The Treasury

Budget 2018 Information Release

Release Document August 2018

https://treasury.govt.nz/publications/information-release/budget-2018-information-release

Key to sections of the Official Information Act 1982 under which information has been withheld.

Certain information in this document has been withheld under one or more of the following sections of the Official Information Act, as applicable:

[1]	to prevent prejudice to the security or defence of New Zealand or the international relations of the government	6(a)
[2]	to avoid prejudice the entrusting of information to the Government of New Zealand on a basis of confidence by the Government of any other country or any agency of such a Government	6(b)(i)
[4]	to prevent prejudice to the maintenance of the law, including the prevention, investigation, and detection of offences, and the right to a fair trial	6(c)
[11]	to damage seriously the economy of New Zealand by disclosing prematurely decisions to change or continue government economic or financial policies relating to the entering into of overseas trade agreements.	6(e)(vi)
[23]	to protect the privacy of natural persons, including deceased people	9(2)(a)
[25]	to protect the commercial position of the person who supplied the information or who is the subject of the information	9(2)(b)(ii)
[26]	to prevent prejudice to the supply of similar information, or information from the same source, and it is in the public interest that such information should continue to be supplied	9(2)(ba)(i)
[27]	to protect information which is subject to an obligation of confidence or which any person has been or could be compelled to provide under the authority of any enactment, where the making available of the information - would be likely otherwise to damage the public interest	9(2)(ba)(ii)
[29]	to avoid prejudice to the substantial economic interests of New Zealand	9(2)(d)
[31]	to maintain the current constitutional conventions protecting collective and individual ministerial responsibility	9(2)(f)(ii)
[33]	to maintain the current constitutional conventions protecting the confidentiality of advice tendered by ministers and officials	9(2)(f)(iv)
[34]	to maintain the effective conduct of public affairs through the free and frank expression of opinions	9(2)(g)(i)
[36]	to maintain legal professional privilege	9(2)(h)
[37]	to enable the Crown to carry out commercial activities without disadvantages or prejudice	9(2)(i)
[38]	to enable the Crown to negotiate without disadvantage or prejudice	9(2)(j)
[39]	to prevent the disclosure of official information for improper gain or improper advantage	9(2)(k)
[40]	not in scope	
[41]	that the making available of the information requested would be contrary to the provisions of a specified enactment	18(c)(i)
[42]	information is already publicly available or will be publicly available soon	18(d)

In preparing this Information Release, the Treasury has considered the public interest considerations in section 9(1) and section 18 of the Official Information Act.

THE TREASURY
Kaitohutohu Kaupapa Rawa

Treasury Report: Fiscal Strategy Model: update to long-term assumptions

Date:	30 April 2018	**Report No:**	T2018/979
		File Number:	AD-1-51

Action Sought

	Action Sought	Deadline
Minister of Finance (Hon Grant Robertson)	**Note** that changes have been made to the Fiscal Strategy Model's (FSM) underlying modelling. **Note** the proposed changes to assumptions in the FSM projections (revenue/tax-to-GDP and allowances) and provide feedback **Agree** to new assumptions for the operating and capital allowances (and their annual growth rates) in the FSM projections.	By 4 May 2018

Contact for Telephone Discussion (if required)

Name	Position	Telephone		1st Contact
[23]	Analyst, Modelling Research and Forecasting	[39] (wk)	N/A (mob)	✓
Peter Gardiner	Manager, Modelling Research and Forecasting	[39] (wk)	[23] (mob)	

Actions for the Minister's Office Staff (if required)

Return the signed report to The Treasury.

