

Effect on GST revenue using alternative relativity scenarios transitioning to a new standard of Horizontal Fiscal Equalisation

Summary

1. The Commonwealth's response to the Productivity Commission's Inquiry into Horizontal Fiscal Equalisation proposed transitioning to a new system for distributing the GST amongst states and territories (states). The Commonwealth has undertaken to provide additional support payments to boost the GST pool to ensure that all states would be better off compared to the current system.
2. This paper tests certain assumptions made by the Commonwealth in relation to the guarantee that no state would be financially worse off. Various scenarios are presented using alternative sets of forecast relativities. The GST revenue of each state under each scenario is compared with the expected revenue under the current methodology.
3. The modelling undertaken shows that most jurisdictions would get less GST in future years compared to the current distribution method.
4. Under scenario 6, where states' relativities are assumed to return to their 10-year historic average by 2026-27, NSW is shown to be a total of \$3.3 billion worse off over six years compared to the status quo. Western Australia would be \$18.1 billion better off. The additional support payments from the Commonwealth would need to increase from the proposed \$1.1 billion in 2026-27 to \$4.8 billion to ensure that no state was worse off in that year alone.

Background

1. The Commonwealth's response¹ to the Productivity Commission's (PC's) Inquiry into Horizontal Fiscal Equalisation (HFE) proposed transitioning to a new system for distributing the GST amongst states. A key element of the response was a guarantee that no state would receive less GST under the under the proposed arrangements compared to the status quo. The Commonwealth's modelling underpinning the guarantee included assumptions about relativities over the next ten years. This paper presents a range of alternative assumptions around the relativities to test the "no state is worse off" outcome.
2. The response paper included a table showing the additional amounts that the Commonwealth would provide states as compensation if their GST revenue based on the new system were less than the amounts provided under the current methodology (see Table 1). The additional revenue would take the form of top ups to the GST pool (which would be distributed according to the relativities and population shares of the particular year) as well as specific amounts to Western Australia and the Northern Territory.
3. The key assumption underpinning the Commonwealth's compensation analysis is the trajectory of relativities out to 2026-27. Under the Commonwealth's relativity assumption, the amount of compensation is always sufficient to ensure that "no state is worse off" – something guaranteed by the former Federal Treasurer.² Table 1 shows that all states will be no worse off in each year and better off in total compared to the status quo.

¹ Australian Government, [Productivity Commission inquiry into horizontal fiscal equalisation: Government interim response](#), July 2018

² The Hon Scott Morrison, Treasurer, Media release, [All better off from fairer way to share GST](#), 5 July 2018

Table 1: Difference in GST revenue – Commonwealth’s proposal compared with current methodology (\$m)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2019-20	0	0	0	814	0	0	0	69
2020-21	0	0	0	585	0	0	0	0
2021-22	78	84	87	568	41	17	7	24
2022-23*	30	45	61	421	31	14	5	24
2023-24	14	32	51	495	28	13	5	25
2024-25*	70	84	101	575	50	22	9	37
2025-26	85	96	112	580	54	23	10	39
2026-27	74	85	105	663	53	23	10	40
Total	351	425	518	4,702	257	112	46	258

* Within-system relativity floor of 0.70 applies from 2022-23 and 0.75 from 2024-25

Source: Australian Government, Productivity Commission inquiry into horizontal fiscal equalisation: Government interim response, July 2018 (Table 5)

- The States provided the Commonwealth Treasury with four alternative relativity scenarios on 11 August 2018 to test if the assured compensation would be sufficient. To date, the Commonwealth has not responded to this request.

Scenarios and Outcomes

- Victoria has run six scenarios (the four referred to above as well as two others). To test each scenario, we have used the Commonwealth’s supplied spreadsheet which calculates GST based on moving to a new standard of HFE. More detail on the assumptions and methodology used are shown below. The purpose was to test if states would be better or worse off under these scenarios compared with the status quo. Each scenario uses a different set of projected relativities and compares the financial impact in each year with the GST states would have received under the current GST methodology.
- Under the all scenarios, most states would be worse in almost every year and always in total compared to the status quo. The “status quo” assumes that the GST pool is not topped up by the Commonwealth. In most instances, the specified pool top up payments would be insufficient to compensate the reduced GST. Details of each scenario are provided below.
- The main reason most states are worse off under the above scenarios compared to the Commonwealth’s scenario, is the transfer of GST mainly from the eastern states to Western Australia. This is largely due to the new distribution methodology where the fiscally strongest state has its GST share “lifted” towards that of the “second strongest” state. In effect, a relatively larger proportion of the GST pool is distributed on an equal per capita basis compared to the current method. Western Australia effectively gains all the pool top up provided by the Commonwealth and also gains GST from most other states.

