INTERNATIONAL CENTRE FOR FINANCIAL SERVICES | THE UNIVERSITY of ADELAIDE

Evaluation of the proposed changes to superannuation tax concessions

George Mihaylov BMa&CompSc(Stat) BFin(Hons) PhD *Adel*

Ivan Obaydin BCom(CorpFin) BCom(Hons) PhD *Adel*

Ralf Zurbruegg BSc(Econ) *LSE*, MSc PhD *Manc*

Research report compiled for the SMSF Association by the International Centre for Financial Services, The University of Adelaide

October 2023

Contents

Tables

Executive summary

This project examines the Australian Government's proposal to reduce the tax concessions available to individuals whose total superannuation balance exceeds $3 million. The scope of the project focusses on individuals who are SMSF members, and our analyses backtest the proposal against a large sample of SMSF members for the financial years ending in 2021 and 2022.

The key findings of the research are outlined below:

- We approximate that, nationally, anywhere from 44,000 up to as many as 50,000 SMSF members might be affected by the proposed reduction in tax concessions.

- The distribution of additional tax liability amounts across individuals is highly skewed. In 2021, we estimate a mean added liability of almost $89,000 per member, versus a median added liability of approximately $28,000. In 2022, we estimate a mean added liability of just over $83,000 per member, versus a median added liability of around $9,000.

- The skewness we observe in the member-level backtested tax liabilities implies that the largest share of new total tax revenue will be contributed by the top 1% of affected members. This share would have been over 27% of total new tax revenue in 2021, and almost 60% of total new tax revenue in 2022.

- Estimating member earnings using Label O 'Allocated earnings or losses' from the SMSF annual return yields close to identical results to those from the current formula proposed by Treasury.

- We estimate that somewhere between 3% and 11% of affected SMSF members will find it difficult to cover the new tax expense from liquid assets within their superannuation. This proportion is higher during periods of capital market growth (i.e., 2021) and lower during periods with bearish capital markets (i.e., 2022).

- We estimate an approximate 4-fold increase in the rate of liquidity problems, from 3.1% to 13.5%, once we account for members meeting the added tax expense in a prior period. This implies an additional cumulative liquidity risk factor for affected members.

Section 1: Project overview and objectives

This research note evaluates the Australian Government's *'Better targeted superannuation concessions'* consultation paper (Treasury, 2023). The consultation paper outlines the Government's proposal to reduce the superannuation tax concessions available to individuals whose total superannuation balance (TSB) exceeds $3 million, with the changes set to apply from 1 July 2025. The proposed reduction to tax concessions will effectively double the headline tax rate, from 15% to 30%, but only on earnings that can be attributed to the proportion of a member's TSB that exceeds the $3 million threshold. Tax concessions on earnings attributed to TSB amounts below the threshold balance will remain unchanged. Importantly, Treasury estimates that the tax reform will impact less than 80,000 Australians.

The scope of this project is to examine the likely effects of the proposal for individuals who are members of a self-managed superannuation fund (SMSF). To do this, we backtest the proposed tax concession reduction against a large sample of SMSFs for the 2020-21 and 2021-22 financial years. Specifically, we (1) estimate the number of impacted SMSF members in Australia, (2) examine the potential consequences for SMSF liquidity in having to meet the new tax obligation, and (3) evaluate the methodology outlined by Treasury for calculating the augmented tax liability. This report presents our findings and commentary.

Section 2: Analyses and results

2.1 Sample

The sample made available for this project, jointly by BGL Corporate Solutions, Class Limited, and SuperConcepts Pty Ltd, is once again a significant point of strength and differentiation for the research and findings we present. We observe financial data on more than 720,000 individual SMSF members each year over the period 2021-2022 (structured as an unbalanced panel).[1] The data collected was intentionally selected to enable the researchers to simulate

[1] 'Unbalanced panel' refers to data that offers a cross-section of members over multiple years, but where not all individuals are observed in every year of the sample frame. As a result of using an

the impact of the proposal to reduce the superannuation tax concessions available to individuals whose TSBs exceed $3 million (Treasury, 2023).[2] It contains 12 SMSF accounting line items for each member. Table 1 presents a breakdown of the sample size by year, highlighting the sampling proportion as a percentage of the full population of SMSF members. On an annual basis, the sampling proportions are consistently just over two thirds of all SMSFs (>67%). The large sampling proportion available for this research implies not only that the super members included in the study are likely to be representative of the broader population, but that any financial modelling based on this sample is also likely to be reliable as a result.

Table 1. Annual sample sizes and sampling proportions

	2021	2022
Sampled SMSF members	722,248	739,252
Total SMSF members	1,071,990	1,100,500
Sampling proportion	67.4%	67.2%

Note: Sampling proportions are calculated as the ratio between the number of sampled SMSF members available for this research and the total number of SMSF members listed in the ATO's Self-managed super fund statistical report as of June each year (ATO Table 1, 2023).