Note any feedback on the quality of the report

Enclosure: No

Treasury Report: Fiscal Strategy Model: update to long-term assumptions

Executive Summary

1. The material provided to you for Budget Matters on Tuesday 24 April includes a draft of the Fiscal Strategy Report (FSR) for your comments (T2018/1089). The Public Finance Act (PFA) requires the FSR to include 10-year projections of fiscal variables, which show likely future progress compared to your long-term fiscal objectives. The Treasury uses the Fiscal Strategy Model (FSM) to produce these projections on your behalf. A number of long-run trend assumptions are made in these projections. The FSR, together with the FSM projections, gives you the opportunity to present the Government's fiscal strategy.

2. This Treasury Report sets out the proposed new operating and capital allowance assumptions, along with proposed new long-term tax-to-GDP rates, to be used in the FSM's projections. We seek your feedback on these proposed new assumptions.

3. The FSM's long-term tax-to-GDP assumptions have, in the past, reflected historical averages. However, the FSM tax-to-GDP assumptions may also be modified to reflect any intended future tax policy changes.

4. Unless you have a desired tax-to-GDP rate that reflects a future tax policy objective, we recommend an update to the long-term tax-to-GDP assumptions to reflect updated historical averages. An update will account for recent revisions to the nominal GDP base and will incorporate more recent tax data that has become available. Table 2 in the Results section outlines the new tax-to-GDP long-term stable rates.

5. Operating and capital allowance assumptions in the FSM projections drive the trajectory of many of the fiscal aggregates. The allowance assumptions can be modified to reflect the Government's intended fiscal strategy and to deliver the desired outcomes for key fiscal aggregates.

6. The recent BEFU 2018 forecasts differ to those in HYEFU 2017/Budget Policy Statement (BPS). This difference, along with the recent changes to the modelling approach and the proposed tax-to-GDP change in the FSM, means the allowances you chose at HYEFU 2017/BPS will deliver a different outcome for key fiscal indicators (such as net core Crown debt).

7. We propose the following assumptions for allowances in the projections compared to those at BPS:

   a Unchanged operating allowances: $2.2 billion per Budget from 2023 growing by 4.5% p.a.

   b Lower capital allowances: $8.5 billion per Budget from 2023 growing by 4.5% p.a.

8. This combination of allowances would achieve broadly similar results to those in the BPS for the projected key fiscal aggregates.

Recommended Action

We recommend that you:

1. **Note** that to reflect recent changes to the Crown accounts, The Treasury has made some modelling updates to the Fiscal Strategy Model (FSM).

2. **Note** the proposed changes to assumptions in the FSM projections (revenue/tax-to-GDP and allowances) and provide feedback.

3. **Agree** to set the assumptions for operating and capital allowances in the Budget Economic and Fiscal Update (BEFU) 2018 FSM in order to achieve similar outcomes as in the Budget Policy Statement (BPS). Specifically we recommend the following allowances compared to those at BPS:

   a Unchanged operating allowances: $2.2 billion per Budget from 2023 growing by 4.5% p.a.

   b Lower capital allowances: $8.5 billion per Budget from 2023 growing by 4.5% p.a.

   Agree/disagree.

Peter Gardiner
Manager, Modelling Research and Forecasting

Hon Grant Robertson
Minister of Finance

Treasury Report: Fiscal Strategy Model: update to long-term assumptions

Purpose of report

4. The material provided to you for Budget Matters on Tuesday 24 April includes a draft of the Fiscal Strategy Report (FSR) for your comments (T2018/1089). The Public Finance Act (PFA) requires the FSR to include 10-year projections of fiscal variables, which show likely future progress against your long-term fiscal objectives.

5. The Treasury uses the Fiscal Strategy Model (FSM) to produce these projections on your behalf. A number of long-run trend assumptions are made for these projections. This report sets out and seeks your feedback on some key assumptions.

6. Specifically, this Treasury Report sets out the proposed new operating and capital allowance assumptions, along with proposed new long-term tax-to-GDP assumptions.

7. We set out a recommendation for allowances that would achieve similar fiscal outcomes to those outlined in the Budget Policy Statement (BPS). The Treasury can work with you to set alternative allowances in the projections should you wish to investigate different options.