Assumptions

- The following assumptions have been made:
 - apart from using new relativities, all other numbers are the same as used by the Commonwealth, including the GST pool, pool top ups and additional payments to Northern Territory and Western Australia;
 - each scenario is defined by a different set of relativities, for each state and for each projection year;
 - each set of relativities was derived by hypothesising a situation in 2026-27 and deriving a corresponding set of relativities for that year; and

- to get a time series of relativities from 2018-19 (the last year of actual relativities) to 2026-27, the relativities for each state take a linear path between these years.

Methodology

9. To calculate the above, Victoria has used the same spreadsheet model provided by the Commonwealth (used by them in the response paper). The Commonwealth's model imposes a within-system relativity floor of 0.70 in 2022-23 rising to 0.75 in 2024-25 and transitions to the new HFE standard from 2021-22 over six years.

Output

10. The tables on pages 4 to 9 illustrate the difference in GST for each scenario under the proposed new methodology compared to the status quo.

How much would the Commonwealth need to increase the GST pool so that no state was worse off in 2026-27?

11. The following example illustrates the shortfall in top up payments. It is based on scenario 6 (where relativities return to 10-year average by 2026-27) and focuses on the outcomes in 2026-27. Applying the Commonwealth's proposed methodology under this scenario shows that all states apart from Western Australia and the Northern Territory would be worse off. In essence, the proposed top up pool of \$1,053m in 2026-27 is insufficient to compensate states.
12. Table 2 shows that the top up pool would need to increase by a further \$3,722 million to \$4,775 million in 2026-27 so that no state was worse off. Note that the additional GST pool is distributed in the same way as the existing pool.

Table 2: GST distribution based on current method and proposed new method under Scenario 6, various pools, 2026-27 (\$m)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Current method, unadjusted pool	30,189	25,131	21,002	5,000	8,708	3,271	1,983	4,616	99,900
New method, pool topped up \$1053m	29,134	24,237	20,372	8,904	8,523	3,224	1,932	4,627	100,953
Difference, current vs new method	-1,055	-894	-630	3,904	-185	-48	-50	11	1,053
New method, pool topped up \$4775m*	30,208	25,130	21,123	9,232	8,837	3,342	2,004	4,798	104,675
Difference, current vs new method	19	0	121	4,232	129	71	21	182	4,775
Additional top up needed to make no state worse off	1,074	894	751	328	314	119	71	171	3,722

* \$4775 million is the minimum required addition to the GST pool (compared to the unadjusted pool) so that no state is worse off in 2026-27 under Scenario 6. The second last row in the table shows that, with this expanded pool, all states would get at least the same GST as under the current distribution method.

Department of Treasury and Finance
Victoria
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Scenario 1 – Modest lift in iron ore prices by 2026-27

Description: A modest forecast increase in iron ore prices lifting royalty revenue by 2026-27. NSW, for example, would be worse off by \$722 million in total over six years, including by \$161 million in 2026-27.

Modest lift in iron ore prices: Difference in GST revenue (\$m)*

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2019-20	0	0	0	1,430	0	0	0	207
2020-21	0	0	0	1,284	0	0	0	154
2021-22	39	50	55	1,161	33	14	5	122
2022-23	-165	-119	-70	980	-9	1	-5	17
2023-24	-141	-100	-52	941	-3	3	-4	19
2024-25	-133	-88	-31	1,154	9	9	-1	30
2025-26	-162	-113	-45	1,277	4	8	-3	32
2026-27	-161	-113	-40	1,319	6	9	-2	34
Total	-722	-482	-182	9,547	39	46	-9	616

Additional information for 2026-27

GST distribution based on current method and new proposed method, 2026-27 (\$m)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Current method, unadjusted pool	26,908	24,843	22,337	6,973	9,063	3,418	1,981	4,376	99,900
New method, topped up pool	26,748	24,730	22,297	8,293	9,069	3,428	1,979	4,410	100,953
Difference	-161	-113	-40	1,319	6	9	-2	34	1,053

Relativities* used in the year 2026-27 in the Commonwealth proposal and in this scenario

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Commonwealth proposal	0.83	0.91	1.11	0.76	1.38	1.75	1.18	4.91
Scenario 1	0.83	0.91	1.12	0.70	1.39	1.77	1.19	4.95

* In each case, relativities shown are initial relativities prior to the imposition of "second strongest state" adjustment

Scenario 2 – Falling property transactions by 2026-27

Description: Property transactions fall resulting in stamp duty revenue slowing in both Victoria and NSW, also assumes Western Australia and Queensland royalties moderate slowly from current level by 2026-27. Victoria, for example, would be worse off by \$856 million in total over six years, including by \$260 million in 2026-27.

