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*Federation Council*

**Debt Capacity Report**

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## Document preparation

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***We also pay respect to the wisdom of our Elders past, present and emerging.***

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## Contents

<b>Executive Summary .....</b>	<b>1</b>
<b>1 Introduction.....</b>	<b>2</b>
<b>2 Debt Capacity and Debt Ratios.....</b>	<b>5</b>
<b>3 Debt Capacity Modelling .....</b>	<b>8</b>
<b>4 Conclusion and Recommendations .....</b>	<b>12</b>
<b>References .....</b>	<b>13</b>

## Tables and figures

Table 1: Definitions and Means of Variables, FY2019 - FY2023 Inclusive.....	9
Table 2: Multiple Regression Results, 2019-2023 Inclusive .....	10
Figure 1: Debt Service Ratio.....	6
Figure 2: Nett Financial Liabilities .....	7

## Executive Summary

This report provides a comprehensive analysis of Federation Council's debt capacity. Our sophisticated empirical work indicates that Council has already exceeded a comfortable level of debt (and total liabilities). This result underscores the importance of securing a large permanent special rate variation as a matter of urgency. There are grave implications for both financial sustainability, future services, and intergenerational equity should a permanent increase to local government taxation not be forthcoming.

# 1 Introduction

The relationship between debt and financial sustainability is a profoundly misunderstood concept for most key stakeholders (see, for instance, some of the comments in Comrie, 2014). People often confuse debt as a source of revenue, when it is indeed nothing of the kind. Debt is merely a way to bring forward future revenues. Moreover, when we access future revenues through debt, the act comes at significant cost – finance institution fees, as well as interest charges. Furthermore, bringing forward revenues in this manner introduces considerable constraints on the decision-making calculus of future ratepayers.

Intergenerational equity should be a major concern when contemplating the drawing down of debt. When we bring forward future revenues, we effectively commit a future generation of ratepayers to funding goods or services that we will, at least partly, consume in the present. Being able to commit other, voiceless, people to pay for our spending clearly opens up a significant moral hazard.

Ironically, many commentators – such as the aforementioned Comrie, and the ILGRP's Sansom (2013) – have tried to assert that debt is required for intergenerational equity. Commentary of this sort is convenient for (state and some local government) politicians who may wish to clear backlogs or avoid increasing taxes for short term political gain. However, arguments in favour of debt routinely neglect the fact that our generation was bequeathed most of its public infrastructure completely unencumbered – it also ignores a palpable level of debt bias.

As the Nobel laureate Buchanan (1997) observed, debt bias is a completely rational decision for older residents because in many cases it is unlikely that they will remain taxpayers long enough to pay their fair share of the debt. Moreover, as we have already touched upon, debt allows politicians to deliver popular public goods and services without the inconvenience of asking current taxpayers to pay for same. When one considers the typical age of our politicians it is easy to understand the eye-watering national debt in Australia.

Notably, in the past, politicians were extremely debt averse because they saw the imposition of burdens on a future generation as a profound moral issue. Indeed, it was generally believed that to 'spend borrowed funds on ordinary items for public consumption was, quite simply beyond the pale of acceptable political behaviour' (Buchanan, 1997, p. 119). Furthermore, politicians were alert to the risk of ballooning debts – especially in the presence of structural budget deficits – with Roosevelt famously observing that 'any family can for a year spend a little more than it earns....but you and I know that a continuation of that habit means the poorhouse' (cited in Borna and Mantriprgada, 1989, p. 38). However, worsening financial sustainability circumstances, exacerbated by constraints or unwillingness to levy a reasonable taxation effort, means that debt sadly has to be a real consideration.

Debt *might* be morally licit under certain strict parameters, notwithstanding the fact that it is rarely a preferable state of affairs. Drew (2021) has employed economic and moral theory to establish six rules that should be observed for public debt to be considered morally defensible:

1. Debt must be only taken out for capital expenditure and not operational expenditure. By definition, operational expenditure refers to goods and services that will be fully consumed within twelve months. It can never be considered morally licit to force others to pay for what we have already consumed.
2. The asset financed through debt must have a long and predictable life. Unfortunately, governments tend to experience considerable difficulty in estimating the useful lives of assets, and

this condition thus warrants careful attention. At a minimum, the real useful life of the asset should at least be equal to the term of the prospective loan.

