Date: 23 February 2010 FN-3-5-1

THE TREASURY
Kaitohutohu Kaupapa Rawa

To: Minister of Finance

AIDE MEMOIRE: OVERESTIMATED REVENUES FROM CHANGING THE GST RATE

Issue

On Friday 19 February Treasury advised your office that estimates provided earlier that week of the revenue gain from increasing GST to 15% were overstated by about $450-500m. The current revenue estimate is about $2.2b. Given the constraint of broad fiscal neutrality the reduction in estimated revenue implies smaller tax reductions elsewhere.

Key Points:

- Treasury is the identified lead agency on GST costings and the error is Treasury's. The overstated estimates were due to an algebraic error in the model used to forecast the revenue effect of changing the GST rate. Although the algebra is somewhat complex, the practical impact of the error was to treat all private consumption as being subject to GST. This resulted in the revenue estimates being overstated by around 20-25% (as only around 80% of consumption is subject to GST).

- We initially had confidence in the Treasury estimates as the Treasury and IRD GST estimates were very close. The good match was taken as confirmation that the costings were sound, resulting in incorrect estimates being provided to Ministers last Tuesday.

- The error was subsequently found as a result of a deeper examination late last week, which was triggered by mismatches between the Treasury and IRD estimates of the revenue effect of "clawback".

- The work to resolve mismatches in our respective estimates of "clawback" revealed that the closeness of the two GST estimates was coincidental; the Treasury and IRD estimates were actually measuring slightly different things (Treasury's GST revenue estimate assumes that the value of GST-inclusive consumption does not change following a GST increase and separately calculates clawback for the increase in after-tax incomes resulting from offsetting income tax reductions, while IRD assumes the value of GST-exclusive consumption does not change and calculates clawback only for the income tax reduction beyond that funded by the GST rise. In principle the two different approaches will generate the same aggregate cost, but allocate the GST and income tax clawback components of the package differently).

- This error has not compromised past GST budget forecasts, which are made using a different model. However past budget Ready Reckoners, Key Facts for Taxpayers cards, advice to the TWG and the excel-based Ballpark Calculator all include this error. However despite this, the latest GST corrected costing for

Budget 2010 is very close to the $2.15b costing generated for the TWG and Ballpark Calculator, with a difference for the 2011/12 year of $60m and a total difference over 3 years of $75m.

Key Actions

In response to this:

- An external review of our GST model and its outputs will occur immediately.
- We will undertake additional QA of the outputs of the other tax costing models to ensure that the methodology and costings used for the 2010 Budget are robust.
- Jeremy Corban, Deputy Secretary, will be accountable for the quality assurance of tax costings for the remainder of the 2010 Budget process.
- We will more systemically note in reporting the level of confidence we have in tax cost estimates.

The aim is to pick up modelling weaknesses <u>before</u> Ministers see the resulting numbers, and to explicitly identify in advice material risks to the estimates.

QA Processes

Costings of tax packages are developed using several different models. IRD, Treasury or MSD lead on different models, depending on which organisation has the best information and knowledge. Results of the different models are then combined and any cross-cutting issues identified (eg the interaction between NZS payments and tax revenues) to develop costings of total packages.

At present for tax models our usual QA processes consist of internal review of models and model results, and benchmarking against independently-developed IRD models. If material mismatches in revenue estimates appear, we work with IRD to identify the source of the mismatches. This improves the robustness of the models used by both organisations. This happened recently with the models used for estimating the effects of personal tax cuts, where an intensive QA and benchmarking effort has improved the accuracy of the models and, perhaps more importantly, identified the relative strengths and weaknesses of the models.

In the case of the GST model the initial, but coincidental, good match of Treasury and IRD GST revenue estimates gave false confirmation that the estimates were robust, therefore the more intensive review process was not triggered until the mismatches in clawback revenues revealed differences in the underlying GST models.

The error has been embedded in the Treasury model since 2001. It survived in part because increasing GST has not been seriously contemplated since 1989. Resources and testing has focussed on models of more direct relevance to past policy making, such as models used for personal tax changes. The current policy focus on revenue from GST rate changes flushed out the error.

The error was picked up through the normal benchmarking processes between Treasury and IRD. This underlines the value in both Treasury and IRD performing independent costings of major policy initiatives. I will discuss with IRD ways of working together to more reliably identify modelling differences and weaknesses earlier in policy processes.

While the key actions outlined above will improve the confidence in our costing estimates, it is worth bearing in mind that modelling the fiscal impact of tax changes is an inexact science. Data limitations and difficult-to-forecast behavioural responses impose limits on the accuracy of the best models. In addition, the estimated fiscal cost of the tax package will continue to change as assumptions are refined, policy decisions made and economic forecasts updated.

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