

Land Tax Model Methodology Review

Department of Treasury and Finance

September 2019

Disclaimer

This report is not intended to be used by anyone other than the South Australian Department of Treasury and Finance (DTF).

PricewaterhouseCoopers Consulting (Australia) Pty Ltd prepared this report solely for DTF's use and benefit in accordance with and for the purpose set out in our contracts with DTF dated 24 July 2019 and 28 August 2019. In doing so, we acted exclusively for DTF and considered no-one else's interests.

We accept no responsibility, duty or liability:

- to anyone other than DTF in connection with this report
- to DTF for the consequences of using or relying on it for a purpose other than that referred to above.

We make no representation concerning the appropriateness of this report for anyone other than DTF. If anyone other than DTF chooses to use or rely on it they do so at their own risk.

This disclaimer applies:

- to the maximum extent permitted by law and, without limitation, to liability arising in negligence or under statute; and
- even if we consent to anyone other than DTF receiving or using this report.

Liability limited by a scheme approved under Professional Standards legislation.

Table of Contents

Executive Summary	4
Purpose and scope	10
Review approach	12
Context	14
Policy position	16
Model methodology overview	19
Methodology review findings	22
Appendix	27

Executive Summary

Background and context

As part of the 2019-20 South Australian State Budget the Marshall Liberal Government announced the introduction of a new 'aggregation model' for land tax purposes from 1 July 2020.¹ The Department of Treasury and Finance (DTF) has developed a land tax model (the Model) which estimates the additional revenue collected as a result of these policy changes in 2020-21. This estimate is comprised of the following policy changes:

- **Trusts** - liable trust ownerships will be subject to a surcharge calculated on the taxable value of the ownership if a specific beneficiary is not identified.
- **Companies** - related companies will be aggregated and land tax calculated on the aggregated taxable land value for the company group.
- **Individuals** - individuals' interests in joint ownerships will be aggregated with their individual ownerships and land tax calculated on total interests in land.

In addition to this, the South Australian Government announced an increase to the tax-free threshold from the current \$391,000 in 2019-20 to \$450,000, as well as a reduction in the top marginal tax rate from 3.7% to 3.6% in 2020-21 with further reductions to 2.9% by 2027-28.²

DTF has developed estimates for two scenarios:

- **Scenario 1 (3.6% top marginal rate)** - develops an estimate of the impacts of aggregation of companies and individuals, and the trust surcharge post adjustments for the currently proposed 2020-21 land tax rate and threshold i.e. a reduction in the top marginal land tax rate from 3.7% to 3.6% and an increase to the tax-free threshold from \$391,000 in 2019-20 to \$450,000.
- **Scenario 2 (2.4% top marginal rate)** - develops an estimate based on a further land tax rate reduction from 2020-21, resulting in a 2.4% top marginal rate plus the impacts of aggregation of companies and individuals, and the trust surcharge.

The purpose of this report is to provide an independent review of the methodology applied in the Model. The scope of this report is limited to reviewing the Model's methodology, assumptions and data sets used by DTF, in order to:

- identify any risks in the methodology
- recommend any alternative modelling approaches that could be considered using the existing data sets or new approaches that could be considered using other data sets.

¹ https://statebudget.sa.gov.au/budget-docs/2019-20_budget_measures_statement.pdf

² Ibid.

For the purposes of this report, the following items are out of scope and have not been considered in our analysis:

- any assumptions on land value growth and revaluations
- the integrity of the Model i.e. whether the calculations are consistent with the identified methodology and arithmetically correct (instead this review focuses on the Model's methodology)
- the process by which data sets have been prepared as inputs into the Model - in particular DTF has undertaken an extensive data matching exercise using multiple data sets in order to identify and aggregate ownerships; these have formed inputs into the Model and we have not reviewed DTF's matching process or its integrity in order to determine the accuracy of its results
- revenue estimates beyond 2020-21.

Policy position reflected in the Model

The policy position(s) detailed below have been provided by DTF as the basis for the 2020-21 revenue estimate calculated in the Model.

Land tax rates and thresholds

Land tax rates and thresholds for Scenario 1 (3.6% top marginal rate) and Scenario 2 (2.4% top marginal rate) in 2020-21 have been modelled as per Table 1.

*Table 1: Land tax rates and thresholds (estimated for 2020-21)**

Scenario 1 (3.6% top marginal rate)		Scenario 2 (2.4% top marginal rate)	
Total taxable value	Amount of tax	Total taxable value	Amount of tax
\$0 - \$450,000	\$0.0 + 0.00%	\$0 - \$450,000	\$0.0 + 0.00%
\$450,001 - \$755,000	\$0.0 + 0.50%	\$450,001 - \$755,000	\$0.0 + 0.50%
\$755,001 - \$1,098,000	\$1525.0 + 1.65%	\$755,001 - \$1,098,000	\$1525.0 + 1.65%
\$1,098,001 - \$1,372,000	\$7184.5 + 2.40%	\$1,098,001 and over	\$7184.5 + 2.40%
\$1,372,001 - \$5,000,000	\$13,760.5 + 2.90%		
\$5,000,001 and over	\$118,972.5 + 3.60%		

* Estimated thresholds only. Thresholds are indexed annually in line with growth in site values liable for land tax as determined by the Valuer-General.

Source: DTF.

Aggregation policy

Joint ownerships are to be aggregated such that both joint ownerships and aggregated interests of individuals / companies in all land holdings are assessed separately and taxed. To avoid double

taxation a deduction will be made on an individual's / company's liability equivalent to their share of the land tax assessed on any jointly owned land.

The company grouping policy is proposed to be consistent with the approach adopted in New South Wales and Victoria which consider situations where one company controls another company, multiple companies are controlled by the same person(s), or where one company and its shareholders control another company.

Trust surcharge

A surcharge on trust ownerships of 0.5% will apply for land with a value greater than \$25,000. This surcharge is calculated on the full value of the land capped at the top marginal tax threshold (as shown in Table 2). The trust surcharge will apply to all trusts unless they are specifically excluded by legislation or where the trustee chooses to nominate a specific beneficiary for land tax purposes.

*Table 2: Land tax rates and thresholds with trust surcharge (estimated for 2020-21)**

Scenario 1 (3.6% top marginal rate)		Scenario 2 (2.4% top marginal rate)	
Total taxable value	Amount of tax	Total taxable value	Amount of tax
\$0 - \$25,000	\$0.0 + 0.00%	\$0 - \$25,000	\$0.0 + 0.00%
\$25,000 - \$450,000	\$125.0 + 0.50%	\$25,000 - \$450,000	\$125.0 + 0.50%
\$450,001 - \$755,000	\$2250.0 + 1.00%	\$450,001 - \$755,000	\$2250.0 + 1.00%
\$755,001 - \$1,098,000	\$5300.0 + 2.15%	\$755,001 - \$1,098,000	\$5300.0 + 2.15%
\$1,098,001 - \$1,372,000	\$12,674.5 + 2.40%	\$1,098,001 and over	\$12,674.5 + 2.40%
\$1,372,001 - \$5,000,000	\$20,620.5 + 3.40%		
\$5,000,001 and over	\$143,972.5 + 3.60%		