3. The asset must constitute something that future generations are likely to value. Because future ratepayers will be forced to pay for a component of the said asset, we must give careful consideration to whether they will be able to extract any value from it. Particular attention should be given to infrastructure that might become redundant (due to changes in technology), as well as *prima facie* vanity projects (statues and the like).
4. Debt must be assumed for good moral reasons. As we have seen, debt bias is not a good moral reason, and nor is a misapprehension that local government ought to be engaged in fiscal stimulus programs.<sup>1</sup>
5. Repayments must at least be equal to the rate of consumption of the asset and be quarantined in future budgets. Otherwise stated, repayments should at least equal the projected level of depreciation. Budgets should mark this money as committed so that it is not put to use to fund other projects (especially discretionary projects)
6. Repayments must involve sacrifice so that a *quid pro quo* is established. This means that taxes or fees should be increased to generate additional revenue commensurate with the required repayments<sup>2</sup>, or that cuts should be made to discretionary expenditure elsewhere in the budget.

Even if these rules are observed, a number of problems persist. These problems include: (i) the fact that debt capacity must be precisely known; (ii) the general absence of debt products whereby the term is consistent with the expected life of the asset<sup>3</sup> (such as buildings that might be expected to survive a century or more); (iii) the problems of accurately estimating the useful life – especially for long-lived assets (see, for example, Drew and Dollery, 2015).

To fully appreciate the aforementioned debt rules, it is helpful to consider matters from the perspective of the personal budget metaphor. This thinking device is an instantiation of the rhetorical trop of *kal vahomer* which asserts that we should at least apply the same standards to weighty matters as we do to ‘lighter’ ones.

In our personal finances, most of us would recoil from taking on large debts for frivolous items or experiences of a transitory nature, such as holidays. We, and our bank manager, would also wish to receive assurance that our incomes were large enough to service the debt – including in a scenario whereby interest rates rose (typically the commercial banking sector insists that incomes are at least three-times larger than projected repayments and that there is also a sufficient cushion when non-discretionary expenditures are accounted for). In addition, when we take out loans in our personal lives, we expect that repayments will commence more or less immediately, and that we personally will be responsible for meeting the repayments (not our children, grandchildren, or perfect strangers). We also usually acknowledge that the repayments will come with some sort of sacrifice – we might need to take on a second job or eschew luxuries.

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<sup>1</sup> Many economists are not convinced that fiscal stimulus is either effective or moral (see Buchanan, 1997; Drew, 2021). In addition, fiscal stimulus is best conducted by a tier of government with an appropriate scale of resources and at least a little influence over monetary policy.

<sup>2</sup> This is precisely what Federation Council did for the Aquatic Centre, and they should be commended for their prudent and morally responsible actions.

<sup>3</sup> The absence of a suitable debt vehicle means that a local government may be exposed to rate risk at regular intervals when a new loan needs to be negotiated.

It would be prudent to exercise at least the same sort of caution when it comes to public debt – and the debt rules that we set forth earlier will assist councils in this regard.

The remainder of this report is dedicated to carefully exploring the debt capacity of Federation Council. In the section that follows we will review two of the principal debt ratios used in the sector, with respect to the peer group of similar councils employed throughout all of these reports. Thereafter, we will conduct sophisticated empirical analysis that redresses most of the insufficiencies of crude ratio analysis. We also compare the average debt capacity predicted by our econometric work, with the current and planned debt load of council. We conclude with our recommendations regarding debt, financial sustainability, and the necessary special rate variation.

## 2 Debt Capacity and Debt Ratios

All of the regulators in Australia employ debt ratios, of one species or another, to try to measure the capacity of local governments to service their borrowings. However, in most cases the ratios have been directly imported from the corporate world with little thought given to the vastly different operating environment encountered by local governments. The most important difference is that debt, and leverage, in the corporate world is a way to amplify profits because most debt is used to purchase income generating assets. By contrast debt in local government tends to be for assets that not only fail to generate profits, but also typically come with substantial ongoing maintenance costs (for example, roads). For this reason, it is inappropriate to directly import ratios from the commercial world and the benchmarks used there have little relevance. In addition, the revenue collection patterns in the corporate and local government sector also differ considerably. Typically, revenue in corporate enterprises flows in on a daily basis. By contrast revenue in local government is lumpy – quarterly taxation receipts, as well as infrequent or annual grant flows. This is yet another reason why most ratios abjectly fail to measure the true debt capacity of councils (especially when the quarters do not map neatly onto financial years).

