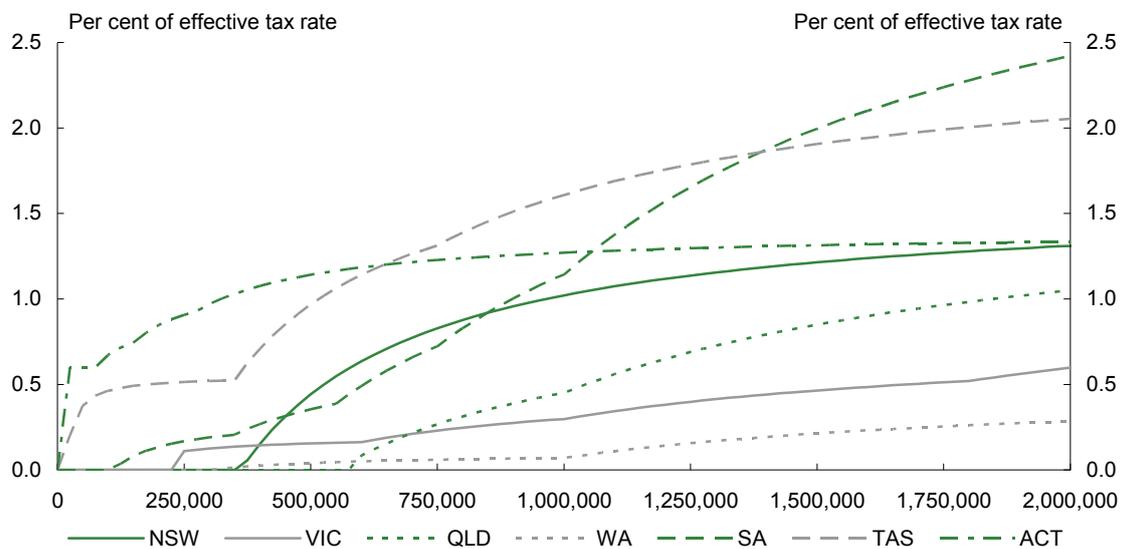
When comparing average tax rates across a State, council rates can appear regressive, as higher rates are generally levied in councils with lower property values (see Chart C2–5). This is likely to reflect the fact that many of the services provided by local governments cost the same regardless of the means of its recipients. In addition, these costs can be higher in rural or remote communities, which often have lower land values. As local government services benefit residents of particular areas, it is appropriate that their residents pay for them through rates. However, the provision of Financial Assistance Grants to all councils – even those with significant local revenue-raising capacity – may reduce the average tax rate in councils with high land values. This issue of Financial Assistance Grants is considered in greater detail in Section G3 Local government.

Land tax

Land tax is a general revenue tax levied by all States except the Northern Territory. Depending on the State, it is calculated on the 'unimproved' or 'site' value of land. Although the details, thresholds and tax rates vary between States, it generally applies only to a limited range of commercial land and investor-owned residential land. A range of land uses are exempt, including primary production, owner-occupied residential, child care and aged care. Land tax raised \$4.3 billion in 2007–08.

Land taxes are levied according to a progressive rate scale. In all States (other than the ACT), these rates are based on an entity's total land holdings. Many States also apply substantial minimum thresholds before any tax is levied. Chart C2-6 reflects the thresholds and average rates applied to land holdings in each State.

Chart C2-6: Thresholds and average rates of land tax



Note: Land tax in the ACT is determined on a value per property, not on aggregate holding.
Source: NSW Treasury (2009).

A narrow-based tax

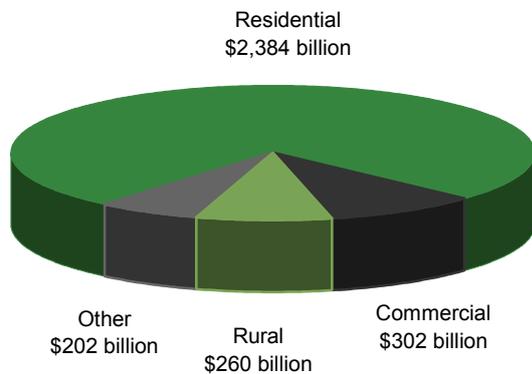
The thresholds applied to land tax and the wide ranging exemptions reduce the efficiency and equity of the tax.

