

B. Inquiry framework for assessing the 2018 reforms and alternative distribution arrangements

B.1 The inquiry's ToR establishes several policy goals for the GST distribution system

The inquiry's terms of reference (ToR) established 4 criteria by which the 2018 reforms, and alternative arrangements considered by the inquiry, were to be assessed. These criteria can be broadly summarised as equity, efficiency, fiscal sustainability, and certainty, identified in the ToR:

- **equity** – delivering a reasonable level of horizontal fiscal equalisation
- **efficiency** – supporting states and territories to pursue reforms, including to the efficiency of service delivery and state and territory revenue bases
- **sustainability** – fiscally sustainable for the Commonwealth and states and territories
- **certainty** – appropriately balancing the objective of responsiveness to changing circumstances with the objectives of reducing volatility and improving the certainty of GST revenue streams to support state fiscal planning.

The Productivity Commission considers that the principal goal of the GST distribution system is to drive fiscal equalisation between Australia's states and territories (hereafter 'states'), and that it is reasonable to continue doing so unless it presents costly challenges to efficiency, fiscal sustainability, or certainty that cannot be managed by other policy tools available to governments (section B.2). This serves as the inquiry's definition of 'reasonable equalisation.'

In practice, this means that not all ToR criteria have been weighted equally when considering alternative arrangements. As one example, because mismatches between yearly revenue and expenses can be managed through government debt issuance, volatility of GST relativities would not be viewed by the PC as a sufficient reason to reduce the degree of equalisation pursued by the HFE system (section B.2). Operationalising this assessment framework has also required that the PC identify metrics that can be used to assess how alternative arrangements perform against each of the criteria (section B.3).

B.2 Defining elements of the framework

The PC considers that the primary goal of the GST distribution system is to drive fiscal equalisation between Australia's states. The primacy of fiscal equalisation for the GST distribution system is consistent with the *Commonwealth Grants Commission Act 1973* (Cth), and the *Intergovernmental Financial Agreement* at the time of the introduction of the GST (Intergovernmental Financial Agreement). Fiscal equalisation was

also generally supported by state submissions to the inquiry, though some states had different views on what considerations should constrain equalisation,¹ and who should pay for that equalisation.²

As set out in the definition of reasonable equalisation, the extent to which other goals are pursued by the GST distribution system partly depends on the availability of other policy tools to achieve them. Using a *Tinbergen Principle* lens, each policy tool should principally focus on one goal. The PC is mindful that Australia's HFE system should not be tasked with trying to achieve too many policy objectives, where other policy tools are available to target these other goals. Asking a single policy tool to target too many goals runs the risk that none of the goals will be achieved particularly well.

More broadly, asking the GST system to pursue additional objectives – such as actively encouraging states to undertake policy reform or actively addressing particular sources of entrenched disadvantage – risks diluting its effectiveness in delivering on its primary fiscal equalisation goal. For example, adjusting the equalisation formula to directly reward or punish states for taking particular policy actions would deviate from HFE if they were to principally go to states with higher fiscal capacity than others. For this reason, governments wishing to pursue these other objectives are likely to be able to do so more effectively by using other policy instruments, such as tied grants from the Australian Government, which can be more directly linked to reform actions and outcomes.

Given that the primary objective of the GST system is to drive fiscal equalisation, the goals of efficiency, fiscal sustainability, and certainty – whilst certainly being important objectives in their own right – are regarded as secondary considerations for the purposes of GST distribution system. As a result, the PC regards the reasonable level of equalisation as the highest degree of equalisation that can be achieved without creating costly challenges to efficiency, fiscal sustainability, and certainty that cannot be addressed by other tools available to governments.

How the inquiry has defined equity

Equity is a contested issue (box B.1). Questions of equity and fairness are ultimately a social choice which the PC seeks to inform rather than strictly adjudicate on. Consistent with this approach, the PC has not sought to identify a definitively equitable distribution of GST revenues between states. Instead, our approach has been to recognise that the primary goal of the GST distribution system is to drive fiscal equalisation between the Australian states,³ to identify those equity lenses that fiscal equalisation

¹ For example, the Queensland Government submission argued that equalisation should not be pursued so much as to dissuade the development of state mining sectors (Queensland Government, sub. 62, p. 23), the NSW Government's submission argued that equalisation should not be pursued so much as to reduce national economic efficiency (NSW Government, sub. 61, p. 7), and the Western Australian Government submission argued that equalisation should not be pursued so much as to dissuade economic development (WA Government, sub. 37, p. 1). Other state submissions argued that there should be no constraints on equalisation (ACT Government, sub. 38, p. 4), or that there was a lack of evidence to support concerns that equalisation under the pre-2018 GST distribution system would come at the expense of other considerations (Victorian Government, sub. 59, p. 23).