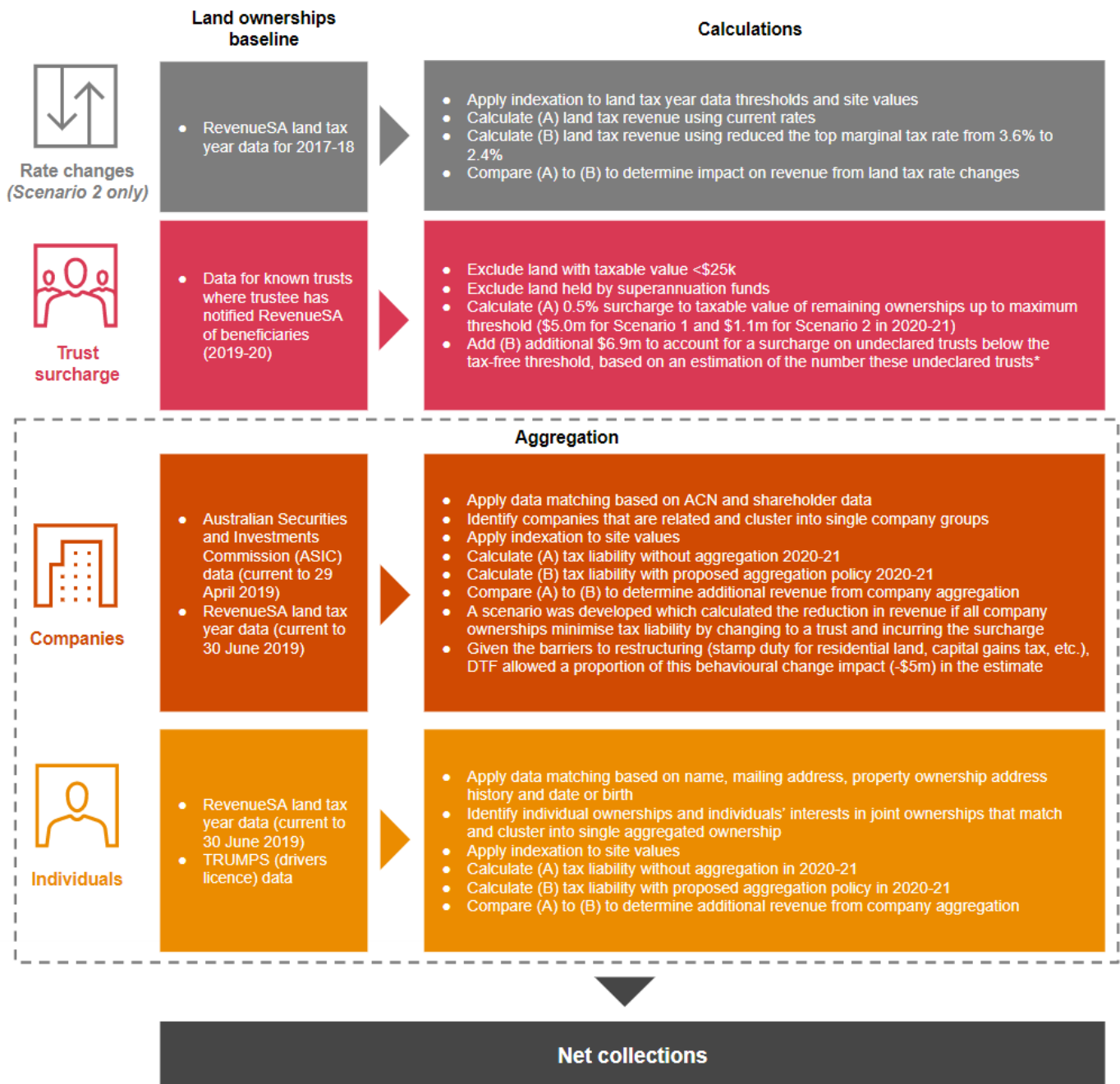
* Estimated thresholds only. Thresholds are indexed annually in line with growth in site values liable for land tax as determined by the Valuer-General.

Source: DTF.

Model methodology overview

The methodology developed to calculate the land tax revenue estimate in the Model is summarised in Figure 1. For Scenario 1 (3.6% top marginal rate), DTF estimated the impacts of aggregation and the trust surcharge in 2020-21 by determining the increase in revenue collected separately for companies, individuals and trusts. For Scenario 2 (2.4% top marginal rate), DTF first calculated the impacts of changes to land tax rates in 2020-21 on the existing land tax base, and then calculated impacts of aggregation and the trust surcharge using these revised marginal rates.

Figure 1: Illustrative breakdown of Model components

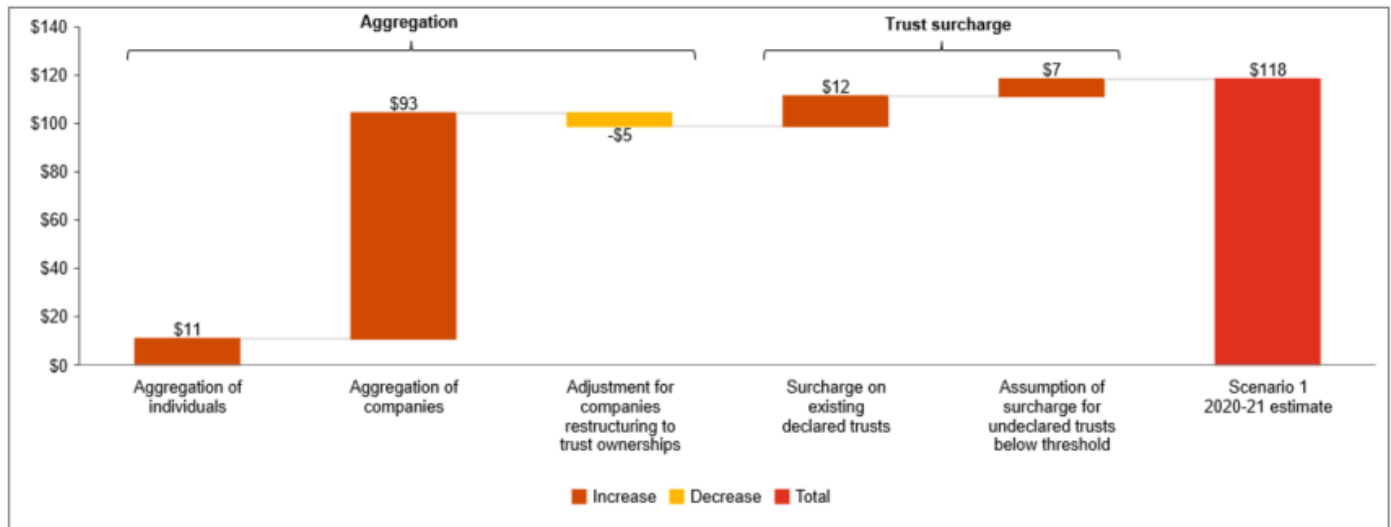


* See further detail in the Appendix.

Notes: DTF has advised that for its aggregation calculations, 2018-19 land tax data has been used for consistency with the data sources used for matching (TRUMPS and ASIC data). To calculate the impacts of rate changes on the existing land tax base, DTF advised that it used the most recent complete actual year land tax data and indexed the result by growth in the land tax base; 2017-18 is the latest complete year of data DTF has in its model, noting that land tax results for 2018-19 are in the process of being finalised. DTF noted it has historically found that when modelling rate changes a more accurate result is achieved by using the finalised land tax base rather than using a snapshot of the base within a year and making adjustments for potential movements throughout the year.