Falling property transactions: Difference in GST revenue (\$m)*

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2019-20	0	0	0	1,443	0	0	0	223
2020-21	0	0	0	1,312	0	0	0	186
2021-22	33	44	47	1,204	30	13	5	173
2022-23	-182	-135	-87	1,040	-14	-0	-6	16
2023-24	-185	-138	-88	1,078	-14	0	-6	17
2024-25	-206	-153	-92	1,384	-9	4	-5	27
2025-26	-276	-214	-135	1,629	-23	-0	-9	27
2026-27	-328	-260	-166	1,826	-32	-2	-11	27
Total	-1,144	-856	-522	10,916	-63	14	-32	696

Additional information for 2026-27

GST distribution based on current method and proposed new method, 2026-27 (\$m)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Current method, unadjusted pool	28,235	25,409	20,978	6,826	8,900	3,330	2,012	4,210	99,900
New method, topped up pool	27,907	25,149	20,811	8,652	8,868	3,328	2,001	4,237	100,953
Difference	-328	-260	-166	1,826	-32	-2	-11	27	1,053

Relativities* used in the year 2026-27 in the Commonwealth proposal and in this scenario

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Commonwealth proposal	0.83	0.91	1.11	0.76	1.38	1.75	1.18	4.91
Scenario 2	0.87	0.93	1.05	0.68	1.37	1.72	1.20	4.76

* In each case, relativities shown are initial relativities prior to the imposition of "second strongest state" adjustment

Scenario 3 – Strong increase in mining production by 2026-27

Description: strong increase in mining production; NSW and Victoria perform relatively better in property related taxes by 2026-27 This scenario replicated the relativities that occurred in 2011-12. Queensland, for example, would be worse off by \$651 million in total over six years, including by \$182 million in 2026-27.

Strong increase in mining production; NSW and Victoria perform relatively better in property related taxes (2026-27 relativity is the same as occurred in 2011-12)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2019-20	0	0	0	1,409	0	0	0	170
2020-21	0	0	0	1,239	0	0	0	76
2021-22	32	36	37	1,090	27	12	4	22
2022-23	-116	-89	-59	879	-4	3	-3	20
2023-24	-216	-177	-125	1,202	-26	-4	-9	18
2024-25	-245	-207	-145	1,554	-26	-2	-10	29
2025-26	-285	-247	-176	1,728	-35	-4	-12	31
2026-27	-284	-255	-182	1,794	-36	-4	-12	34
Total	-1,115	-940	-651	10,894	-99	1	-41	400

Additional information for 2026-27

GST distribution based on current method and proposed new method, 2026-27 (\$m)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Current method, unadjusted pool	31,103	24,796	18,693	7,222	8,322	3,115	1,876	4,772	99,900
New method, topped up pool	30,819	24,541	18,511	9,016	8,286	3,111	1,864	4,805	100,953
Difference	-284	-255	-182	1,794	-36	-4	-12	34	1,053

Relativities* used in the year 2026-27 in the Commonwealth proposal and in this scenario

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Commonwealth proposal	0.83	0.91	1.11	0.76	1.38	1.75	1.18	4.91
Scenario 3	0.96	0.90	0.93	0.72	1.27	1.60	1.12	5.36

* In each case, relativities shown are initial relativities prior to the imposition of "second strongest state" adjustment

Scenario 4 – Queensland becomes second strongest state by 2026-27

Description: Queensland becomes the second strongest state. Queensland has the second lowest relativity (higher only than Western Australia) by 2026-27. This scenario replicated the relativities that occurred in 2010-11. South Australia, for example, would be worse off by \$238 million in total over six years, including by \$116 million in 2026-27.