² For example, the NSW Government's primary recommendation was that Australia distribute the GST pool on an equal per capita (EPC) basis and that the Australian Government pursue fiscal equalisation through direct payments outside of the GST pool. If that was not deemed desirable, the NSW Government's second recommendation was that Australia return to a pre-2018 system but with a fixed relativity floor of 0.5, which would be funded by Commonwealth payments to states that fall below that floor (NSW Government, sub. 61, p. 5).

³ Assuming states make the same effort to raise own-source revenue and operate at the same level of efficiency.

most readily aligns with, and to estimate the degree of equalisation that could be achieved by each alternative arrangement. The PC does not dismiss alternative conceptions of equity, nor does the PC recommend that equalisation should be pursued regardless of the costs. Consistent with informing social choices over the distribution of resources in Australia, this approach allows the PC to communicate the relative equity merits of equalisation, and the degree of equalisation offered by each alternative arrangement.

Fiscal equalisation is consistent with an equality of opportunity view of equity, as well as vertical and horizontal equity principles commonly used in public policy. Fairness arguments that appeal to rewards for policy effort are implicitly reflected in the inquiry's *efficiency* assessments of alternative arrangements, which assesses the degree to which GST distribution outcomes are affected by state policy choices.

The inclusion of 'reasonable' as a qualification on equalisation in the inquiry terms of reference has been interpreted by the PC as a request to identify when there might be reasonable constraints on the degree of equalisation achieved by the GST distribution system. Because the PC considers that the principal goal of the GST distribution system is to drive fiscal equalisation between Australia's states, the inquiry views 'reasonable equalisation' as the degree of equalisation that can be achieved without creating costly challenges to efficiency, fiscal sustainability, and certainty that cannot be addressed by other policy tools or market instruments available to governments.

The PC assessed the equity properties of each GST distribution system by estimating its *equalisation rate*. This equity metric does not seek to measure equality of outcomes at the individual level; nor does it measure equality of actual service delivery outcomes at the level of each jurisdiction.

It is more targeted to horizontal equalisation: it measures how much a given GST distribution reduces the inequality in assessed fiscal capacity between the states. Without GST, states have different assessed fiscal capacities to provide services to their residents, with the Northern Territory currently having the least, Western Australia having the most and the other states falling in between.

The pre-2018 GST distribution system was designed to remove the differences between states' assessed fiscal capacities so that each state had the same capacity to provide a similar level of public services. The equalisation rate of the pre-2018 system is therefore 100%, all pre-existing inequality of assessed fiscal capacity has been removed.

By contrast, an equal per capita distribution allocates GST revenue in proportion to population, leaving the differences between states' assessed fiscal capacities unchanged. This equalisation rate is therefore 0%, none of the inequality present prior to the distribution of GST revenue between the states has been reduced.

This measure is distinct to one that measures how much a GST distribution reduces *state fiscal capacity gaps*, the difference between *assessed* fiscal need and *assessed* revenue.

An equal per capita (EPC) distribution could, in theory, fully reduce all *state fiscal capacity gaps* if the GST pool was big enough. Yet even if this were to occur some states would be significantly better off than others and inequality would continue. A measure that focuses on reducing *state fiscal capacity gaps* alone would not capture this inequality, hence why we use the equalisation rate.

Box B.1 – Equalisation rates and analytical conceptions of equity

Analytical notions of equity have been examined at length in the literature. Different principles are used to judge what is equitable, and perception of the situations they apply to also differ. Equity judgements can also vary on the basis of the appropriate time period over which they are analysed. In Australia, common views of equity include:

- **equality of opportunity** – in a fiscal setting, this emphasises that people should have access to comparable levels and quality of public services that support participation in society – such as education, health, policing, and child protection.
- **equity of outcomes** – focuses on ensuring people have the opportunity to achieve similar outcomes should they choose to pursue them (Sen 1999). In a fiscal setting, this can involve providing different levels of fiscal support for public services that can avoid and/or address structural disadvantage.
- **vertical equity** – those with higher incomes should contribute more to the funding of public services than those on lower incomes.
- **horizontal equity** – those in similar circumstances should contribute the same to funding public services.
- **reward for effort** – desert-based equity frameworks argue that people deserve to enjoy the fruits of their labour (Locke 1690), though not for outcomes attributable to ‘luck’ (Dworkin 1981).