The major exemption from land tax is owner-occupied housing. This exemption removes around 60 per cent of land by value from the tax base. Another significant exemption is land used for primary production. Despite the significant amount of land that this exemption covers, it represents only around 10 per cent of the total land value (see Chart C2-7 Panel A). Significantly, these exemptions have excluded from the tax base the land with the fastest recent growth in value (see Chart C2-7 Panel B).

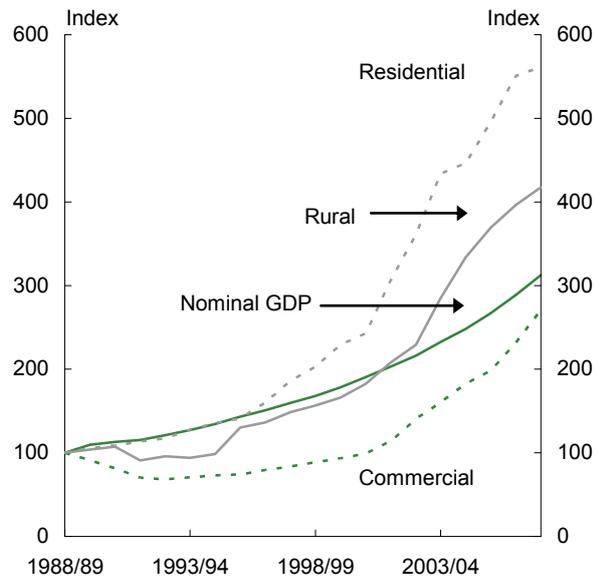
Also excluded from the base are leasehold land, State and Commonwealth-owned land and land owned and used by non-profit organisations and charitable institutions.

Chart C2–7: Land values and growth

Panel A: Land value by category (2007–08)



Panel B: Growth in aggregate land values



Source: ABS cat. no. 5204.

Substantial exemptions harm the efficiency of any tax by encouraging economic activity to move to the untaxed sector. In this regard, the large thresholds applied in some States have the effect of exempting small landholders from the tax. For land tax, the efficiency cost is also likely to be compounded by the burden of the tax shifting from landholders to land users.

The exemption is likely to have particular influence on land for residential property. The exemption of owner-occupiers rules out around 75 per cent of residential land and, for the remainder, high thresholds in some States effectively exempt many small-scale investors. As land can shift in and out of the tax base depending on who owns it, it is unlikely that the tax will be fully reflected in lower land prices for residential property. The portion of tax that is not reflected in lower land prices is borne by investors through lower returns, or by their renters through higher rent. This means the tax, to some extent, has been passed forward to workers and the owners of capital. Further, it is likely that, in the long run, much of the burden of the tax is shifted to renters, as rents adjust to ensure that investors achieve an adequate return. This may be inequitable, as renters generally have low income and wealth.

Significant exemptions also make land tax more complex to comply with and to administer.

Higher tax on aggregate holdings discourages large-scale investment in land

When the Australian colonies introduced land taxes in the late nineteenth century, higher tax rates on aggregate holdings were introduced to encourage large rural landholders to subdivide their land and sell it to settlers (Smith 2004). As rural land is no longer in the base, this rationale for higher rates on larger aggregate holdings is no longer applicable.

Today these rules lead to higher taxes on larger landholders. The most significant consequence of this approach is a bias against large investments in residential property. The land tax scales tax more heavily any corporation or individual that seeks to make a large investment in land, such as for residential housing. For the States that levy land tax on an aggregate basis, Table C2–3 depicts the different rate of tax per dwelling for a small and large investor in each State. The much larger share of rent that land tax represents places

large investors at a significant competitive disadvantage. This is likely contribute to the investment housing market being dominated by small investors.

Very few institutional investors invest in private rental housing. The aggregate holding approach deters these potential long-term investors from the market, as do a number of elements of the existing income tax system. Policies that discourage such investment are particularly perplexing given that such investors may be a better match for private tenants who desire long-term tenure.