Queensland is second strongest state (2026-27 relativity is the same as occurred in 2010-11)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2019-20	0	0	0	1,440	0	0	0	194
2020-21	0	0	0	1,304	0	0	0	126
2021-22	27	34	33	1,193	27	12	4	79
2022-23	-168	-129	-92	1,023	-15	-0	-6	17
2023-24	-242	-194	-142	1,270	-31	-5	-10	17
2024-25	-303	-247	-182	1,707	-37	-5	-12	26
2025-26	-449	-375	-217	2,116	-67	-13	-20	24
2026-27	-688	-584	109	2,371	-116	-28	-32	20
Total	-1,822	-1,494	-491	12,425	-238	-39	-75	502

Additional information for 2026-27

GST distribution based on current method and proposed new method, 2026-27 (\$m)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Current method, unadjusted pool	30,897	25,743	18,371	6,872	8,410	3,155	1,936	4,516	99,900
New method, topped up pool	30,209	25,160	18,480	9,243	8,294	3,127	1,904	4,536	100,953
Difference	-688	-584	109	2,371	-116	-28	-32	20	1,053

Relativities* used in the year 2026-27 in the Commonwealth proposal and in this scenario

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Commonwealth proposal	0.83	0.91	1.11	0.76	1.38	1.75	1.18	4.91
Scenario 4	0.95	0.94	0.91	0.68	1.28	1.62	1.15	5.07

* In each case, relativities shown are initial relativities prior to the imposition of "second strongest state" adjustment

Scenario 5 – Peak of mining boom again in 2026-27

Description: A mining boom results in Western Australia's relativity falling to 0.30 by 2026-27. This is the same (low point) relativity that the state had in 2015-16. Tasmania, for example, would be worse off by \$248 million in total over six years, including by \$78 million in 2026-27.

Scenario 5 – Mining boom: Difference in GST revenue (\$m)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2019-20	0	0	0	1,787	0	0	0	153
2020-21	0	0	0	2,033	0	0	0	41
2021-22	-34	-19	5	2,337	15	9	1	21
2022-23	-743	-608	-436	2,620	-133	-35	-36	2
2023-24	-839	-695	-495	2,925	-152	-40	-41	1
2024-25	-1,036	-868	-606	3,731	-183	-47	-51	8
2025-26	-1,203	-1,019	-709	4,255	-216	-56	-59	7
2026-27	-1,606	-1,372	-958	5,444	-296	-78	-80	-1
Total	-5,462	-4,580	-3,199	25,132	-965	-248	-267	232

Additional information for 2026-27

GST distribution based on current method and proposed new method, 2026-27 (\$m)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Current method, unadjusted pool	30,674	24,389	22,630	3,011	8,873	3,532	1,843	4,947	99,900
New method, topped up pool	29,068	23,017	21,672	8,456	8,577	3,454	1,763	4,946	100,953
Difference	-1,606	-1,372	-958	5,444	-296	-78	-80	-1	1,053

Relativities* used in the year 2026-27 in the Commonwealth proposal and in this scenario

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Commonwealth proposal	0.83	0.91	1.11	0.76	1.38	1.75	1.18	4.91
Scenario 5	0.95	0.89	1.13	0.30	1.36	1.82	1.10	5.57

* In each case, relativities shown are initial relativities prior to the imposition of "second strongest state" adjustment

Scenario 6 – Relativities return to 10-year average by 2026-27

Description: By 2026-27, each state has a relativity derived by averaging that state’s relativities over the past ten years. The ACT, for example, would be worse off by \$150 million in total over six years, including by \$50 million in 2026-27.

Average relativities over ten years: Difference in GST revenue (\$m)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
2019-20	0	0	0	1,608	0	0	0	184
2020-21	0	0	0	1,657	0	0	0	106
2021-22	-1	11	22	1,747	22	10	3	48
2022-23	-448	-361	-257	1,797	-72	-17	-20	10
2023-24	-454	-370	-261	1,848	-73	-17	-20	11
2024-25	-551	-454	-315	2,376	-84	-19	-24	19
2025-26	-807	-676	-475	3,150	-136	-34	-37	15
2026-27	-1,055	-894	-630	3,904	-185	-48	-50	11
Total	-3,316	-2,744	-1,914	18,086	-528	-125	-150	404

Additional information for 2026-27

GST distribution based on current method and proposed new method, 2026-27 (\$m)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Current method, unadjusted pool	30,189	25,131	21,002	5,000	8,708	3,271	1,983	4,616	99,900
New method, topped up pool	29,134	24,237	20,372	8,904	8,523	3,224	1,932	4,627	100,953
Difference	-1,055	-894	-630	3,904	-185	-48	-50	11	1,053

Relativities* used in the year 2026-27 in the Commonwealth proposal and in this scenario

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Commonwealth proposal	0.83	0.91	1.11	0.76	1.38	1.75	1.18	4.91
Scenario 6	0.93	0.92	1.05	0.50	1.33	1.68	1.18	5.20

* In each case, relativities shown are initial relativities prior to the imposition of “second strongest state” adjustment