The Fiscal Strategy Model (FSM): allowances and tax assumptions

The FSM projects the financial performance and position of the government over the medium term…

8. The FSM reflects the Government's medium-term fiscal strategy. Macroeconomic and fiscal variables are projected over a ten-year horizon, which commence after the five-year EFU forecasts. The FSM is published on The Treasury's website with each EFU.

9. The FSM is a growth-based model that builds on the latest EFU forecast base. Relatively simple economic and fiscal assumptions are used to drive the projections.

10. The model's projections are included in the FSR, which the Government is required to publish each year. The FSR must set out the medium-term objectives for fiscal policy and it must specifically set out the objectives for the key fiscal aggregates: operating expenses, operating revenues, level of total debt and total net worth. The FSM's projections of these fiscal variables are included in the FSR.

11. Operating and capital allowance assumptions in the FSM projections drive the trajectory of many of the fiscal aggregates. The allowance assumptions can be modified to reflect the Government's intended fiscal strategy and to deliver the desired outcomes for key fiscal aggregates. In the FSM, new policy spending initiatives are assumed to be funded by the operating or capital allowance.

12. The FSM's long-term tax-to-GDP assumptions have, in the past, reflected historical averages. Typically, the allowance assumptions, rather than the tax-to-GDP assumptions, are modified to deliver the outcomes that align with the Government's fiscal strategy. However, the FSM's tax-to-GDP assumptions may also be modified to reflect any intended changes in future tax policy.

…and we have recently made some changes to the FSM's underlying modelling.

13. To incorporate recent changes that have been made to the Crown accounts, The Treasury has updated the FSM's modelling. The updates also improve the modelling logic and simplify the underlying methodology.

The Treasury proposes an update to the FSM's long-term tax-to-GDP assumptions…

14. Unless you have a desired tax-to-GDP rate that reflects a future tax policy objective, The Treasury recommends that you continue with the existing approach to setting the long-term tax-to-GDP rates, which is to use long-term historical averages.

15. We recommend an update to the long-term tax-to-GDP assumptions to reflect updated historical averages. An update will account for recent revisions to the nominal GDP base and will incorporate more recent tax data that has become available since the last update, which was approximately three years ago.

16. Specifically, we recommend an update to the overall tax-to-GDP and individual tax category-to-GDP assumptions. Overall, we recommend a slight reduction in the tax-to-GDP rates. Table 2 in the Results section (overleaf) outlines the new tax-to-GDP long-term stable rates.

17. We also recommend an update to the transition rates for the overall tax revenue-to-GDP and individual tax categories-to-GDP so that they also reflect history. Table 3 in the Results section (overleaf) outlines the new transition rates.

18. In isolation, the proposed tax parameter changes leave us with a higher net core Crown debt outlook compared to HYEFU 17.

…and we also recommend a review the FSM's operating and capital allowance assumptions…

19. As the FSM is used to reflect the Government's intentions with respect to its fiscal strategy, the model allows for the operating and capital allowance assumption (and their respective growth rates) to be altered in the projections.

20. The recent BEFU 2018 forecasts differ from those in HYEFU 2017. This difference, along with the recent changes to the modelling approach and the proposed tax-to-GDP change in the FSM, means the allowances you chose at HYEFU 2017/BPS will deliver a different outcome for key fiscal indicators (such as net core Crown debt).

21. Specifically, lower allowances in the projections will need to be imposed to deliver similar outcomes for the key fiscal aggregates as in the BPS.

22. The model published on The Treasury's website alongside the BPS and HYEFU 2017 assumed the following allowances in the projection period:

    a Operating allowances of $2.2 billion per Budget growing by 4.5% p.a.

    b Capital allowances of $9.5 billion per Budget growing by 4.5% p.a.