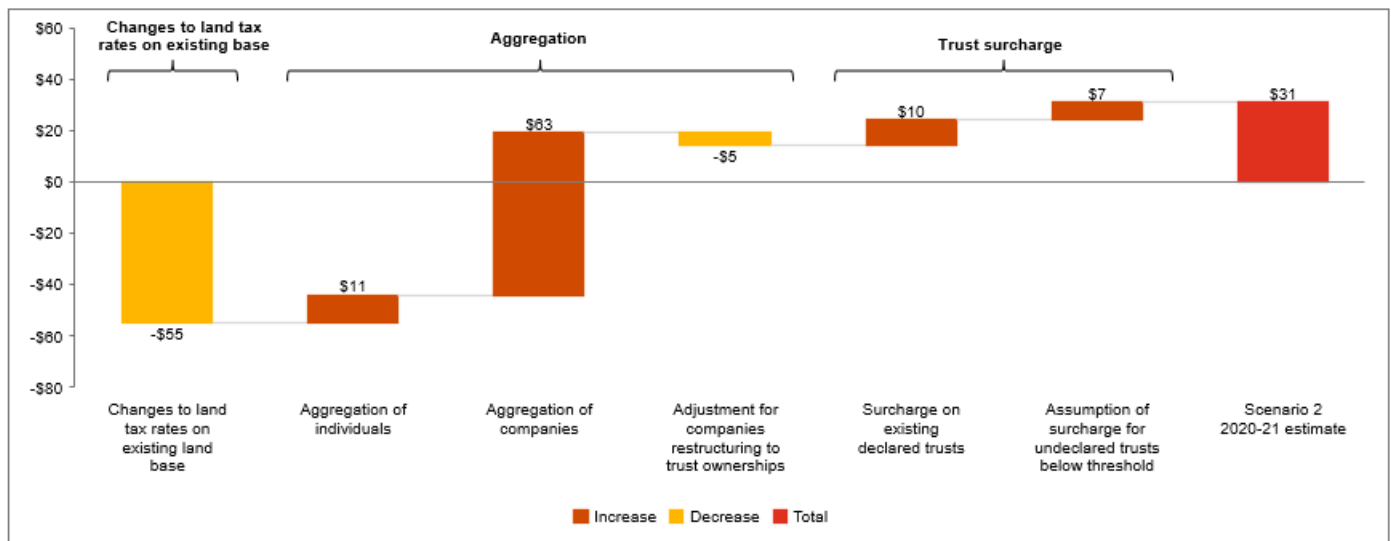
Based on this approach, the total net impact of the policy reforms in 2020-21 is estimated to be \$118 million for Scenario 1 (3.6% top marginal rate) and \$31 million for Scenario 2 (2.4% top marginal rate). Figures 2 and 3 illustrate the individual components which make up these results.

Figure 2: Breakdown of Scenario 1 (3.6% top marginal rate) estimate for 2020-21 (\$'millions)



Source: DTF.

Figure 3: Breakdown of Scenario 2 (2.4% top marginal rate) estimate for 2020-21 (\$'millions)



Source: DTF.

Key risk factors of the Model's methodology

Through our review of the Model's supporting Excel spreadsheets, supporting documentation provided by DTF and conversations with relevant DTF stakeholders, we have identified risk factors that relate to the Model's methodology in the following categories:

- **Known data risks** - risks associated with the accuracy of data sets used within the Model.
- **Unknown data risks** - risks that arise out of limitations in available data meaning the detail on some ownerships in the land base population is unknown.
- **Behavioural change** - the impact that future behavioural change will have on estimates as taxpayers seek to minimise their tax liability under the new policy.

Reasonableness of the estimates

In light of the risk factors discussed above and how these have been addressed in the Model's methodology, the methodology applied in deriving the estimate for Scenario 1 (3.6% top marginal rate) and Scenario 2 (2.4% top marginal rate) is reasonable with respect to the policy that the Model reflects, the data sets available on the ownership population, and the 2020-21 timeframe for which the estimate has been developed. We have based this finding on the following:

- The impact of changes to land tax rates on the existing land base for Scenario 2 (2.4% top marginal rate) are calculated using the land ownership data from which tax liabilities are assessed.
- DTF's advice that data sets used to assess the impacts of aggregation (i.e. DTF's matching algorithms and assumptions) capture a significant proportion of company and individual ownerships, limiting the unknown data risks that relate to these ownerships. We note DTF have used reasonable data sets for its matching process however, we have not reviewed DTF's matching process or tested its application.
- There is a known data risk associated with potential errors occurring in the matching process used in the calculation of the impacts of aggregation. DTF analysis shows that this impact is likely to be minor.
- While there are some unknown data risks, particularly for trusts, these create both upward and downward pressures on the estimate.
- Behavioural impacts through restructuring of ownerships will be limited by transaction costs and time for the 2020-21 estimate.

Based on our review of the Model's methodology, we have not identified alternative ways to use the existing data sets to improve the reasonableness of the estimate. We have identified that ownership data from other jurisdictions with established aggregation policies would provide another reference point, albeit, unlikely to affect the reasonableness of the current estimate. Similarly collection of primary data through a zero tax filing process may provide more complete data but we note in the current process this is unlikely to be practical or desirable before legislation is passed.

Purpose and scope

As part of the 2019-20 South Australian State Budget the Marshall Liberal Government announced the introduction of a new 'aggregation model' for land tax purposes, to ensure a more 'level playing field' for taxpayers.³ Under existing arrangements, some land owners are setting up complex ownership structures designed to minimise land tax payable.⁴

The reforms will shift the aggregation method for:

- **Companies** - provisions will allow two or more related companies to be grouped for land tax purposes.
- **Individuals** - aggregation will be based on an owner's interest in a piece of land, rather than only aggregating properties held in the same ownership structure.

In cases where the interests in land of trust beneficiaries are not disclosed or cannot be identified, trust ownerships will not be subject to aggregation but a surcharge will apply.

The South Australian Government has announced that:

- it aims to introduce new arrangements on 1 July 2020
- the details of the arrangements will be subject to consultation prior to implementation.⁵

In addition to this, the South Australian Government announced an increase to the tax-free threshold from the current \$391,000 in 2019-20 to \$450,000, as well as a reduction in the top marginal tax rate from 3.7% to 3.6% in 2020-21 with further reductions to 2.9% by 2027-28.⁶

DTF has developed estimates for two scenarios:

- **Scenario 1 (3.6% top marginal rate)** - develops an estimate of the impacts of aggregation of companies and individuals, and the trust surcharge post adjustments for the currently proposed 2020-21 land tax rate and threshold i.e. a reduction in the top marginal land tax rate from 3.7% to 3.6% and an increase to the tax-free threshold from \$391,000 in 2019-20 to \$450,000.
- **Scenario 2 (2.4% top marginal rate)** - develops an estimate based on a further land tax rate reduction from 2020-21, resulting in a 2.4% top marginal rate plus the impacts of aggregation of companies and individuals, and the trust surcharge.

The purpose of this report is to provide an independent review of the methodology applied in the Model. The scope of this report is limited to reviewing the Model's methodology, assumptions and data sets used by DTF, in order to:

- identify risks in the methodology

³ https://statebudget.sa.gov.au/budget-docs/2019-20_budget_measures_statement.pdf

⁴ <https://premier.sa.gov.au/news/closing-land-tax-loophole-for-owners-of-multiple-parcels-of-land>

⁵ https://statebudget.sa.gov.au/budget-docs/2019-20_budget_measures_statement.pdf

⁶ Ibid.

- recommend alternative modelling approaches that could be considered using the existing data sets or new approaches that could be considered using other potential data sets.

We have not conducted an assessment of the integrity of the Model to determine if calculations within the Excel spreadsheet(s) are working as intended. Rather, the focus of this report is on the methodology that has been adopted by DTF. Our review assesses the reasonableness of the Model's methodology in relation to the stated policy position reflected in the Model.

Review approach

Approach

The approach we have applied in reviewing the Model's methodology is illustrated in Figure 4. Our recommendations are based on our understanding of the policy position(s) and methodology that underpin the Model, and the data sets and assumptions that have been used within the Model. These have been provided through access to the Model's supporting Excel spreadsheets, supporting documentation provided by DTF, and conversations with key personnel from DTF who have been involved in the development of the Model.

Figure 4: Summary of review approach

	1 Policy / Methodology	2 Data and assumptions	3 Recommendations
Activities	<ul style="list-style-type: none"> Confirm and understand policy position(s) that form the basis of the estimates Confirm and understand methodology applied 	<ul style="list-style-type: none"> Review data sets and assumptions used in the Model Understand sources of current data sets and any limitations / weaknesses 	<ul style="list-style-type: none"> Identify gaps / risks in the modelling approach Recommend alternative approaches to using the existing data sets or new approaches based on other potential data sets
Approach	<ul style="list-style-type: none"> Conversations with DTF on 29 August 2019 and 3 September 2019 to confirm policy position(s) reflected in the Model and methodology applied Review of supporting DTF documentation for the Model 	<ul style="list-style-type: none"> Review of supporting DTF documentation for the Model Review of Excel spreadsheets that support the revenue estimate (the Model) at DTF premises on 29 August 2019 and 3 September 2019 	<ul style="list-style-type: none"> Internal PwC workshops with model reviewer and land tax advisors to develop alternative ways of using the current data sets and identify alternative data sets and approaches

Limitations

For the purposes of this report, the following items are out of scope and have not been considered in our analysis:

- any assumptions on land value growth and revaluations

- the integrity of the Model through reviewing that calculations in the worksheets are in all material respects internally consistent and arithmetically correct (instead this review focuses on the Model's methodology)
- the process by which data sets have been prepared as inputs into the Model - in particular DTF has undertaken an extensive data matching exercise using multiple data sets in order to identify and aggregate ownerships; these have formed inputs into the Model and we have not reviewed DTF's matching process or its integrity in order to determine the accuracy of its results
- revenue estimates beyond 2020-21.