The use of crude ratios is further ill-advised because this method of analysis only accommodates a very limited suite of variables. In addition, the one-size-fits-all benchmarks associated with the ratios in each state totally neglect the very different types of revenue streams of the various kinds of councils (most notably differences between rural and metropolitan local governments which conduct different businesses – such as water and sewer – and have vastly different own source revenue potentials).

The overall outcome of the many serious deficiencies associated with debt ratio analysis is that end-users stand a high chance of being fundamentally misled (Drew and Dollery, 2015).

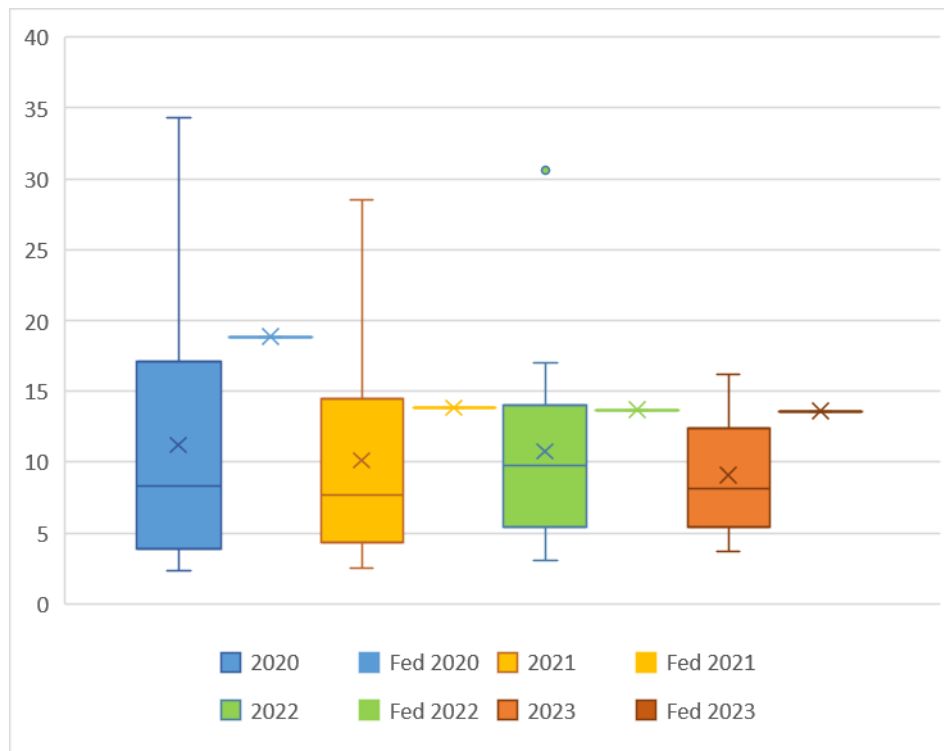
The Debt Service ratio, used in New South Wales, is a perfect exemplar of our criticisms. This metric divides earnings before interest, depreciation, taxation and amortisation (EBITDA) by the sum of principal repayments and borrowing costs. A ratio of this kind makes sense in the corporate world where there is a clear nexus between debt and revenue generation (and hence profits) but makes *no* sense for the local government sector. In addition, there are a number of other reasons to doubt the wisdom of using a metric of this kind. For instance, the ratio perversely penalises Councils for making additional repayments, even though doing so is often a feature of good capital management. Indeed, the ratio has been used in the past to try to argue that Councils with zero debt were somehow financially ‘unfit’ for the future. Second, the numerator is likely to be distorted in a rate cap environment because it is rarely representative of actual capacity to pay (see our Capacity to Pay report). Third, the ratio only takes account of some explicit liabilities.

Indeed, it should be very clear that the ratio is not fit for purpose given that it routinely fails to identify Councils suffering fiscal distress – indeed, just twenty-five Councils failed to meet the benchmark (2.0) over the last six years, and this figure notably excluded Councils subsequently placed into administration.

In Figure 1 we present the NSW metric which putatively measures debt capacity. The results over the last four financial years – relative to other Office of Local Government (OLG) group councils – seem to imply that the entire sub-cohort has considerable excess capacity. This suggestion could hardly be further from the truth, given that at least two of the peer group are experiencing significant and chronic financial distress. Figure 1 also seems to imply that Federation has even greater capacity than most in the peer group – finishing in the top quartile (top 25%), by a considerable margin for two of the years. As we will see later, this result is very misleading.