23. These allowances resulted in the following outcomes:

    a Net debt of 17.7% of GDP in 2023 (the first projected year) and an overall decline to 15.9% of GDP by 2032 (the last projected year).

    b Core Crown expenses of 27.5% in 2023, reaching 28.2% by 2032.

    c Positive OBEGAL declining from 2.7% to 2.2% across the projections.

24. We apply the allowance assumptions (as set-out in point 22) to the near final version of the BEFU 2018 FSM. Compared to HYEFU 2017, the BEFU 2018 FSM projects a higher net debt (by 2.6 percentage points in 2032), slightly higher core Crown expenses and slightly weaker OBEGAL. This is driven by the modelling changes, tax-to-GDP update and a new forecast base.

…and we recommend the allowance settings be reviewed for the final BEFU 2018 FSM.

25. If you want to achieve broadly similar outcomes for the key fiscal aggregates as you did in the BPS, we propose the following assumptions for allowances in the projections:

a Unchanged operating allowances: $2.2 billion per Budget from 2023 growing by 4.5% p.a.

b Lower capital allowances: $8.5 billion per Budget from 2023 growing by 4.5% p.a.

26. This combination of allowances achieves broadly similar results to those in the BPS for the projected key fiscal aggregates. Please refer to Table 1 in the Results section.

Results

27. This section summarises the proposed changes to the operating allowances and tax-to-GDP ratios and summarises results of the key fiscal indicators for the following scenarios:

a HYEFU 2017.

b Near final BEFU 2018 with HYEFU 2017 operating and capital allowance assumptions (BEFU 18 with HYEFU 17 allowances).

c Near final BEFU with the proposed new allowances (proposed BEFU 2018).

28. Table 1 table summarises key fiscal indicator results for the first projected year and the last projected year for the different options:

Table 1: Key fiscal indicators (% of nominal GDP unless otherwise stated)

	HYEFU 2017		**BEFU 18 with HYEFU 17 allowances**		**Proposed BEFU 2018**	
Fiscal year	**2023**	**2032**	**2023**	**2032**	**2023**	**2032**
Net core Crown debt	17.7%	15.9%	18.2%	18.5%	18.1%	16.4%
Core Crown expenses	27.5%	28.2%	27.9%	28.5%	27.9%	28.4%
OBEGAL	2.7%	2.2%	1.9%	1.7%	1.9%	1.8%
Cumulative capital allowances ($NZ) across the forecasts and projections	$130.24 billion		$130.77 billion		$116.02 billion	

29. Table 2 sets out the core Crown tax-to-GDP long-term stable assumptions:

Table 2: core Crown tax-to-GDP

	HYEFU 2017	BEFU 18 with HYEFU 17 allowances	Proposed BEFU 2018
Source deductions	11.0%	11.0%	11.0%
Corporate tax	4.2%	4.2%	4.2%
Goods and services tax	7.4%	7.2%	7.2%
Hypothecated transport taxes	1.3%	1.3%	1.3%
Remaining tax types	4.4%	4.3%	4.3%
Inter-segment elimination	0.3%	0.3%	0.3%
Total core Crown tax revenue	**28.6%**	**28.3%**	**28.3%**

30. Table 3 sets out the proposed new transition rates for the tax categories

Table 3: transition rates across tax categories

	HYEFU 2017	BEFU 18 with HYEFU 17 allowances	Proposed BEFU 2018
Source deductions	0.05 percentage points p.a.	0.3 ppts p.a.	0.3 ppts p.a.
Corporate tax		0.4 ppts p.a.	0.4 ppts p.a.
Goods and services tax		0.2 ppts p.a.	0.2 ppts p.a.
Hypothecated transport taxes		0.1 ppts p.a.	0.1 ppts p.a.
Remaining tax types		0.3 ppts p.a.	0.3 ppts p.a.
Inter-segment elimination		0.1 ppts p.a.	0.1 ppts p.a.

Note: given tax rates are not currently at the long-term averages, these are the rates that the FSM assumes they transition.