Context

The current land tax regime in South Australia is based on the legal ownership of land. In general terms, land tax has always applied to the registered owner of the land with tax calculated on the aggregated value of all land holdings. For example, if a property owner were to own three properties valued as follows – property 1 (\$2 million), property 2 (\$3 million) and property 3 (\$4 million) – their tax liability would be calculated using the aggregated value of those three properties (\$9 million).

Under existing arrangements, some land owners have set up ownership structures designed to minimise land tax payable. Two common examples of current arrangements to minimise land tax are detailed below:

- A taxpayer who ultimately controls two or more taxable land parcels across two or more trusts (with each trust having a slightly different composition of beneficiaries) could be subject to land tax on the individual value of each parcel rather than on the aggregated value of all parcels notwithstanding that they are all controlled by the same taxpayer.
- A taxpayer may set up multiple companies to each own a taxable land parcel. These companies will then be subject to land tax on the value of the land owned by each company independently (a single parcel), rather than the aggregated value of the land owned by all the companies, notwithstanding that they are controlled by the same taxpayer.

Both arrangements could lead to no land tax being payable (if all parcels are below the tax-free threshold or otherwise exempt) or a lesser amount of land tax than that if all land was commonly owned, which means that utilising an entity structure to effectively split multiple land holdings into separate owners has been an effective land tax minimisation strategy. This is further illustrated (using the company example) in Figure 5.

Figure 5: Illustrative example of the impacts of aggregation

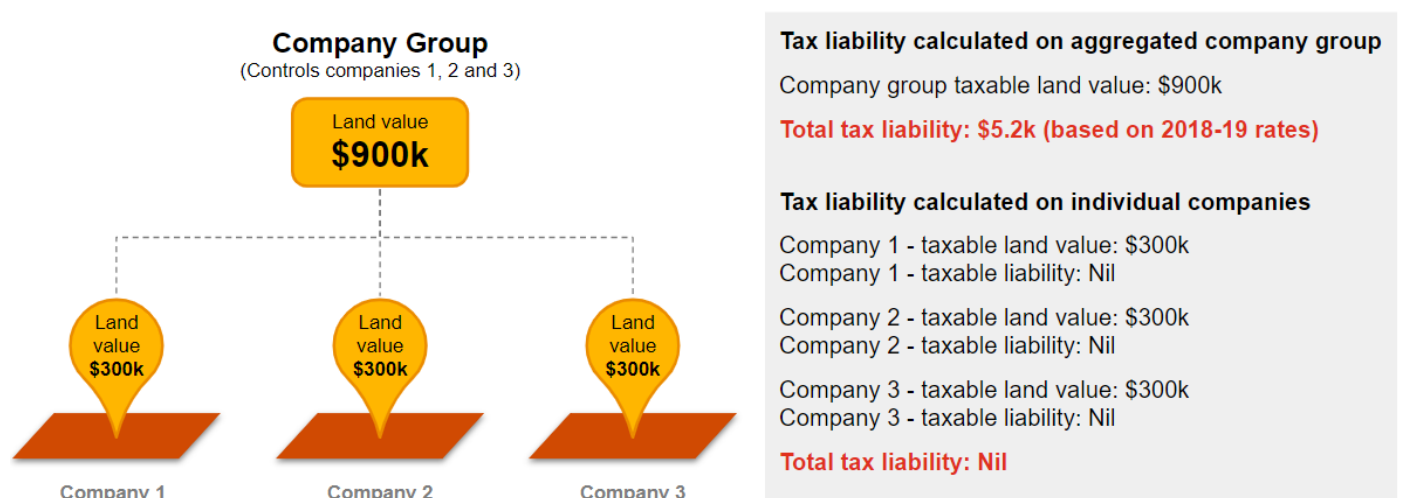


Table 3 shows the number of ownerships in South Australia, both above and below the tax-free threshold. Out of the total 265,500 ownerships, approximately 20% (52,500) are above the tax-free threshold and subject to land tax. Through the introduction of an aggregation model, a number of the remaining 213,000 ownerships will become liable for land tax.

Table 3: Number of liable ownerships in South Australia (2017-18)

Ownership type	All liable ownerships	Liable ownerships over the tax-free threshold	Tax payable (\$'millions)
Individual	231,800	36,200	84
Company	32,500	16,100	281
Association	1200	100	3
Total	265,500	52,500	367

Source: DTF.

Policy position

The policy position(s) detailed below have been provided by DTF as the basis for the 2020-21 revenue estimate calculated in the Model.

Land tax rates and thresholds

Land tax rates and thresholds for Scenario 1 (3.6% top marginal rate) and Scenario 2 (2.4% top marginal rate) in 2020-21 have been modelled as per Table 4.

*Table 4: Land tax rates and thresholds (estimated for 2020-21)**

Scenario 1 (3.6% top marginal rate)		Scenario 2 (2.4% top marginal rate)	
Total taxable value	Amount of tax	Total taxable value	Amount of tax
\$0 - \$450,000	\$0.0 + 0.00%	\$0 - \$450,000	\$0.0 + 0.00%
\$450,001 - \$755,000	\$0.0 + 0.50%	\$450,001 - \$755,000	\$0.0 + 0.50%
\$755,001 - \$1,098,000	\$1525.0 + 1.65%	\$755,001 - \$1,098,000	\$1525.0 + 1.65%
\$1,098,001 - \$1,372,000	\$7184.5 + 2.40%	\$1,098,001 and over	\$7184.5 + 2.40%
\$1,372,001 - \$5,000,000	\$13,760.5 + 2.90%		
\$5,000,001 and over	\$118,972.5 + 3.60%		

*Estimated thresholds only. Thresholds are indexed annually in line with growth in site values liable for land tax as determined by the Valuer-General.

Source: DTF.

Aggregation policy

Approach to aggregation of joint ownerships

The following aggregation policy has been adopted in the Model:

- Both joint ownerships and aggregated interests of individuals / companies in all land holdings are assessed separately and taxed.
- To avoid double taxation, a deduction will be made on an individual's / company's liability equivalent to their share of the land tax assessed on any jointly owned land (proportional to their ownership share).
- This deduction will be taken off the entire liability - even if the liability includes land tax payable on properties other than joint ownerships.
- Where a deduction for jointly owned land is greater than the tax liability of the individual / company, the tax liability is set at zero.

Company grouping

Company grouping policy is proposed to be consistent with the approach adopted in New South Wales and Victoria:

- **Control exercised by a company over other companies** - two companies are related to each other if one company:
 - controls the composition of the board of directors of another company; or
 - is able to cast, or to control the casting of, more than 50% of the maximum number of votes that might be cast at a general meeting of the other company; or
 - holds greater than 50% of the issued share capital of the other company.
- **Control exercised by the same person or persons over two or more companies** - companies are related if a person, or the same persons acting together have a controlling interest in each company. Control of a company is deemed to exist if a person is, or persons acting together:
 - are able to control the composition of the board of directors of the company; or
 - are in a position to cast or control the casting of more than 50% of the maximum number of votes that might be cast at a general meeting of the company; or
 - hold more than 50% of the company's issued shares.
- **Control exercised jointly by a company together with its shareholders** - two companies are related where one company, together with its shareholders, holds more than 50% of the issued share capital of another company. This will be deemed to have occurred where both of the following conditions are satisfied:
 - $X + Y > 50\%$
 - $X + Z > 50\%$

where:

- X is the shareholding in company 1 held by company 2 expressed as a percentage.
- Y is the shareholding in company 1 held by the shareholders common to both companies expressed as a percentage.
- Z is the shareholding in company 2 held by the shareholders common to both companies expressed as a percentage.