Table C2–3: Effect of aggregation returns to rental property investment

	Sydney	Melbourne	Brisbane	Perth	Adelaide	Hobart	Average
Median home (\$'000)	544,000	441,900	419,000	450,000	359,000	336,000	424,983
Rent at 5% (\$'000)	27,200	22,095	20,950	22,500	17,950	16,800	21,249
Small investor							
Land tax per property (\$)	0	0	0	0	209	837	174
Proportion of rent	0%	0%	0%	0%	1%	5%	1%
Large investor							
Land tax per property (\$)	4,848	3,270	3,190	2,232	5,618	3,844	3,834
Proportion of rent	18%	15%	15%	10%	31%	23%	18%

Note: The small investor is assumed to hold one median priced dwelling, with 25 held by the large-scale investor. The land value is assumed to be half the value of the property. Median house price is for a 3 bedroom dwelling at June 2009. In Perth, the calculation of land tax includes the Metropolitan Regional Improvement Tax. In Brisbane, the investor is assumed to be a corporation.

Source: Real Estate Institute of Australia (2009); NSW Government (2009) and Treasury calculations.

Finding

Several features of current land taxes, in particular their narrow base, make them less efficient and fair than they could be.

By levying the tax at increasing rates on an entity's total holding, land tax discourages large-scale investment in land, particularly for rental housing.

Because owner-occupied housing is exempt, the burden of land tax on residential investment properties is probably borne by renters through higher rents.

C2–4 Directions for reform

Recommendation 51:

Ideally, there would be no role for any stamp duties, including conveyancing stamp duties, in a modern Australian tax system. Recognising the revenue needs of the States, the removal of stamp duty should be achieved through a switch to more efficient taxes, such as those levied on broad consumption or land bases. Increasing land tax at the same time as reducing stamp duty has the additional benefit of some offsetting impacts on asset prices.

Recommendation 52:

Given the efficiency benefits of a broad land tax, it should be levied on as broad a base as possible. In order to tax more valuable land at higher rates, consideration should be given to levying land tax using an increasing marginal rate schedule, with the lowest rate being zero, with thresholds determined by the per-square-metre value.

Recommendation 53:

In the long run, the land tax base should be broadened to eventually include all land. If this occurs, low-value land, such as most agricultural land, would not face a land tax liability where its value per-square-metre is below the lowest rate threshold.

Recommendation 54:

There are a number of incremental reforms that could potentially improve the operation of land tax, including:

- (a) ensuring that land tax applies per land holding, not on an entity's total holding, in order to promote investment in land development;
- (b) eliminating stamp duties on commercial and industrial properties in return for a broad land tax on those properties; and
- (c) investigating various transitional arrangements necessary to achieve a broader land tax.

Stamp duty

Ideally, there is no place for stamp duty in a modern Australian tax system. Stamp duties generate large efficiency costs, as they discourage turnover in property and tax improvements as well as land. The tax also imposes a higher burden on people who need to move, which is not equitable. The only positive feature of stamp duty — its relative simplicity — has long since ceased to justify its continued use in the face of the costs it imposes on Australian society (see Recommendation 51).

While removing stamp duty would lead to more equitable and efficient outcomes, it would create a substantial hole in State revenues. As discussed in greater detail in Section G2 State tax reform, this shortfall should be met through increased reliance on more efficient State taxes. The Australian government should consider facilitating a transition away from stamp duties, reflecting the national benefit of reforms to State taxes and the quality of the

Australian government tax bases. Another option is to reduce stamp duties incrementally, including capping the maximum rate, possibly as part of an intergovernmental agreement.

There is a case to link the reform of stamp duty to that of land tax to reduce the impact on prices and wealth caused by tax reform. Some of the reduction in stamp duty would lead to higher property prices,¹⁰ whereas increases in land tax would lead to lower land prices. The overall impact on property prices and investment is uncertain and depends on a range of policies affecting land use, but there is likely to be two effects of note. First, (depending in part on future policies affecting land use) property prices might increase because a more efficient tax system increases economic growth, some of which is captured in land rent — what was a 'deadweight' loss from stamp duty is captured in higher economic returns to the land owner. Second, land is a complement to property investment, so moving to a zero tax rate on capital investment (as stamp duty rates reduce) would increase the demand for land. International empirical evidence on the impact on building activity from switching an improved property tax for land tax is inconclusive (Oates & Schwab 1997) or mildly positive (Plassman & Tideman 2000).¹¹

Land tax

The future Australian tax system should increasingly rely on land values as a tax base.