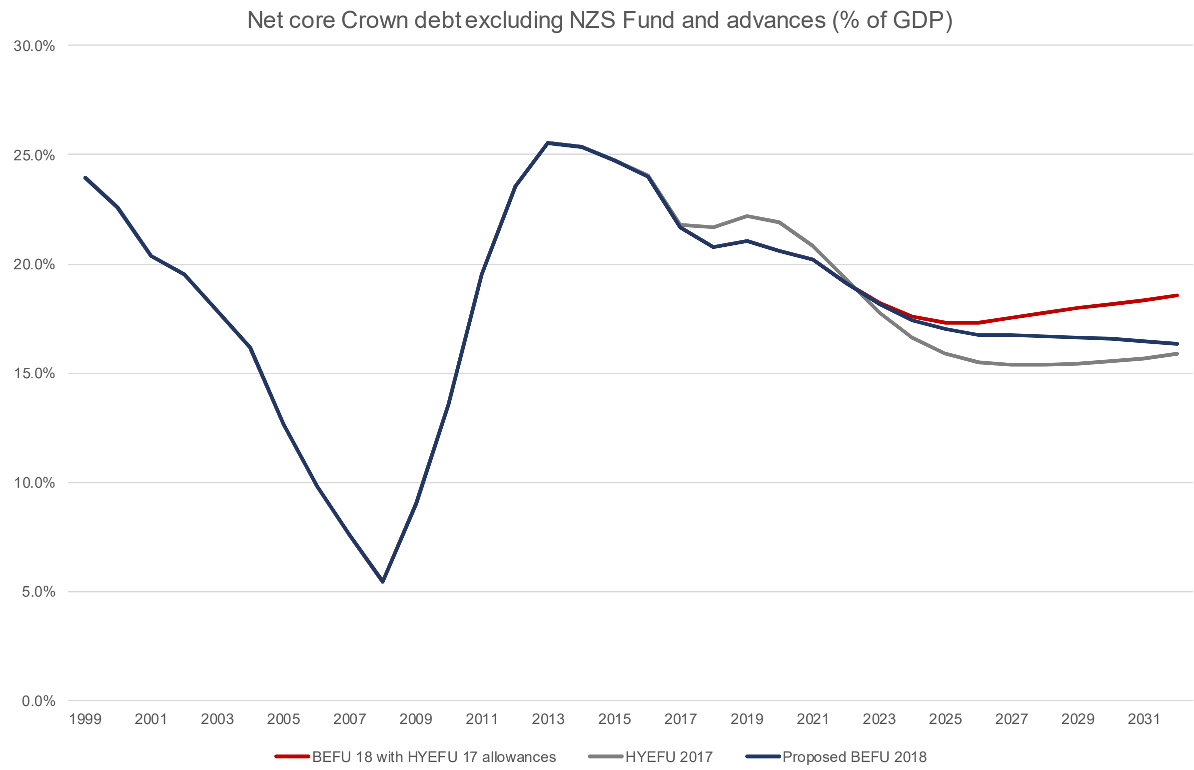
31. Table 4: sets out the core Crown tax-to-GDP long-term assumption and the proposed new allowance assumptions:

Table 4: allowance assumptions

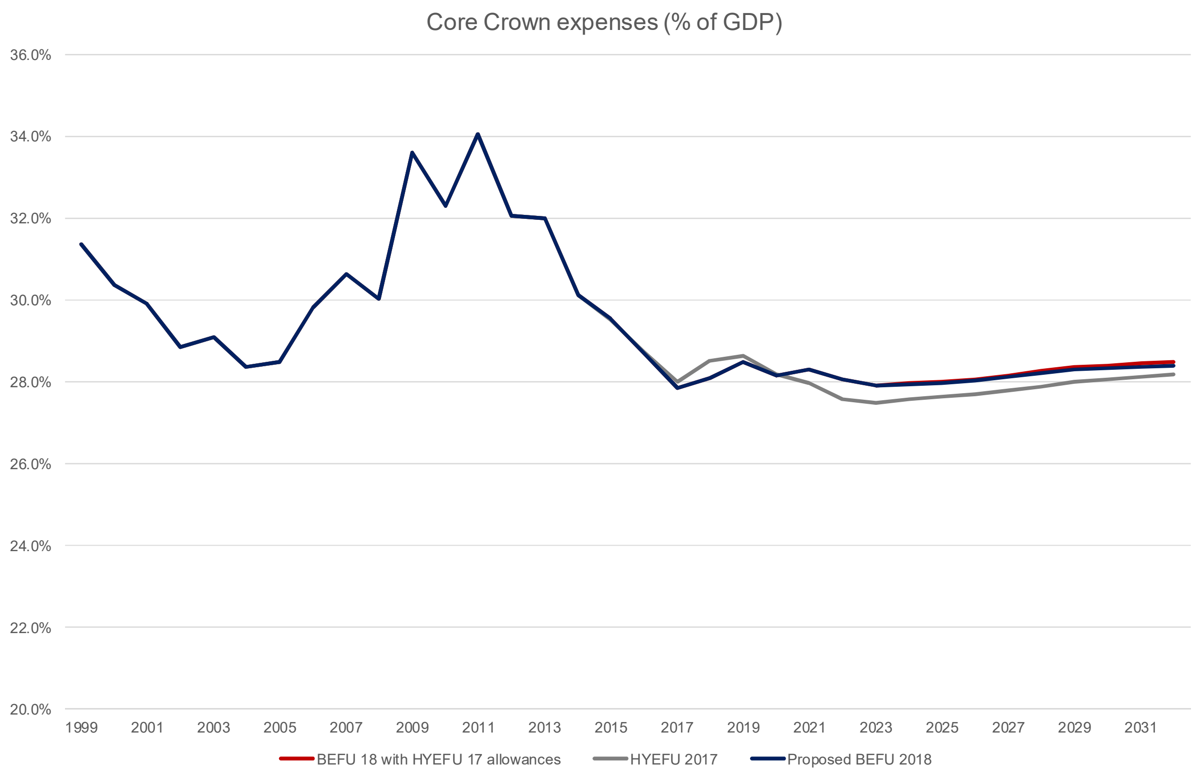
	HYEFU 2017	BEFU 18 with HYEFU 17 allowances	Proposed BEFU 2018
Operating allowance annual increment per Budget	$2.2 billion	$2.2 billion	$2.2 billion
Operating allowance annual growth rate	4.5%	4.5%	4.5%
Capital allowance annual increment per Budget	$9.5 billion	$9.5 billion	$8.5 billion
Capital allowance annual growth rate	4.5%	4.5%	4.5%

32. The following charts provide historical and forecast fiscal indicator tracks, along with the projected tracks under the different options.