Trust surcharge

A surcharge on trust ownerships has been modelled as follows:

- A surcharge of 0.5% will apply for land held in trust with a value greater than \$25,000.

PRIVATE & CONFIDENTIAL

- If applied, the surcharge will be levied on the full value of the land (no surcharge-free threshold).
- The value of the surcharge will be capped for land exceeding the top marginal tax threshold (5,000,000 in Scenario 1 (3.6% top marginal rate) and \$1,098,000 in Scenario 2 (2.4% top marginal rate)). The impact of the trust surcharge is shown in Table 5.
- The trust surcharge will apply to all trusts unless they are specifically excluded by legislation (complying superannuation trusts, charitable trusts, concessional trusts, public unit trusts, administration trusts) or where the trustee chooses to nominate a beneficiary for land tax purposes.
- A trustee of unit and fixed trusts can provide the Commissioner of Taxation with a notice of beneficial interests of the land, such that it will be exempt from the surcharge.
- Trustees of existing discretionary trusts will have until 30 June 2020 to provide notice of a beneficiary to avoid the surcharge. The beneficiary can only be changed in limited circumstances - death or incapacity of the beneficiary.
- Where notification of beneficial interests is in force (either fixed or discretionary), a beneficiary's interest in the trust land will be aggregated with any other interests in land the beneficiary holds as an individual / company.
- Any discretionary trusts established after the Bill has been introduced into Parliament, or any land acquired within an existing trust after this date, will not have the ability to nominate a beneficiary for land tax purposes.

*Table 5: Land tax rates and thresholds for non-exempt trusts (estimated for 2020-21)**

Scenario 1 (3.6% top marginal rate)		Scenario 2 (2.4% top marginal rate)	
Total taxable value	Amount of tax	Total taxable value	Amount of tax
\$0 - \$25,000	\$0.0 + 0.00%	\$0 - \$25,000	\$0.0 + 0.00%
\$25,000 - \$450,000	\$125.0 + 0.50%	\$25,000 - \$450,000	\$125.0 + 0.50%
\$450,001 - \$755,000	\$2250.0 + 1.00%	\$450,001 - \$755,000	\$2250.0 + 1.00%
\$755,001 - \$1,098,000	\$5300.0 + 2.15%	\$755,001 - \$1,098,000	\$5300.0 + 2.15%
\$1,098,001 - \$1,372,000	\$12,674.5 + 2.40%	\$1,098,001 and over	\$12,674.5 + 2.40%
\$1,372,001 - \$5,000,000	\$20,620.5 + 3.40%		
\$5,000,001 and over	\$143,972.5 + 3.60%		

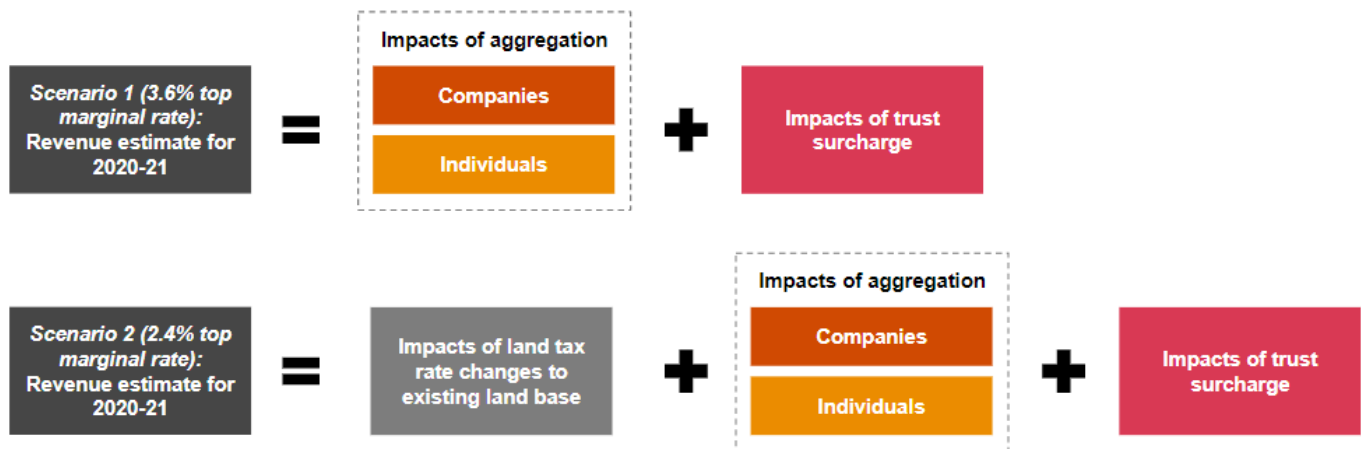
* Estimated thresholds only. Thresholds are indexed annually in line with growth in site values liable for land tax as determined by the Valuer-General.

Source: DTF.

Model methodology overview

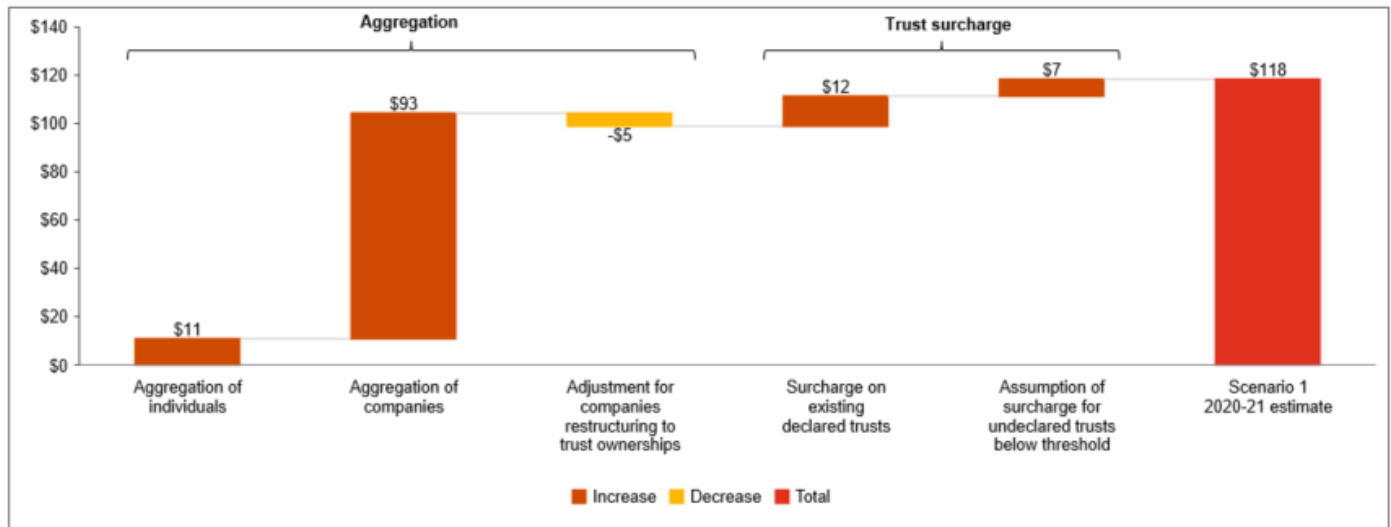
The methodology developed to calculate the land tax revenue estimate in the Model is summarised in Figure 6. For Scenario 1 (3.6% top marginal rate), DTF estimated the impacts of aggregation and the trust surcharge in 2020-21 by determining the increase in revenue collected separately for companies, individuals and trusts. For Scenario 2 (2.4% top marginal rate), DTF first calculated the impacts of changes to land tax rates in 2020-21 on the existing land tax base, and then calculated impacts of aggregation and the trust surcharge using these revised marginal rates.