Along with natural resources (see Section C1 Charging for non-renewable resources), land tax is the only major tax that can be levied directly on economic rent. Shifting taxes away from mobile bases toward an immobile base, increases efficiency and potentially leads to higher long-term economic growth. Further, as land values tend to be correlated with growth in the economy and population, land tax is well-suited to future demographic pressures.

Current land taxes should be reformed to make them more efficient and equitable.

Reform the assessment mechanism

Land tax should no longer be based on aggregate land holdings. As well as discouraging large-scale investment in the rental property market, this approach does not appropriately target the economic rent from land.

The simplest approach would be to levy the tax at a flat rate on the unimproved land value, irrespective of total value. This would avoid arbitrary distinctions between tax burdens based on land parcel size or the landholder's characteristics. A flat rate would also avoid the problem of 'bracket creep', which, because of existing thresholds, has raised the real effective tax rate over time. However, a flat rate would reduce the top marginal tax on many properties relative to the current land tax. Some of these are likely to be land of high value, leading to windfall gains to some landowners. One approach would be to adopt a slow transition to the new rate structure, such as only slowly reducing existing land tax rates.

Alternatively, increasing marginal rates of tax could be applied to the economic rent in land. That is, stepped rates could be based on the value of the property per square metre, starting with a zero rate on low-value land. Higher valued land with more significant economic rents

¹⁰ Leigh (2009) suggests that the incidence of the tax falls on sellers.

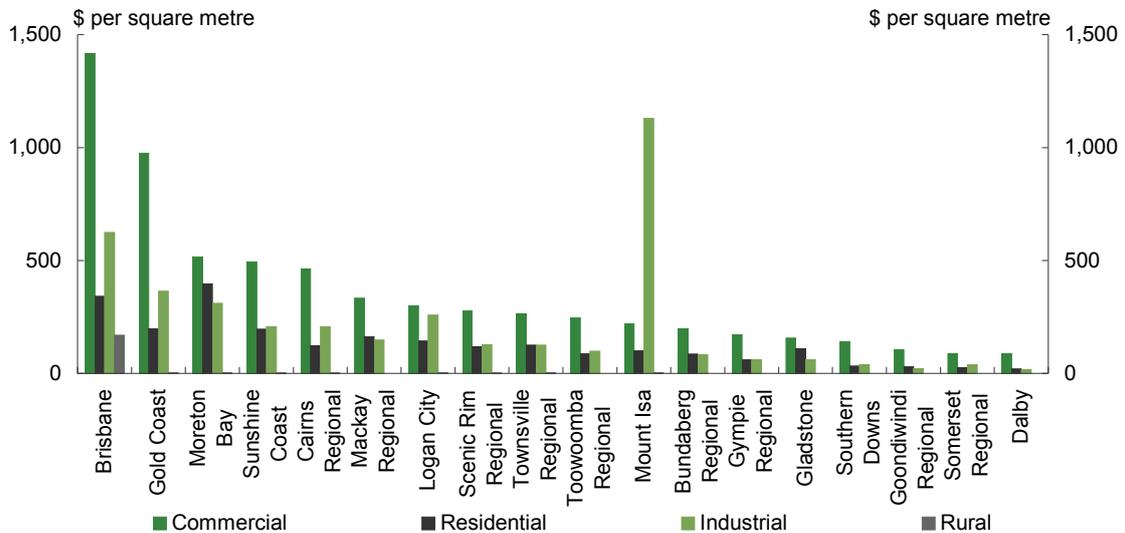
¹¹ For a survey of empirical studies see Anderson (2009).

would pay a higher rate of tax (see Recommendation 52). Higher rates of tax on economic rents do not distort economic decision-making, as higher rates on labour or capital would. Targeting higher rates in this way would allow higher rates to be levied in areas of high demand for land.

An increasing marginal rate of tax may be justified the more certainty there is that the land valuation accurately reflects economic rent, rather than returns to other factors such as capital. This is particularly important should site (rather than unimproved) value be used to administer land tax. While easier to administer, site value has some merged capital costs (such as land clearing) included in the base (see Box C2-4). This approach is justifiable in areas, such as major urban centres where merged capital represents only a small portion of their value, but may be more problematic in low-value areas.