Each of these equity frames are reflected in public debate about the GST distribution system. Horizontal fiscal equalisation (HFE) is consistent with an equality-of-opportunity and equity of outcomes lens by providing states with equivalent fiscal capacity to deliver similar public services. It also aligns with a horizontal equity perspective, insofar as Australians who pay broadly similar taxes can access similar services regardless of which state they are in (Buchanan 1950), and with vertical equity to the extent that jurisdictions with higher fiscal capacities receive less assistance.

Desert-based perspectives are also evident in arguments that the HFE system might discourage state efforts to develop their economies if successful development leads to lower GST revenue shares. Where these opportunities arise from natural resource endowments, geological ‘luck’ might be cited as a justification for sharing at least some resource-related revenues across the country, rather than allocating them solely to the states in which they arise (Collier 2014). In part, desert-based conceptions of equity can be partly viewed through the efficiency elements of the framework, which estimates the degree to which policy choices made by governments can lead to reductions in their GST distributions under different GST distribution systems.

Decisions about which conceptions of equity are most important are ultimately social choices that the PC cannot definitively adjudicate on, but which it can help to inform. These social choices can be viewed through a social contract lens (Hobbes 1651; Locke 1690; Rawls 1971; Rousseau 1762). The PC has sought to do so by communicating which equity lenses align with fiscal equalisation, and estimating the degree of equalisation that can be achieved by different GST distribution systems.

How the inquiry has defined efficiency

In a fiscal equalisation setting, efficiency relates to the extent to which different GST distribution systems could potentially distort the policy choices of governments. Ideally, a GST distribution system would be policy neutral, having no impact on state government policy choices (box B.2). This could potentially occur if some policy choices led to material reductions in GST revenue distributions to that state, or where some policy choices led to larger changes in GST revenues than others. Where this occurs, it is plausible that, all else equal, states might decide against policies that have notable negative effects on their GST revenue distribution. These effects would likely be at the margin, given that any policy decision reflects multiple considerations, including broader economic and social impacts.

The evidence reviewed by the inquiry to date has not established that the GST distribution system that preceded the 2018 reforms distorted state policy choices, though it does appear that the likelihood of such outcomes are higher in the case of the mining assessment, where dominant-state effects can drive notable reductions in GST distributions in responses to changes in natural resource pricing by state governments. It follows that any increase in efficiency is likely to be only marginal, relative to a pre-2018 system.

To assess the efficiency properties of each GST distribution system, the inquiry estimated the GST distribution impacts, and their range, for a bundle of standard state tax system reform directions. This estimation approach is set out in section B.3.

Consistent with the previous discussion of fiscal equalisation being the primary policy goal of the GST distribution system, efficiency is regarded by the inquiry as a reasonable constraint on the degree of the equalisation of the system, but only where the costs of policy distortions are material, and where they cannot be managed by other policy tools.

Box B.2 – Policy neutrality and the efficiency of the GST distribution system

In a world with unlimited needs and wants, but only scarce resources, choices need to be made about what uses those resources are put to. When resources are allocated in line with the preferences of a society, a society is said to achieve *allocative efficiency*. When those preferences are provided for using the least amount of resources possible, it is said to achieve *productive efficiency*. Both support the welfare of the Australian community. Allocative efficiency means that our scarce resources are being used for things that we actually value, and productive efficiency means that we have more resources left over to produce other goods and services that we also value.

Governments have an important role in this resource allocation system, establishing policy settings that give individuals and businesses the confidence to become producers, and individuals and households the confidence to buy from them. Government also has a role in addressing departures from efficiency (market failures) or providing goods and services that market failures prevent businesses from meaningfully supplying.

These activities help governments support allocative and productive efficiency, promoting social welfare in the process. There are a number of ways, both positive and negative, that HFE systems can affect their ability to do so.

- **Getting funds to governments that have the most visibility of community preferences** – In line with the *subsidiarity principle*, untied fiscal transfers to state governments allow those

Box B.2 – Policy neutrality and the efficiency of the GST distribution system

governments closer to their communities to make judgements about what policy choices satisfy community preferences.

- **Extent to which the GST distribution system distorts the flow of resources to their most valued use** – different GST distribution systems can potentially support labour mobility between jurisdictions, by reducing the extent to which the quality of public services acts as a factor when deciding where to move in Australia.
- **Changes in GST distributions might distort policy decisions** – GST distribution systems can lead to changes in GST payments. If policy changes lead to marked reductions in GST payments, or if some policy changes come with greater impacts on GST distributions than others, there is the possibility that policy choices will be distorted away from otherwise welfare-enhancing settings.