Figure 6: Overview of the Model's methodology



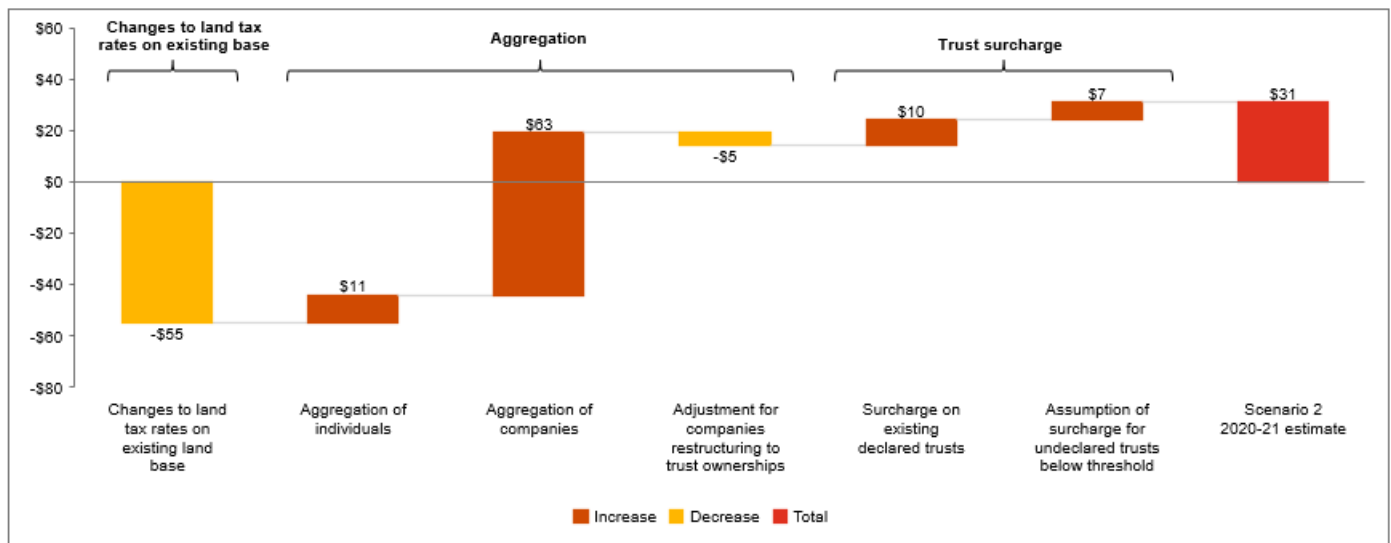
Based on this approach, the total net impact of the policy reforms in 2020-21 is estimated to be \$118 million for Scenario 1 (3.6% top marginal rate) and \$31 million for Scenario 2 (2.4% top marginal rate). Figures 7 and 8 illustrate the individual components which make up these results.

Figure 7: Breakdown of Scenario 1 (3.6% top marginal rate) estimate for 2020-21 (\$'millions)



Source: DTF.

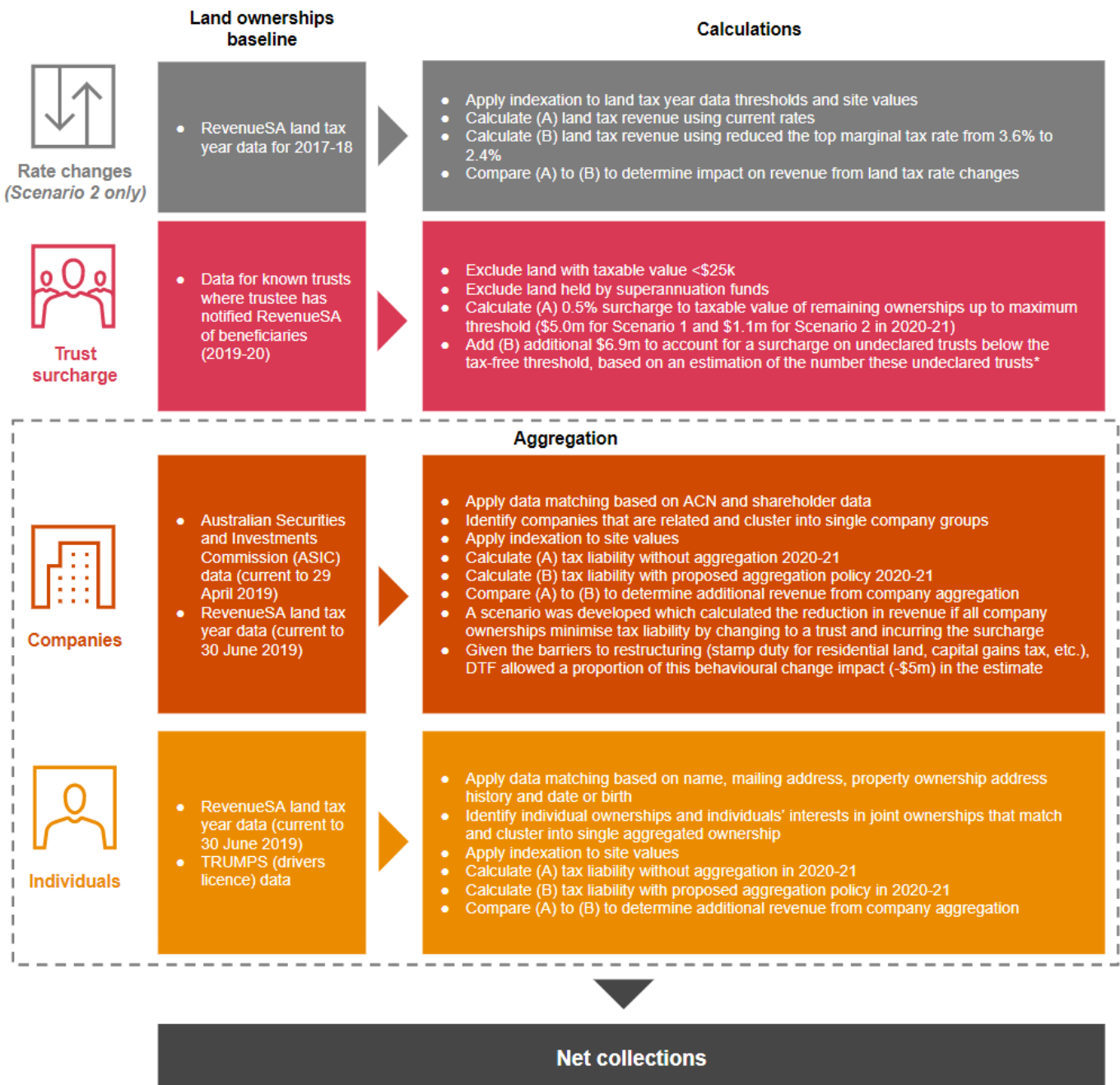
Figure 8: Breakdown of Scenario 2 (2.4% top marginal rate) estimate for 2020-21 (\$'millions)



Source: DTF.

Figure 9 provides a further breakdown of each component of the Model and an overview of the methodology applied.

Figure 9: Illustrative breakdown of methodology components



* See further detail in the Appendix.

Notes: DTF has advised that for its aggregation calculations, 2018-19 land tax data has been used for consistency with the data sources used for matching (TRUMPS and ASIC data). To calculate the impacts of rate changes on the existing land tax base, DTF advised that it used the most recent complete actual year land tax data and indexed the result by growth in the land tax base; 2017-18 is the latest complete year of data DTF has in its model, noting that land tax results for 2018-19 are in the process of being finalised. DTF noted it has historically found that when modelling rate changes a more accurate result is achieved by using the finalised land tax base rather than using a snapshot of the base within a year and making adjustments for potential movements throughout the year.

Methodology review findings

Overview of risk factors in the Model's methodology

Through our review of the Model's supporting Excel spreadsheets, supporting documentation provided by DTF and conversations with relevant DTF stakeholders, we identified risks factors that relate to the Model's methodology against the following categories:

- **Known data risks** - risks associated with the accuracy of data sets used within the Model.
- **Unknown data risks** - risks that arise out of limitations in available data meaning the detail on some ownerships in the land base population is unknown.
- **Behavioural change** - the impact that future behavioural change will have on estimates as taxpayers seek to minimise their tax liability under the new policy.