This approach would levy a higher rate on areas with greater economic rent, which would be more accurate than by using zoning as a proxy for economic rent. As reflected in Chart C2-8, while commercial land tends to have a higher value than the residential land in the same area, this does not hold across a whole State. Commercial land in country areas is often of lower value than residential land in capital cities. Basing the tax on land value per-square-metre would also ensure more timely changes in tax in response to changes in value of the land than if the assessment were based on changes in zoning, which can occur after the land has increased in value.

Chart C2-8: Land values by zoning in selected local government areas in Queensland



Source: Queensland Department of Environment and Resource Management (unpublished).

Broaden the base

Land used for owner-occupied housing should not be exempt from the tax base. The current exemption is inequitable, as it is likely that it contributes to renters bearing some or all of the tax. Excluding owner-occupied land also reduces efficiency of the tax, by distorting land use.

Broadening the tax base to include land used for owner-occupied housing would add significant revenue raising capacity to the tax base. This would improve the overall efficiency of the tax system, by reducing the reliance on alternative, less efficient taxes (see Recommendation 53).

Land used for primary production

Uniform application of the marginal rate scale on a per-square-metre basis with a low minimum threshold is likely to result in no tax paid by most land likely to be used for primary production. However, as it is based on value, this would significantly reduce the administration and compliance burden of land tax compared to the current use-based exemption. Further, a land tax would be inefficient if it affected land use. The scope for any inaccuracy in land valuation to affect land use is likely to be greater for lower-value land or for where it is difficult to separate the value from improvements to land from its inherent value. Targeting land use toward higher-value land above a minimum per-square-metre reduces the potential for the tax to affect land use.

However, primary production land on the fringes of urban areas (such as market gardens) may find its value increasing as demand for residential or industrial development increases. The value of primary production land in this situation could increase to the point where it becomes taxable even before it is zoned for more intensive development. This outcome reflects the increase in economic rent to the owner.

By basing the eligibility for tax based on value, rather than use, primary production land would not become taxable merely because it is converted to a different use, such as from primary production to biodiversity conservation.

Income-poor, asset-rich owner-occupiers

Some taxpayers may have difficulty in finding the cash to pay their land tax every year. For example, many low-income earners may live in valuable properties but not have cash readily available to pay their land tax liability.

For low-income earners who lack the cash flow to pay land tax every year the land tax could be deferred. The amount could accrue as a debt attaching to the property, with an appropriate caveat registered at the Land Title Office and a non-concessional rate of interest applied (in line with the standard variable mortgage rate). Asset-rich, income-poor persons could then allow the debt to accumulate until they move. The debt would be acquitted at the next transfer. Deferral arrangements already apply for local government rates in South Australia. To protect people in areas of declining value, the value of any debt should be non-recourse — that is, capped at the land value realised upon sale.

Land used for commercial and industrial use

A large share of land tax is currently raised from land subject to commercial and industrial use. However, large thresholds may mean that the full incidence of land tax is not borne in lower property values and fall instead on those who use land for business. Taxes on business inputs are a particularly high-cost source of tax revenue. In combination with stamp duty, levying increasing rates on a base with large thresholds means that the taxes borne by businesses are likely to be variable and, in some case, high. This affects efficient land use, as well as increasing the complexity and uncertainty for business.

A potential reform priority could be to remove the thresholds for land used for commercial and industrial purposes in return for rationalising the rate scale and for abolishing stamp duty on those properties (see Recommendation 54).

Valuation methodology

A redesigned land tax system could be simply administered by aligning local government rates with the land tax. Ideally, landowners should receive just one bill per year covering both and have a single point of contact for enquires, debt management and compliance. More significant simplification could be achieved if all local government rates had the same base as State land tax. This would reduce administration and compliance costs for individuals and businesses that pay rates across different councils in the same State and lower the cost of valuation, which is a significant part of the cost of collecting land tax and rates.

To be efficient, land tax valuations need to reflect the ‘highest and best’ use of the land – that is, its current market value – rather than its value in actual use (Oates & Schwab 2009). So long as the tax liability reflects its best use, then the tax does not affect the decisions of the owner. If some types of land (such as agriculture) are exempt or in other ways preferred by valuation methods or land tax, then use-value assessment can delay development (England & Mohr 2003).