The degree to which GST distributions can potentially distort state policy decisions is how the PC has assessed the efficiency of alternative GST distribution mechanisms. The estimation approach taken by the PC is detailed in section B.3.

How the inquiry has defined fiscal sustainability

A government's fiscal sustainability can be defined as its ability to maintain its current spending, tax and other related policies into the long term, without a threat to its solvency or the need for large and sudden adjustments to policy settings (box B.3) (Australian Government of Australia 2023, p. 224; European Commission 2017, p. 1). Aligned with this definition, a fiscally sustainable GST distribution system would not force large and sudden policy changes or pose a threat to solvency in the longer term for state governments or the Australian Government.

Box B.3 – Fiscal sustainability⁴

The fiscal sustainability of alternative GST distribution systems means they do not force major state or Australian Government policy changes or pose a threat to their solvency in the longer term. The long-run fiscal sustainability of governments is commonly assessed through the basic debt dynamics equation:

$$\Delta d_t = (r - g)d_{t-1} - pb_t$$

where d_t is government debt at time t , d_{t-1} is debt at time $t - 1$, r is the interest rate on existing debt, g is the growth rate of the economy (typically GDP growth rate), and pb_t is the primary budget balance at time t .

⁴ There are relevant sustainability considerations beyond fiscal sustainability. However, the PC has not measured these considerations quantitatively. In particular, community perceptions of fairness of the distribution are important for ongoing institutional stability. Perceptions of procedural fairness can also impact community support for the system. Some key features of procedural fairness include transparency of the process, equal application of the process, independence in the carrying out of that process, and the ability to review outcomes of the process.

Box B.3 – Fiscal sustainability⁴

If $r > g$, the trajectory of debt to GDP will be positive (that is, there will be upward pressure on the debt ratio), unless sufficiently offset by budget surpluses. Similarly, if $r < g$, the trajectory of debt to GDP will be downward, unless offset by budget deficits.

The PC has assessed the fiscal pressures facing states using a range of related indicators, including net debt to revenue ratios and interest to revenue ratios (appendix D). For state governments, total revenue is used as a denominator instead of GDP or GSP because state revenue streams are not as directly linked to states' economic outcomes as they are for the Australian Government (Government of Tasmania 2021, p. 40).

The fiscal sustainability implications of alternative arrangements can be assessed by understanding the revenue implications of different alternative arrangements for states and the Australian Government.

For the states, the PC used the GST distributions modelled under each of the alternative arrangements and state finance statistics to estimate the subsequent changes to states' fiscal balances, state debt, and overall interest costs. The proportion of overall state government revenue that would have to be paid to service state government debt is then used to assess the fiscal pressure created by each alternative arrangement.

For the Australian Government, this has included an assessment of its exposure to No Worse-Off payment liabilities with respect to a range of commodity price scenarios, as well as the cost to the Australian Government of alternative GST distribution models.

How the inquiry has defined certainty

A degree of certainty about future revenues is important for supporting effective fiscal planning by states. This applies both to GST distributions and to states' own-source revenues.

At its core, certainty means predictability rather than an absence of any variation. Even in the face of variability, if governments can reasonably predict revenue outcomes, they are better able to plan budgets, manage expenditure, and respond to fiscal pressures. It is true that in some circumstances, reduced volatility can improve predictability. All else equal, revenue that fluctuates less from year-to-year is easier to anticipate, which makes planning budgets more stable.

Lower volatility does not always translate into greater certainty, however. Some forms of volatility in GST distributions can actually reduce volatility in states' overall revenues. This can occur where there is negative covariance – if fluctuations in GST distributions move in the opposite direction to changes in own-source revenues, offsetting revenue swings and smoothing total receipts. Similarly, even where GST distributions are volatile, they can still reduce overall revenue volatility if they are less volatile than own-source revenues.

Nevertheless, in assessing alternative arrangements, the PC has not elected to assess certainty by examining the volatility of total revenue under different GST distribution systems because of the time lag involved in CGC assessments. While a revenue stream may be negatively correlated with GST

revenue in the same year, these correlations are not the result of a direct causal relationship and therefore may not be relied upon to stabilise total revenue forecasts into the future.⁵

Instead, the inquiry has judged certainty by the degree of volatility of GST revenue under different alternative arrangements, after removing revenue changes attributable to changes in the GST pool and individual state populations. The specific estimation approach taken by the PC is detailed in section B.3.