Known and unknown data risks

Changes to rates on existing land base

The Model is used to calculate the impact of changes to land tax rates for Scenario 2 (2.4% top marginal rate) compared to the rates in Scenario 1 (3.6% top marginal rate). This is calculated on the existing land base using RevenueSA land tax year data from which current tax liabilities are assessed. Indexation is applied to this land base for a 2020-21 estimate based on figures provided by the Valuer-General. Hence there are no known data risks beyond the accuracy of data currently used for tax assessment purposes and the Valuer-General indexation assumptions applied. There are no unknown data risks as this data set covers the total population of ownerships.

Aggregation of companies

To calculate the impact of aggregation of company ownerships, DTF has described and documented the methodology it applied to match Australian Securities and Investments Commission (ASIC) data with RevenueSA land tax year data. In order to determine which companies to aggregate in a company group, DTF ran a series of data queries over these data sets which identified companies based on their Australian Company Number (ACN) and matched these with other companies based on the company's shareholdings and its shareholders. This process was repeated for each company added to the group. DTF conducted its own internal checks of the matched data sets to investigate the results as part of this process. The output of this process is an identification of related companies to be aggregated, which is an input into the Model.

DTF noted that there is a known data risk associated with this matched data from potential errors in the matching process. There are some instances where incorrect matching has resulted in there being interests which total to over 100% associated with an ownership. However, the impact of this is immaterial and accounts for approximately 0.2% of ownerships by count and 0.7% by

taxable value.⁷ We note DTF have used reasonable data sets for its matching process however, we have not reviewed DTF's matching process or tested its application.

Based on available data, 99% of companies had a valid ACN and were able to be run through the matching process.⁸ For the remaining 1%, there is an unknown data risk as it is uncertain how these companies might be aggregated (though we note that this is immaterial given the significant majority of the company ownership population that has a valid ACN).

Aggregation of individuals

To calculate the impact of aggregation of individual ownerships with individual interests in joint ownerships, DTF has described and documented the methodology it applied to match TRUMPS (drivers licence) data with RevenueSA land tax year data. In order to determine which unique individuals had interests in joint ownerships, DTF ran a series of data queries over these data sets which identified unique individuals based on date of birth, full name, ownership mailing address, ownership address history, and residential and postal address history. DTF conducted its own internal checks of the matched data sets to identify matches that had a high degree of confidence. The output of this process is an identification of ownerships and interests in ownerships held by a unique individual, which is an input into the Model.

DTF noted that there is a known data risk associated with this matched data from potential errors in the matching process. There are some instances where incorrect matching has resulted in there being interests which total to over 100% associated with an ownership. However, the impact of this is immaterial and accounts for approximately 0.5% of ownerships both by count and by taxable value.⁹ We note DTF have used reasonable data sets for its matching process however, we have not reviewed DTF's matching process or tested its application.

DTF has advised that it considered 94% of individuals to have a sufficiently reliable data match to include in the aggregation process.¹⁰ For the remaining 6%, there is an unknown data risk as it is uncertain how these individual ownerships might be aggregated (though we note that this is a relatively small proportion of the population).

Trust surcharge

To calculate the impact of the trust surcharge, trusts were identified using RevenueSA declared trusts data where the trustee had notified RevenueSA of the beneficiaries of the trust (in order to avoid land being aggregated with other land owned by the trustee). There are no known data risks beyond the accuracy of this data set as provided by RevenueSA.

As the RevenueSA data only captures declared trusts, there is an unknown data risk associated with undeclared trusts to which a surcharge may be applicable. In particular, for trust ownerships below the tax-free threshold there may be a lack of incentive for a trustee to notify RevenueSA of the beneficiaries of the trust (where the trustee does not have other ownerships that would be aggregated and potentially liable for tax on an aggregated basis). This unknown data risk has been mitigated in the Model's methodology by assuming that the number of trust ownerships as a proportion of all individual and company ownerships below the tax-free threshold is equal to the

⁷ Per data provided by DTF on 2 September 2019.

⁸ Per data provided by DTF on 3 September 2019.

⁹ Per data provided by DTF on 2 September 2019.

¹⁰ Per data provided by DTF on 5 September 2019.

proportion of declared trusts relative to all individual and company ownerships above the tax-free threshold (see Appendix for further detail).

There remains an unknown data risk for undeclared trusts above the tax-free threshold. Ultimately this creates both upward and downward pressures on the estimate as these ownerships may not be incurring the trust surcharge where it should apply (upward pressure) but may be aggregated with other company or individual ownerships which would otherwise not apply (downward pressure).

Another unknown data risk is that the RevenueSA data set may contain certain types of trusts that would be exempt from the surcharge (but cannot be identified as such from this data set). Per discussion with DTF, these types of trust are:

- **Child maintenance land** - land held on trust that was transferred to the trustee for the benefit of a beneficiary as the result of a family breakdown.
- **Public unit trusts** - a unit trust scheme some or all of the units in which are quoted on a recognised financial market, and that is a widely held trust meaning the trust has at least 300 unit holders.

The exemption of these types of trusts creates some downward pressure on the estimate, although these are not anticipated to be significant.

Behavioural change

We anticipate that some taxpayers will seek to minimise their tax liability through restructuring their ownerships to a trust in order to avoid aggregation as the new aggregation policy is implemented. This behavioural change will have a downward pressure on the estimate. However, transaction costs will create a barrier to restructuring in the form of capital gains tax (particularly for taxpayers who have held an ownership for a longer period of time) and stamp duty (on residential land). It is therefore more likely that taxpayers looking to hold land over the longer term will be incentivised to restructure where the ongoing benefit of a lower marginal tax rate (factoring in the trust surcharge) outweighs the one-off transaction costs. As the estimate is provided for 2020-21, the short-term impact of behavioural change will be limited to the extent that the costs to restructure exceed estimated land tax savings for existing landholdings. However, we anticipate that these factors will unwind over time where possible through the natural turnover of ownerships as taxpayers seek to optimise their ownership structures in a way that minimises land tax liability.

The impacts of behavioural change have been accounted for by DTF in relation to aggregation of companies. DTF calculated the upper limit downside risk if all company ownerships restructured to a trust where this would reduce their land tax liability (in isolation of all other factors).

Acknowledging the barriers to restructuring in the short-term for the purposes of a 2020-21 estimate, DTF incorporated a downward adjustment of -\$5 million to its estimate for company aggregation.

There is also potential for behavioural change in relation to trusts as trustees may provide a notice of a beneficiary to avoid the surcharge. Assuming that taxpayers act to minimise their tax liability, this will create downward pressure on the estimate. However, we note that where trustees have currently notified RevenueSA of the beneficiaries of the trust, it is likely that this is because the trustee holds other ownerships and therefore avoiding the surcharge would result in aggregation.

Reasonableness of the estimates

In light of the risk factors discussed above and how these have been addressed in the Model's methodology, the methodology applied in deriving the estimate for Scenario 1 (3.6% top marginal rate) and Scenario 2 (2.4% top marginal rate) is reasonable with respect to the policy that the Model reflects, the data sets available on the ownership population, and the 2020-21 timeframe for which the estimate has been developed. We have based this finding on the following:

- The impact of changes to land tax rates on the existing land base for Scenario 2 (2.4% top marginal rate) are calculated using the land ownership data from which tax liabilities are assessed.
- DTF's advice that data sets used to assess the impacts of aggregation (i.e. DTF's matching algorithms and assumptions) capture a significant proportion of company and individual ownerships, limiting the unknown data risks that relate to these ownerships. We note DTF have used reasonable data sets for its matching process however, we have not reviewed DTF's matching process or tested its application.
- There is a known data risk associated with potential errors occurring in the matching process used in the calculation of the impacts of aggregation. DTF analysis shows that this impact is likely to be minor.
- While there are some unknown data risks, particularly for trusts, these create both upward and downward pressures on the estimate.
- Behavioural impacts through restructuring of ownerships will be limited by transaction costs and time for the 2020-21 estimate.