In major urban centres the administration of unimproved valuations has become increasingly difficult, with most States instead using site valuations. Very little unimproved land actually remains. There is declining knowledge of what land was like in its original state, and the historical information regarding fill and other improvements is increasingly difficult to determine. Consequently unimproved values continue to be regularly challenged by landowners in the courts with escalating costs for both land owners and the State (Hefferan & Boyd 2008).

To instil confidence in a system where greater revenue is raised from taxes on land values, greater investment in valuation and information collection methodologies would be warranted. This should include moving to a standard land or site value basis, using transparent and nationally consistent valuation methodologies and the updating of valuations on a consistently frequent basis to maintain alignment with movements in values.

Ensuring a smooth transition

This Review is not the first to consider a shift in the tax mix from inefficient transaction taxes towards a broader land tax base (for example IPART 2008, Productivity Commission 2004, Harvey 2001). While this would deliver substantial long-term benefits to the Australian community, the transition is clearly challenging. Transitional arrangements are important to build community acceptance and to minimise potential disruption (see Recommendation 54).

Successful transitional arrangements are likely to have a number of key design features.

First, any special transitional arrangements to a broader land tax regime should be limited to existing owners. Land tax is borne by existing owners of land when the tax is introduced. Future owners who are required to remit land tax are effectively ‘compensated’ by paying a lower price for the land. Future owners who remit tax payments only bear land tax on any unexpected capital growth in their land. Since this is associated with an unexpected windfall, there is no case for compensating future owners.

Second, the clearest need for a transition mechanism is for owner-occupied land. Existing owner-occupied landholders are likely to have bought their homes with the expectation that

they would continue to be exempt from land tax. Additionally, a shift to land tax might generate perceptions of unfairness for people who purchased their property recently and paid stamp duty. Compared to longstanding holders of land, recent buyers would not have benefited from the land tax exemption and would face higher effective tax rates on their property over the time of ownership (see Chart C2-4). Therefore, for new land tax payers, transitional mechanisms may have to take into account the time at which properties were purchased. These concerns are ameliorated somewhat by the fact that reducing or abolishing stamp duty is likely to improve the property values of all owners.

Third, transitional mechanisms need to be designed to minimise harmful unintended consequences. If transitional arrangements exempted existing landholders from a tax until they sell, they would create lock-in effects that discourage sales. These should be minimised, recognising that lock-in caused by stamp duty is an important reason for removal of that tax. Further, during the time between announcement and introduction of a significant reform to taxation, there is the potential for significant market disruption. For example, if it were announced that land tax would replace stamp duty from a specific date in the future, people might defer the purchase of property pending the abolition of stamp duty.

Fourth, transitional arrangements that reduce tax burdens to facilitate reform also reduce revenue collections. These lower revenues mean that higher rates of tax must be applied to other tax bases or spending reduced. Some of the revenue cost could potentially be met by reductions in spending that may be less effective at improving housing affordability than tax reform. The overall revenue cost should be balanced, particularly where transitional arrangements over long time periods are concerned.

Transitional mechanisms are most likely to be effective when they reflect agreement between the Australian government and all the State governments. This recognises that the Australian government has access to larger and more efficient tax bases with which to finance revenue shortfalls, and that the reform would deliver significant benefits across the country.

In deciding on an acceptable transition mechanism it would be necessary to strike a balance between revenue cost, complexity of design and the extent of shift in policy. The balance of these different considerations is best made by government at the time any reform is undertaken. Several potential transition approaches are flagged in Box C2-5.

Box C2–5: Potential transition mechanisms for land used for owner-occupied housing

A simple option for facilitating the introduction of land tax on owner-occupied housing would be to levy the tax only on land that had been acquired after a given date, while continuing the exemption for all land held before that time. However, this complete grandfathering approach retains the lock-in effect of stamp duty for existing owners — they would begin to pay land tax only if they move — and would also come at a significant revenue cost.