However, the availability of debt markets for governments to smooth mismatches in revenue and expenses, whether arising from volatility in GST distributions or other factors, means that small improvements in certainty alone are not considered to be a reasonable basis to limit the degree of equalisation pursued by the GST distribution system.

B.3 Operationalising the framework to assess alternative arrangements on a consistent basis

In order to assess the equity, efficiency, fiscal sustainability, and certainty performance of the alternative arrangements considered by the PC, the inquiry developed its own model of the GST distribution system in Australia. This was developed using data provided by the CGC in combination with published CGC methodology papers (box B.4). This model was then used to estimate GST relativities had the alternative arrangements considered by the PC been in place between 2000–01 and 2024–25, assuming that all other state budget settings remained constant. The outputs of this modelling exercise were then used to estimate the equity, efficiency, fiscal sustainability, and certainty performance of a range of alternative arrangements considered by the inquiry. A summary of key results from this modelling exercise are provided in appendix C. What follows here is a description of each of the indicators used to assess those properties.

Box B.4 – Historical modelling of alternative GST distribution systems

Alternative arrangements were assessed using a consistent historical simulation method.

Each scenario was applied retrospectively to historical CGC data on assessed revenues, expenses and populations to estimate the GST relativities and distributions that would have resulted had the arrangement operated at the time. Assessment-year relativities were averaged over 3 years and normalised to distribute the full GST pool (application years 2001–02 to 2024–25). GST pool amounts were based on final budget outcomes for the relevant GST distribution year (the application year). The scenarios modelled included:

- **pre-2018 system** – applied the pre-2018 equalisation methodology to historical CGC data, using 3-year averaging throughout for consistency
- **current system** – applied the standard-state benchmark retrospectively. States with a greater fiscal capacity than the new equalisation standard (the fiscally stronger of New South Wales and

⁵ The use of a 3-year lagged average of assessed revenues and expenses means the relationship with GST payments is not as direct, and can take several years to flow through to a state's budget.

Box B.4 – Historical modelling of alternative GST distribution systems

Victoria) have their relativity lifted to the standard state benchmark, with the cost redistributed within the fixed GST pool.

- **mining discounts** – reduced the relevant assessed revenue by the specified discount, added an equivalent equal per capita expense to keep the GST pool size constant, and then recalculated GST requirements and relativities.
- **fixed floors** – applied the selected floor after 3-year averaging, lifted relativities below the floor and redistributed the cost across non-floor states based on population shares.
- **blended relativities** – combined EPC and HFE relativities using the specified weights in each assessment year, before averaging over 3 years. For illustration, under a 50% equal per capita blend, an assessed relativity of 2 becomes a GST relativity of 1.5.

Further details on modelled GST distribution systems are provided in chapters 3 and 4. The modelled results for alternatives may differ slightly from published historical outcomes (where they would be expected to align) because of differences in data and implementation, including the use of 3-year averaging throughout. However, the approach provides a consistent basis for the PC to compare alternatives.

Equity

The equity of competing GST distribution systems has been assessed by calculating the equalisation rate of each alternative arrangement.

The equalisation rate measures how much the model reduces the initial dispersion in fiscal need. A rate of 100% means the model fully equalises states to assessed need. A lower rate means variation in need remains after the GST distribution. This is the better measure of whether the model is achieving equalisation, because it captures the relative difference between states rather than just the average level of GST payments relative to need.

$$\text{Equalisation rate}_i = 100 \left(1 - \frac{\sqrt{\sum_s w_s (N_{is} - G_{is})^2}}{\sqrt{\sum_s w_s (N_{is} - \bar{N}_i)^2}} \right)$$

where

$$\bar{N}_i = \sum_s w_s N_{is}$$

Table B.1 – Calculation of the equalisation rate

Symbol	Definition
<i>i</i>	Inquiry year and model scenario (for example, 2024–25 current system, 2024–25 EPC, 2024–25 mining discount)
<i>s</i>	State or territory
<i>N_{is}</i>	Assessed fiscal need per capita for state <i>s</i> in scenario <i>i</i> , before GST redistribution
<i>G_{is}</i>	GST payment per capita received by state <i>s</i> in scenario <i>i</i>

Symbol	Definition
P_s	Population of state s
w_s	Population weight for state s : $w_s = \frac{P_s}{\sum_s P_s}$
$\bar{N}_i$	Population-weighted average assessed need per capita across all states in scenario i : $\bar{N}_i = \sum_s w_s N_{is}$

Efficiency

The efficiency of alternative GST distribution systems was analysed by estimating how far different systems departed from policy neutrality after a series of \$1m revenue shocks were independently introduced to different revenue heads.