In reaching this finding we have not considered in relation to the estimate:

- any assumptions around land value growth / revaluations
- the integrity of the Model in terms of reviewing that calculations in the worksheets are in all material respects internally consistent and arithmetically correct
- the accuracy of DTF's data matching process for aggregation of companies and individuals.

Based on our review of the Model's methodology, we have not identified alternative ways to use the existing data sets. We have identified new sources of data that could be considered and these are detailed below:

- **Comparison to interstate ownership profiles** - As aggregation laws currently apply in Victoria, New South Wales and Queensland, DTF could request data from these jurisdictions to understand the current distribution of land ownership by type in order to test how these compare to South Australia. These would provide an indication of the potential behavioural change that could result from a change in aggregation policy. However we note that as these jurisdictions have had aggregation laws in place for a significant time, the impact of behavioural change will likely be more prevalent and therefore not immediately comparable to the South Australian context of a 2020-21 estimate. Therefore, this data could provide additional reference points but would not have a significant impact on the current estimate.

- **Collection of primary data through a zero tax filing process** - An alternative process which could be implemented in order to capture relevant, primary ownership data to develop an estimate would be to collect the required information from taxpayers as part of a zero tax filing regime prior to the introduction of aggregation reforms. We note that this approach may delay the 1 July 2020 target to implement these arrangements and that requesting taxpayer information prior to legislation being passed presents issues as there is no legal obligation to comply and that the overall process may be burdensome for taxpayers. DTF has indicated that its intention is to write to all taxpayers to collect information after the legislation has been passed by Parliament.

Appendix

Approach to estimating additional surcharge revenue for undeclared trusts below the tax-free threshold

There is a potential gap in the data set to capture ownerships which could be subject to the 0.5% trust surcharge. This is because there is a lack of incentive for a trustee of land that is below the taxable threshold to notify RevenueSA of the beneficiaries of the trust (where the trustee does not have other ownerships that would be aggregated and potentially liable for tax on an aggregated basis). Available data sets are not able to identify these trusts which could be held by either an individual or company as trustee. Based on RevenueSA data, approximately 5,500 trusts have been identified out of the 264,300 liable ownerships held by companies and individuals (potentially as trustee).

DTF calculated the potential upper limit of trust surcharge revenue that could be collected from ownerships below the tax-free threshold (shown in Table 6). If it is assumed that all company and individual ownerships below the threshold are held as trusts (excluding known trusts previously identified to avoid double counting), the resulting revenue from these ownerships is \$170 million.

Table 6: Ownerships over \$25,000 and under \$369,000 (excluding known trusts)

Ownership type	Number	0.5% surcharge (\$m)	Taxable value (\$m)
Individual	199,618	156	31,406
Company	14,443	13	2,609
Association	1063	0.5	105
Total	215,124	170	34,120

Source: DTF.

To estimate the proportion of the \$170 million upper limit that could be realised, analysis of the proportion of all individual and company ownerships that are declared trusts (based on RevenueSA declarations) has been undertaken, with segmentation by land value brackets (as illustrated in Figure 10). This shows that declared trusts for land ownerships below the taxable threshold (\$391,000 in 2019-20¹¹) form a significantly lower proportion of total individual and company ownerships than declared trusts above this threshold, supporting the assumption that a number of these ownerships are not being captured in the RevenueSA data set. Based on this information, the following calculations can be made:

- 1) the weighted average of declared trust ownerships below \$400,000 as a proportion of total individual and company ownerships below \$400,000 is 1.5%
- 2) the weighted average of declared trust ownerships above \$400,000 as a proportion of total individual and company ownerships above \$400,000 is 6.3%

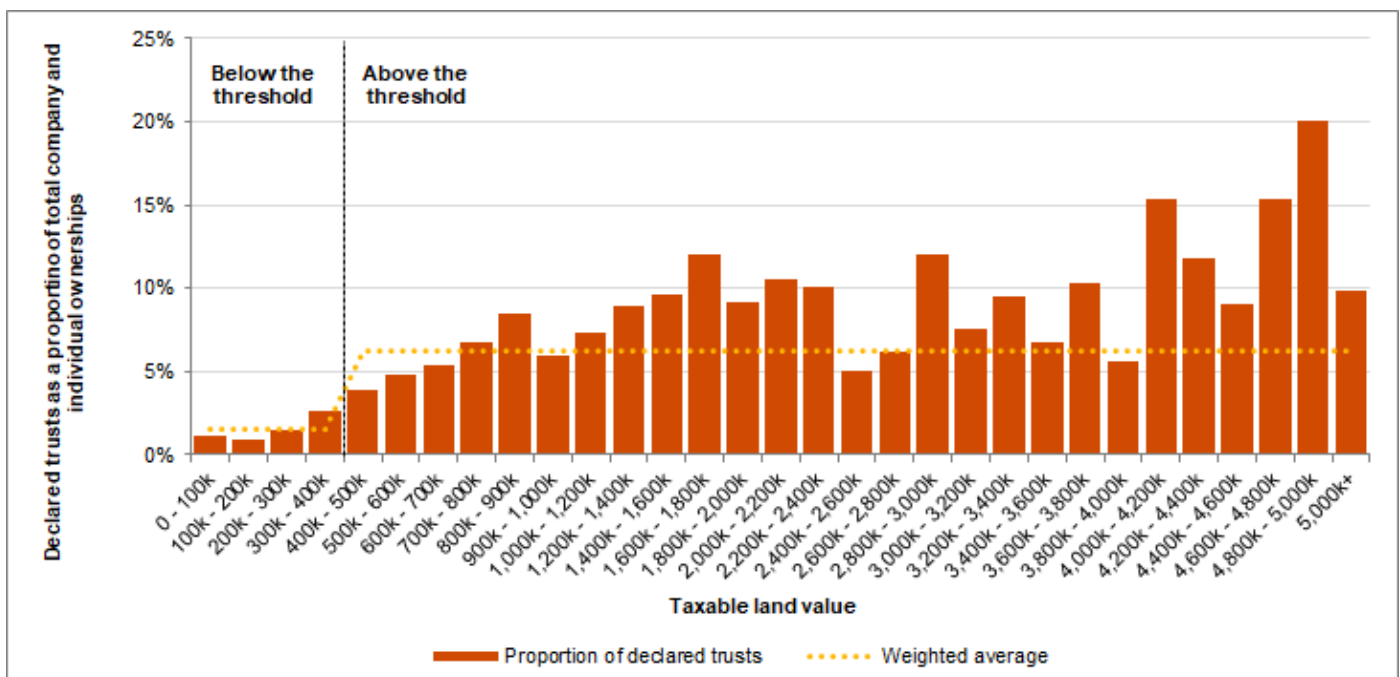
¹¹ <https://www.revenuesa.sa.gov.au/taxes-and-duties/land-tax/rates-and-thresholds>

- 3) 16% of trusts are superannuation trusts and are therefore excluded from the trust surcharge (based on the declared trust data).

Combining the above assumptions to determine the impact of capturing additional trust ownerships below the tax-free threshold results in an additional \$6.9 million in revenue:

- subtracting (1) from (2) provides the difference in the proportion of declared trusts above and below the threshold ($6.3\% - 1.5\% = 4.8\%$)
- applying 4.8% to the value of ownerships over \$25,000 and under \$369,000 (excluding known trusts) with the 0.5% surcharge applied, reveals the additional revenue that is captured when it is assumed that the proportion of trusts as a percentage of all ownerships is the same above and below the threshold ($4.8\% \times 170 \text{ million} = \8.2 million)
- excluding (3) from the \$8.2m figure removes the assumed percentage of superannuation trusts from this revenue estimate as these are exempt from the surcharge, this results in a revenue estimate of \$6.9m ($((100\% - 16\%) \times \$8.2 \text{ million}) = \6.9 million).

Figure 10: Declared trusts as a proportion of total individual and company ownerships (2019-20)



Source: PwC analysis of DTF land ownership and trust data.

www.pwc.com.au