Figure 1: Debt Service Ratio

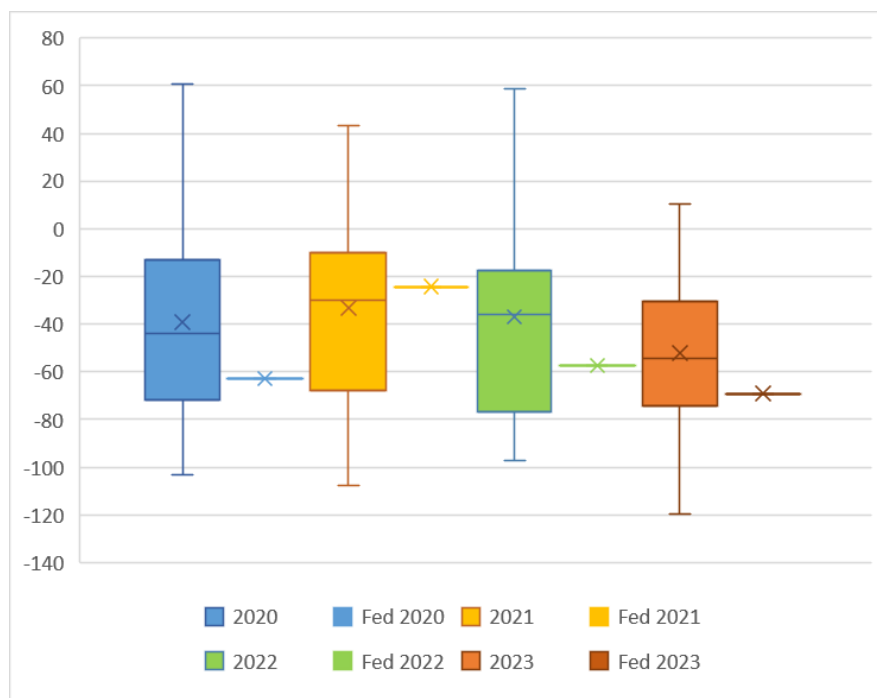


A much better, but still flawed, ratio is the nett financial liabilities metric which is used in most of the other states according to various alternate specifications. The denominator for this ratio – revenues less capital grants – better reflects how debt is actually serviced (from free revenue flows). The numerator – total liabilities less current assets – better reflects prudent capital management practices.

However, the ratio is still marred by at least two problems. First, analysis is restricted to a single year, and it is clear from recent events (such as the coronavirus pandemic) that atypical data might easily mislead end-users. Second, the nett financial liabilities ratio ignores actual revenue capacity which is a crucial flaw in a long-standing rate cap regime.

In Figure 2 we plot the nett financial liabilities ratio for the last four financial years relative to the aforementioned peer group. Please note that in this specification of the ratio that a more negative result is actually the desired outcome. Figure 2 seems to also suggest that Federation has surplus debt capacity, although at a much lower level. It is notable that one of the illustrated years was below typical (2021) and that none of the years were in the best quartile of results (contra the Debt Service data we illustrated earlier).

Figure 2: Nett Financial Liabilities



It is difficult to reconcile the very different assessments yielded by these two crude methods. Debt capacity is a serious matter and deserves a much more rigorous and stable approach.

One wouldn't ordinarily consider taking out a loan unless one was sure that one had sufficient revenue flows to repay it. As an aside, it is interesting to note that banks would also generally be averse to providing loans without sufficient assurance around future revenue flows. However, because of a concept known to economists as 'soft budget constraints' finance institutions tend to eschew prudent lending practice when it comes to local governments (Oates, 2005). This is because banks know that if a Council encounters an incapacity to repay, that the state government will place it into administration and engineer a back-door bailout through manipulation of grants and other levers (see the case of Central Darling Shire; Drew and Campbell, 2016 for confirmation of the well-documented effect in Australia). Finance institutions will always get their money back and for this reason often fail to apply the same stringent lending criteria to local governments, that they typically use for corporate or personal lending. Given this well document effect people should take no solace in the willingness of financial institutions to lend more money to a given council.