The PC assessed departures from policy neutrality using 2 measures: the weighted average change, and the average maximum change, of GST distributions for each state following each of the shocks. In both cases, the closer the measure to 0, the more policy neutral the particular GST distribution system.

Revenue shocks were independently applied to 14 different revenue heads.⁶ In all cases, the PC applied the shock and assumed that no change was made to the 2024–25 underlying shares of the revenue bases in each state. In this way, the shocks can be considered as change to tax rates. The PC assumed the additional revenue from each shock was spent in an expenditure category where the CGC assess expenditure needs on an equal per capita basis.

In GST distribution system j , the absolute GST revenue effect (as a percentage of the revenue shock) for state i , from a \$1m shock to revenue base r , is given by:

$$\text{GST Revenue Effect}_{j,i,r} = \left| \frac{\Delta \text{GST Revenue}_{j,i,r}}{\$1\text{m}} \right| \times 100\%$$

The change in GST revenue, $\Delta \text{GST Revenue}_{j,i,r}$, is calculated as the total GST revenue change after the shock fully flows through the CGC's assessment lag and averaging period.

Weighted average GST revenue effect

In forming a weighted average GST revenue effect for each distribution system, the PC weighted the effects of each shock differently.

For each distribution system, the first step was to form a 'total' absolute GST revenue change for each revenue shock, $r = 1, \dots, R$, across states, $i = 1, \dots, N$. In doing this, the PC excluded a state's GST revenue change if that state did not have any share of the shocked revenue base. The PC made this decision because, regardless of the size of the GST effect, that state has no capacity to alter its policies in response to that effect. The remaining absolute GST revenue effects were weighted equally.

$$\Sigma \text{GST Revenue Effect}_{j,r} = \sum_{i \in \text{Share of revenue base}, r > 0} \text{GST Revenue Effect}_{j,i,r}$$

⁶ The shocked revenue heads were payroll tax, land tax, stamp duty on conveyances, insurance tax, light vehicles, heavy vehicles, motor stamp duty, iron ore, coal, gold, copper, lithium, nickel, other minerals royalties and other revenue. Commonwealth payments were excluded as states do not exert the same control in raising Commonwealth payments revenue as other revenue heads.

The second step was to aggregate the total effects for each revenue shock into a single weighted average for each distribution system. The PC applied a 2-step process to determine the weighting for each revenue shock's total effect. First, each revenue head was weighted by its share of the total assessed revenue in 2024–25. Then, each revenue head weighting was scaled according to the number of states which had assessed revenue in that category in 2024–25. The weighted average for each distribution system, j , is therefore constructed as:

$$\overline{\text{GST Revenue effect}}_j = \frac{\sum_{r=1}^R \text{Total FY25 assessed revenue for revenue head } r \times \Sigma \text{GST Revenue Effect}_{j,r}}{\sum_{r=1}^R \text{Total FY25 assessed revenue for revenue head } r \times \sum_{i \in \text{Share of revenue base}, r>0} i}$$

Average maximum GST revenue effect

The second way the PC has assessed the policy neutrality of GST distribution systems is the *maximum* GST revenue effect resulting from a shock, averaged across all states. A smaller average maximum indicates that, even at its most extreme, the distribution system has smaller departures from policy neutrality.

This measure has been calculated from the same series of revenue shocks as described above. In each distribution system, j , the PC selected, for each state, i , the maximum absolute GST revenue effect out of all revenue shocks, r . The unweighted average of these maximums is the reported value for the measure.

$$\text{Average Maximum GST Revenue Effect}_j = \frac{\sum_{i=1}^n \max\{\text{GST Revenue Effect}_{j,i,r}\}_{R \in 1, \dots, R}}{N}$$

Fiscal sustainability

The fiscal sustainability impacts of competing GST distribution systems have been explored for the Australian Government and state governments. Given the fiscal impacts of the GST distribution are expected to be more significant for state governments than the Australian government, different measures are used.

- **State governments** – GST payments constitute a significant proportion of state revenue, so changes in the distribution have the potential to impact states' broader fiscal sustainability. Therefore, a broader measure of fiscal sustainability impact is used to compare the effects of different distribution systems, based on states' interest expense to revenue ratios.
- **Australian Government** – prior to the 2018 reforms, the GST distribution system had no direct impact on the Australian Government's fiscal position. The current system has introduced 2 direct costs to the Australian Government, GST pool boost, and the (NoWO) guarantee. Neither cost is likely to threaten the Australian Government's overall fiscal sustainability, but NoWO payments are material, volatile and could impose significant trade-offs. Therefore, the cost of the NoWO guarantee in a given year is used to measure the relative impacts of different GST distribution systems on the Australian Government's fiscal position. The approach to assessing the exposure of the Australian Government to NoWO payments to states is detailed in chapter 3 of the interim report, and key modelling results are provided in appendix C.