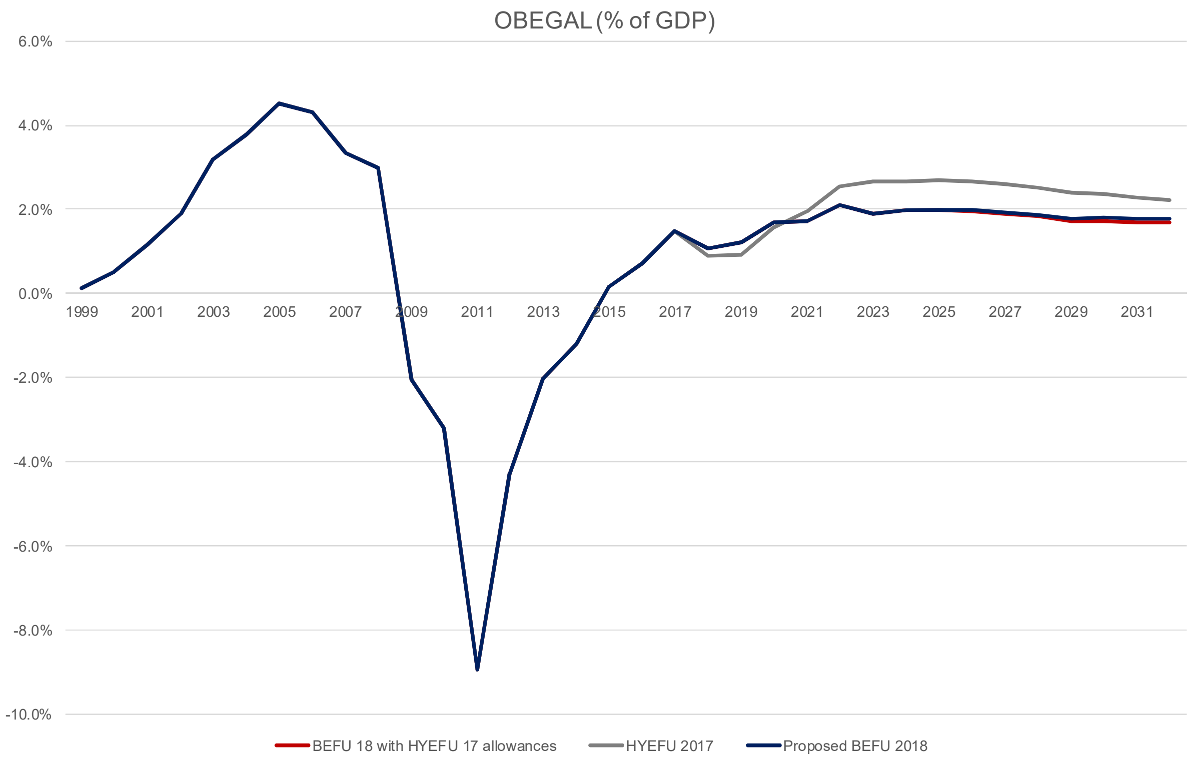
a Net debt:



b Core Crown expenses:



c OBEGAL:



Advantages of the proposed changes

33. The modelling changes made to the FSM reflect changes made to the Crown accounts. This ensures the FSM is based on our latest understanding of the dynamics of the fiscal variables.

34. The proposed changes to the FSM's long-term tax-to-GDP assumptions will be based on a longer and more up-to-date set of historical tax revenue data. Setting the long-term historical tax-to-GDP assumption in the FSM projections is a mechanical exercise with the historical 20-year average used (where possible). This assumption is updated, approximately, once every three-years or when the circumstances warrant a review of the assumption (for example if tax policy leads to markedly different tax rates or a rebase of nominal GDP).

35. The new allowance assumptions result in key fiscal variables that more closely reflect the results from HYEFU 2017 in 2032. This brings closer the divergence in the fiscal variables, and better aligns the consistency of the objectives for key fiscal variables between EFUs. The proposed changes also reconcile with the Government's setting of medium-term objectives for fiscal policy.

Risks

36. The proposed assumptions are higher than the current assumptions and this may raise the need to communicate the changes. However, making such changes to allowances is consistent with the Government's medium-term objectives for fiscal policy.

37. There is an on-going risk of error or omission in the FSM. Adherence to good quality assurance, project management, and change management practices along with on-going capability building help mitigate this risk.

38. There is inherent uncertainty with projecting future revenues. As is the case with any assumption, our new parameters for tax-to-GDP may not reflect actual future tax revenues. The projections are based on simple tax-to-GDP assumptions, and we make every best effort to ensure these assumptions reflect the most up-to-date historical tax revenue data.

Next Steps

39. The projections produced by the FSM will be included in the FSR. Therefore, you should provide us with your decision prior to the report being sent to proof-readers on 4 May 2018.