To understand what ought to be done to accurately ascertain debt capacity one would be well-advised to reflect on the personal budget metaphor again. {The lead author of this report used to be an executive in a commercial bank and is therefore well acquainted with lending protocol}. There are three main things that a bank will ask if a person applies for a loan (i) the number of parties to the loan, (ii) the incomes of the parties, and (iii) the length of time that they have held their job. The third criteria is about trying to understand the likelihood that incomes might change in the future – due to unemployment or a career change – and is thus not applicable to government (where revenue is largely guaranteed by punitive provisions in the Act (1993, NSW)). Therefore, for the case of local government the main factors in question are the number of parties (assessable properties) and the incomes of the ratepayers. Indeed, the scholarly literature has, in fact, illustrated an econometric approach to the question of ascertaining debt capacity, using precisely these data inputs (see, for instance, Ramsay et al., 1988; Levine et al., 2013).

Accordingly, in the section that follows we outline our empirical approach to a more precise determination of debt capacity with respect to the scholarly precedent.

### 3 Debt Capacity Modelling

In this section we conduct a multiple regression analysis on a six-year panel principally derived from the audited financial statements of all rural councils in NSW, augmented by OLG data.

In econometrics we use sophisticated mathematics along with robust statistical reasoning to first establish a formula that best describes the mean response of the dependent variable (in this case, total liabilities), to a number of relevant independent variables. We can then insert the precise values, for the Federation local government area, into the equation that we derive and use this to predict the liability capacity that would be expected if council were exerting a typical revenue effort.

Regression has a number of advantages over other potential methods. First, it allows us to take account of all of the important variables known to affect liability capacity simultaneously. In particular, it allows us to properly account for the number of assessments, as well as the incomes of the ratepayers. A second advantage of regression is that panel methods can allow us to ascertain matters over multiple years and thus mitigate any distortions that may have arisen if a given year were atypical. In addition, regression allows economists to make *ceteris paribus* claims – that is, precisely understand statistical associations between the regressand and regressors, holding all other things constant.

Readers should be aware that the three professors who have authored this report are extremely experienced scholars, with a combined output of well-over two hundred works, which have been cited around four thousand times by their scholarly peers. They are thus some of the best in the world, and routinely conduct far more sophisticated empirical analysis than even econometrics.

Econometrics is based on a strong body of theory developed over centuries and is something that students study at both the undergraduate and graduate levels. Typically, to become an econometrician one studies at least a bachelor's degree (three years), followed by a two year master's. All three of the professors involved in this present work hold doctorates in the field (the highest qualification available from universities), and all have successfully taught postgraduates at the highest level. For readers interested in further information on econometrics, we refer them to the introductory works of Wooldridge (2006) or Kennedy (2003).

As noted, the econometric work is considerably broader than the earlier ratio analysis, because it employs the entire cohort of rural councils (rather than merely the same OLG group) for the entire liability burden and goes back six years with respect to the data.

The final model specification that we employ in our analysis can be expressed as follows:

$$\mathbf{B}_{it} = \alpha_i + \beta_1 \mathbf{A}_{it} + \beta_2 \mathbf{X}_{it} + \mu_{it} \quad t = 1..6$$

Where **B** is the total liabilities, **A** is the disaggregated assessment data, **X** is a vector of relevant economic and demographic data for particular local government areas at specific times and **μ** is an idiosyncratic error term. The subscript *it* refers to the *i*<sup>th</sup> council entity and the *t*<sup>th</sup> year. Log transformations were employed to counter skewness when econometric diagnostic tests revealed the need to do so. We also conducted and satisfied all other relevant diagnostic tests. Table 1 provides the definition for each variable as well as summary data. It should be noted that for this particular econometric exercise we used standard OLS regression with year dummy variables. We elected to do so because fixed-effects is not an appropriate technique when the key data is almost time-invariant (it is known to provide biased estimates in these cases) – in addition, a random-effects model failed the well-known Hausman test and was therefore also not appropriate.