State government interest expense to revenue ratios under different systems

To assess the impact of different GST distribution systems on state fiscal sustainability, the PC took the GST distributions modelled under each of the alternative arrangements from 2001–02 to 2024–25, and state finance statistics from the ABS Government Finance Statistics (GFS) to estimate the subsequent changes to states fiscal balances, state debt, and overall interest costs.

Given that state governments also control public non-financial corporations (PNFCs), whose borrowings are underpinned by guarantees from state governments, the modelled results for the general government were added to actual PNFC figures. Further detail on the modelling assumptions and results is provided in appendix C.

Selecting the indicator of interest expense to revenue ratios

The PC used the ratio of interest expenses to revenue for the total non-financial public sector (TNFPS) as its main indicator for the fiscal sustainability impacts of different GST distribution systems. The PC uses each state's interest to revenue ratio from 2024–25, to reflect the cumulative effect on net debt and interest expenses of having each alternative arrangement in place from 2001–02 to 2024–25.⁷ This measures how much of a government's revenue is being absorbed by debt-servicing costs, rather than being available for other purposes, such as funding government services or building buffers to manage future shocks (SA Government 2025, p. 42).

The interest (*i*) to revenue (*r*) ratio for each state (*s*) under alternative arrangement (*m*):

$$IR_{s,m} = \frac{i_{s,m}}{r_{s,m}}$$

The ratio of interest expenses to revenue was selected because it provides an indicator of the extent to which governments are able to sustainably maintain their current spending, tax and other related policies over the long term without threatening its solvency or requiring major remedial action. This approach is conceptually similar to the debt dynamics equation set out in box B.3, in that both focus on the point at which debt-servicing costs begin to place material pressure on a government's fiscal position.

To facilitate comparison of GST distribution systems, the PC converted states' interest expense to revenue ratios into an aggregate 'fiscal pressure' score (table B.2). The PC uses Moody's Baseline Credit Analysis interest-to-revenue thresholds to assess when modelled debt-servicing costs may start to constrain fiscal sustainability (Moody's Ratings 2026).⁸

This focus is consistent with Tasmania's Fiscal Sustainability Report, which states that '*a ratio above 10 per cent, while still incurring budget deficits, would indicate the State's finances are becoming unsustainable*' (Government of Tasmania 2026, p. 13). States with relatively low interest burdens receive a score of zero, while higher interest burdens receive progressively larger scores, reflecting growing fiscal pressure.

Table B.2 – Interest to revenue thresholds and weightings

Moody's bands	Aaa	aa	a	baa	ba	b	caa	ca
Interest-to-revenue threshold bands	<0.5%	0.5% - 1.5%	1.5% - 3%	3% - 5%	5% - 8%	8% - 12%	12% - 18%	>18%
PC score	0 – unlikely to be a significant pressure on fiscal sustainability			1	2	3	4	5

Source: Moody's Ratings (2026).

⁷ 2024–25 is the final year where state fiscal data is available from the ABS GFS.

⁸ The Moody's categories are used only as a benchmark for interpreting when interest costs become more material to fiscal sustainability; they do not imply a credit rating for any state.

The equation for fiscal pressure (FP) for each arrangement then becomes:

$$FP_m = \sum_{s \in S} p(IR_{s,m})$$

where the function p is:

$$p(IR_{s,m}) = \begin{cases} 0 & IR_{s,m} < 3\% \\ 1 & 3\% \leq IR_{s,m} < 5\% \\ 2 & 5\% \leq IR_{s,m} < 8\% \\ 3 & 8\% \leq IR_{s,m} < 12\% \\ 4 & 12\% \leq IR_{s,m} < 18\% \\ 5 & IR_{s,m} \geq 18\% \end{cases}$$

Certainty

The certainty provided by different GST distribution systems has been analysed using the year-on-year distribution system-driven volatility of GST revenues. All else equal, the more volatile a distribution system, the harder it is to predict, and the more detrimental the effect on state fiscal planning.

To isolate the volatility driven by the distribution system (as opposed to volatility driven by changes in population share or size of the GST pool), the PC has calculated what the average year-on-year volatility of pool-growth adjusted GST revenues per capita across all states would have been, had the system operated between 2001–02 and 2024–25.