A more flexible way of managing the transition would be to give purchasers of owner-occupied housing a choice between paying stamp duty or paying land tax, while grandfathering existing landholders. Once a property became liable for land tax it would remain liable. Purchasers who intended to move again soon would probably choose to pay land tax while purchasers who intended to live in the house for many years would probably choose to pay stamp duty. This option would have advantages and disadvantages. It would give purchasers more options. Since home buyers could avoid paying stamp duty up-front, access to housing would be immediately improved. Existing concessions and exemptions from stamp duty could be retained. Where people opt to pay stamp duty, this would reduce the revenue shortfall from the transition to land tax. On the downside, the transition could be very protracted unless some end date were specified.

An alternative approach may involve providing a credit to be used against any future land tax liability. A credit could be based on previous stamp duty paid or on the land tax expected to be paid over a set period of ownership. A full credit could be provided to people who buy between the announcement and introduction of the tax, to prevent people deferring purchases to avoid the tax. The credit would offset their annual land tax liability until it was exhausted. A partial credit — possibly on a sliding scale based on years held — could be provided to people who had paid stamp duty in a specified period before the announcement. A sliding scale would reflect revenue considerations and the fact that the effective tax rate from stamp duty declines with length of holding period. Alternatively, a flat credit irrespective of the length of time owned or amount of previously paid stamp duty could be provided to all existing holders of land for owner-occupied housing. This approach would be simpler to administer and allow longer deferral of land tax liabilities for holders of lower value land. Compared to permanent grandfathering of existing landholders, the use of a credit scheme would bring owner-occupied housing into the tax base sooner and lead to smaller revenue shortfalls.

Finally, a phase-in arrangement could be adopted. For example, the level of stamp duty could annually step down by one-tenth of its current level and the level of land tax could step up by one-tenth of its ultimate level. Under this arrangement, for example, a house sold in the third year would pay 70 per cent of the full stamp duty on the transaction and 30 per cent of the assessed land tax each year for a specified period. This would result in some stamp duty collections occurring in the phase-in period, reducing the fiscal cost compared to complete grandfathering. Limiting the period over which discounted land tax applies, perhaps to 10 years, reflects the fact that the discount will have lock-in effects eventually. After this period, the percentage paid in land tax could gradually phase up to the full rate. Similarly, people who never transact could remain fully exempt for a period, say 15 years, with the tax then gradually phased in, in line with the time periods applied to others. This would provide a measured phase-in over a predictable period and would avoid sudden jumps in liability.

Annex C2: Relationship between the rate of tax on land and a tax on economic rent

The economics of land tax can be analysed using a relatively simple model (adapted from Oates and Schwab 2009).

Assume that the value of land (L) depends on the rental income (r) and an interest rate (ρ) over n years, so that:

$$(1) \quad L = \frac{r}{(1+\rho)} + \frac{r}{(1+\rho)^2} + \frac{r}{(1+\rho)^3} + \dots + \frac{r}{(1+\rho)^n}$$

$$(2) \quad = \sum_{s=1}^n \frac{r}{(1+\rho)^s}$$

Since land does not depreciate with time, it is reasonable to assume that the value depends on the cash flows into infinity so that:

$$(3) \quad L = \frac{r}{\rho}$$

This means that when market interest rates are at 5 per cent, land that returns a rental income of \$30,000 will sell at \$600,000 in the market. Now assume that a tax on land value (t_L) is introduced and because it is broad (and land is in fixed supply), there is no way for the landowner to pass it onto the tenant. The annual rental income to the owner (r) is reduced by $(r - t_L L)$. Substituting this into (3) we find:

$$(4) \quad L = \frac{r}{\rho + t_L}$$

The market value of land has been reduced. For example, a land tax rate of 1 per cent would see the value of land fall to \$500,000; that is, equivalent to the present discounted value of the tax liability of \$100,000. Any new buyer of the land will receive a rental income of \$30,000, out of which a tax of \$5,000 would be due. But because they only paid \$500,000, they still earn an post-tax return equivalent to the market return of 5 per cent (that is \$25,000). The purchaser is effectively compensated for the tax payments by the fall in the price of land.

This model allows the rate of a land value tax (t_L) to be compared against an equivalent tax directly on economic rent (t_r). If the two revenues are equal, then $r t_r = L t_L$ and equation (4) implies:

$$(5) \quad t_r = \frac{t_L}{t_L + \rho}$$

So at a 5 per cent interest rate, a 1 per cent land tax is equivalent to a 17 per cent tax on economic rent.