Table 1: Definitions and Means of Variables, FY2019 - FY2023 Inclusive

Variable	Definition	Similar Councils
<b>Rates</b>		
Total Liabilities	The sum of current and non-current liabilities as per the audited financial statements.	20424.79
<b>Assessments</b>		
Residential (ln)	Number of residential assessments, logged	7.916
Farm (ln)	Number of farm assessments, logged	6.879
Business (ln)	Number of business assessments, logged	5.800
<b>Income Controls</b>		
Mean employee income (ln)	Mean employee income (lagged), logged	10.807
Mean unincorporated business income	Mean unincorporated business income (lagged)	15507.13
Aged	Proportion of people on an aged pension	13.614
DSP (ln)	Proportion of people on a disability support pension, logged	1.456
Newstart (ln)	Proportion of people on a Newstart allowance, logged	1.436
Carer (ln)	Proportion of people on a carers' pension, logged	0.416
Single (ln)	Proportion of people on a single parent pension, logged	0.400

In Table 2, we detail the major outputs arising from our econometric work. It is important to remember that all associations are *ceteris paribus* claims – that is, the coefficients can only reasonably be interpreted if one considers that all other variables would be held constant. It should also be noted that the results in Table 2 are only an interim step – the main output from the exercise is an indication of the total liability capacity, assuming average revenue effort.

The number of residential assessments is statistically significant at the highest level of confidence. This result suggests that a one percent increase to the number of residential assessments is associated with a

\$128,000 increase in liability capacity, *ceteris paribus*. The aforementioned association is consistent with what we found in the capacity to pay report and arises from the fact that residential assessments typically attract a higher rate of taxation on their unimproved land values than do farm business assessments. This is a pleasing concordance which gives additional reason to have confidence in the results.

**Table 2: Multiple Regression Results, 2019-2023 Inclusive**

	<b>Cohort</b>
Number of residential assessments (ln)	12873.16** (3130.777)
Number of farm assessments (ln)	-2785.96 (1883.02)
Number of business assessments (ln)	7759.857* (3312.27)
Income variables	Yes**
Welfare receipts	Yes**
n	266
Coefficient of determination	0.5275

+p < 0.10, \*p < 0.05, \*\*p < 0.01. Standard errors in parentheses

Predicted liability capacity was quantified by inserting the precise figures for Federation Council into the equation previously derived. The results were relatively stable over the last few years ranging from a nominal low of \$28.7 million in 2021 through to \$31.725 million in 2023. It is natural for these numbers to vary a little year by year, and grow in response to increasing incomes, assessment growth, and the time value of money.

The total explicit borrowings at Federation Council as at 30 June 2023 was \$9,916,000 and the total liabilities some \$28.844 million. Since this time council has drawn down an additional \$3.8 million for the upgrade of the water infrastructure at Howlong.

According to our econometric work, Federation Council has already exceeded its average consolidated liabilities capacity, by some nine hundred thousand dollars<sup>4</sup>. Indeed, Federation's current liabilities would seem to place them firmly within the 8<sup>th</sup> decile, compared to other rural councils. Federation clearly has no additional capacity to take on more liabilities and we would caution Council against doing so in the absence of a large permanent special rate variation being approved. Even if a SRV was successful this should not be considered to be a licence to take out debt. Any debt would need to comply with the six rules we outlined earlier. Further investigations around capacity would also be prudent.

Indeed, the liability plight of Council underscores the need for the community to pay at least an average, if not greater, level of taxes. At present it would be hard to argue that there is any generational equity, and we are unwilling to provide any assurance around sustainability. Thus, this Debt Capacity report confirms

<sup>4</sup> We also ran the regressions just for the explicit borrowings. This supplementary work suggested that consolidated explicit debt was some two-and-a-half millions dollars over the average debt capacity and that recent borrowings had placed Federation into the 9<sup>th</sup> decile relative to the peer group.

that the matter of a permanent SRV is of the gravest importance for the current and future residents of the Federation area.

## 4 Conclusion and Recommendations

This Debt Capacity report – especially our sophisticated econometric work – confirms that Federation Council is in a serious financial sustainability predicament. There is no capacity for Council to take on any further debt in the absence of a large permanent SRV being approved. Indeed, this report thus provides strong support for a large permanent SRV consistent with the OLG Guidelines.

To preserve intergenerational equity, it is imperative that a large permanent SRV is secured so that the *quid-pro-quo* required for morally licit debt is satisfied. The proposed SRV will merely ensure that current debt loads are serviced in a morally defensible manner.

We underscore that the liability levels of Federation Council are of some concern and caution Council against taking on further debt until such time that a large permanent SRV has been secured. Even after a successful SRV, things would be tight and proper investigations would need to be made at this time. We note that Council had made its debt decisions in the past with reference to the OLG Debt Service ratio and that this situation underlines the need for the OLG to urgently review the competency of its financial sustainability metrics and benchmarks.

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