To calculate this measure, GST revenue has been transformed in 2 ways. First, for each state $i = 1, \dots, N$, in each year $t = 1, \dots, T$, dividing GST revenue by the population of the state in that year, $p_{i,t}$. Then, to control for growth in the size of the per capita GST pool, dividing these per capita revenues by the growth rate of the national average GST payments per person between 2001–02 (the base year, denoted by $t = 0$) and the relevant year.⁹ Pool-growth adjusted GST revenues per capita under each GST distribution system, j , are therefore given by:

$$\text{Pool growth adjusted GST Revenue per capita}_{j,i,t} = \text{GST Revenue}_{j,i,t} \div p_{i,t} \div \frac{\text{GST Pool}_t \div \text{Aus. Population}_t}{\text{GST Pool}_0 \div \text{Aus. Population}_0}$$

For each state in each year, the year-on-year volatility in pool growth adjusted GST revenue per capita has been calculated in every year from 2002–03 to 2024–25.

The certainty measure for each distribution system, j , is then given by the average of these volatilities across all years and all states.

$$\overline{\text{Volatility}}_j = \sum_{i=1}^N \sum_{t=1}^T \left| \frac{\text{Pool growth adjusted GST Revenue per capita}_{j,i,t}}{\text{Pool growth adjusted GST Revenue per capita}_{j,i,t-1}} \right| \div (N \times T)$$

⁹ This adjustment does not strip away any volatility contributed by the GST pool boost, in GST distribution systems where the pool boost is included.

B.4 Alternative arrangements that we did not undertake a full assessment of

The framework set out in this appendix was applied to the range of GST distribution models set out in chapters 3 and 4 of the interim report. Several additional models were also considered for their clear conceptual strength, such as the broader indicators model proposed by Saul Eslake, and the optimal equalisation model proposed by Chris Murphy, though did not undergo a full assessment against the PC framework. A brief summary of each of these models is set out below.

Broader indicators model – The alternative arrangement proposed by Saul Eslake was a broader indicators model which seeks to achieve a high level of fiscal equalisation but relies on a broader range of publicly available indicators than is currently used in the CGC assessments (Saul Eslake, sub. 3, p. 25). These include gross state product, a range of demographic indicators, and other proxies for fiscal need and capacity. The appeal of the broader indicators model lies in the possibility of reducing direct links between state policy choices and subsequent GST distributions. A key challenge encountered by the PC in assessing the model was methodological, with the range of indicators presenting preliminary econometric challenges that stood in the way of a robust model. Another potential challenge is that the more system moves away from direct measures of fiscal capacity, the greater the risk that it ceases to equalise for the appropriate factors.

Optimal equalisation model – Under the optimal equalisation model proposed to the PC by Chris Murphy, not all revenues would be equalised between states. Source-based taxes (for example, mining royalties, stamp duty, land tax) would be fully equalised, and only the proportion of residence-based taxes that are attributable to demographic variability between states should be equalised. In addition, not all expenses should attempt to be equalised for (Chris Murphy, sub.45, p. 46). Murphy argues that not doing so risks distorting internal labour migration patterns in a way that is detrimental to consumer welfare. Insufficient granularity in the PC's model prevented a full assessment of the model against the PC's framework, though the ongoing full equalisation of mining revenues in the alternative raises ongoing policy neutrality challenges. More generally the proposal would require a range of detailed methodological changes that exceeded the scope of the inquiry.

Broader changes to the federal financial relations system – The Australian Centre for Federalism proposed that in the place of changes to the GST distribution system Australia should move towards broader changes to the federal financial relations (FFR) system. An example provided in the submission is for the Australian Government to share income tax revenues collected from residents of a state to be shared with that state on a 50/50 basis (Tracy Fenwick, sub. 23, p. 6). The PC did not undertake a full assessment of this proposal against the framework set out in this appendix, as such changes to the broader tax and FFR systems were considered beyond the scope of the inquiry.

PC 2018 model – The alternative proposed in the PC's 2018 inquiry into *Horizontal Fiscal Equalisation* was for a new equalisation benchmark (PC 2018). It recommended equalising states to the average fiscal capacity of all states. Under this model, the GST distribution would occur in 2 stages. First, those states with an assessed fiscal capacity below the average would be allocated GST revenue until the point that they reached the average fiscal capacity of the states. Once this point had been reached, what remained of the GST distribution pool would be divided between states on an EPC basis. In some ways, this approach could be seen as similar to EPC/HFE approaches. The PC 2018 model would have amplified some of the challenges the PC identified with the 2018 reforms and was not fully assessed against the framework.

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