2.2 Impacted SMSFs

In this section, we use two methods to estimate the number of impacted SMSF members nationally. First, we use the unbalanced panel of members available for this research (see Table 2). Our unbalanced panel contains all SMSF members whose anonymised data was provided to us, irrespective of whether they appeared in just one, or both years over the sample frame. As a result, the unbalanced panel is sensitive to new account openings and account closures. In our second estimation, we use a balanced panel of only those individuals who were SMSF members in both 2021 and 2022 (see Table 3).

unbalanced panel, some of the members included in our analyses only have financial data available for one of the two sampled years. This is done to maximise the number of included observations.

[2] A key limitation of this research is that we are unable to observe TSB's directly for any of the members included in our data. This means that our results are statistically conservative, likely underestimating the total number of SMSF members impacted by the proposed reform. Moreover, our results also underestimate the size of the tax payable for at least some members who are correctly captured.

Table 2. Estimated proportion of affected SMSF members – unbalanced panel

	2021	2022
Affected SMSF members	32,256	29,677
Sampled SMSF members	722,248	739,252
Proportion	4.5%	4.0%
Overall estimated impact[a]	~47,876	~44,180

(a) Overall estimated impact is calculated as the sampled proportion of affected members multiplied by the total number of SMSF members in Australia (ATO, 2023).

Table 3. Estimated proportion of affected SMSF members – balanced panel

	2021	2022
Affected SMSF members[a]	31,892	31,892
Sampled SMSF members	696,256	696,256
Proportion	4.6%	4.6%
Overall estimated impact[b]	~49,102	~50,408

(a) Affected SMSF members are those with closing account balances ≥ $3,000,000 as at June 30 in at least one period (i.e., either in 2021 (3,216 members); or in 2022 (1,967 members); or in both 2021 and 2022 (26,709 members).

(b) Overall estimated impact is calculated as the sampled proportion of affected members multiplied by the total number of SMSF members in Australia according to the ATO (2023).

Our unbalanced panel estimates suggest that there are, at a minimum, somewhere in the order of 44,000 to 48,000 SMSF members in Australia that will be impacted by the change in tax concessions for super (see Table 2). This is a lower bound estimate (i.e., a floor rather than a ceiling) because we cannot account for the non-SMSF superannuation assets that will also be included in member TSBs, since they are unobservable in our data. Superannuation assets external to the SMSFs we observe will only serve to increase TSBs. In addition, our analyses back test for 2021 and 2022, whereas the actual tax reform is proposed to be implemented from 2025 onwards, implying a strong possibility that the number of affected members will have increased by that time due to both new accounts and aggregate growth in superannuation assets.

The results from Table 3 show that there might be as many as 49,000-50,000 SMSF members in Australia that will be impacted by the change in tax concessions for super, year-on-year, based on our balanced panel. While these results are slightly higher, they are likewise floor estimates for the actual number of impacted members based on TSBs by 2025. Overall, our results, suggesting that anywhere between 44,000 and 50,000 SMSF members will be affected, seem in line with the overall estimate from Treasury, who state that the change will impact "… less than 80,000 people" (including both those in SMSFs and those who are only in APRA funds) (Treasury, 2023). This suggests that a majority of the new tax burden will be borne by SMSF members.

Finding 1: *We approximate that, nationally, anywhere from 44,000 up to as many as 50,000 SMSF members might be affected by the proposed reduction in tax concessions, based on multiple point estimate analyses from the 2021 and 2022 financial years.*

Importantly, we also use our balanced panel to identify 26,709 SMSF members whose year-end closing account balance exceeds $3M in both 2021 and 2022. In the next section, we isolate this subset in order to examine the potential effect from members depleting their liquidity in one year, and then having to again meet the increased tax liability in a subsequent year.

2.3 Tax liability estimates

In Table 4 we provide a notional breakdown of the member-level tax liability estimates, based on our results backtesting the proposed tax reform over the 2021 and 2022 financial years. We take Treasury's (2023) formula for member earnings, based on adjusted annual differences in member TSBs, and replicate the methodology for our unbalanced sample of SMSF members. Treasury's (2023) proposed earnings calculation is based on the following formula:

$$Earnings = (TSB_{Current} + Withdrawals - Net\ Contributions) - TSB_{Prior}$$

Table 4. Tax liability estimates

	2021	2022
SMSFs with negative earnings[a]	703 (2.2%)	15,339 (51.7%)
SMSFs with near zero earnings[b]	232 (0.7%)	603 (2.0%)
SMSFs with tax liability amount		
$1-$1,000	1,251 (3.9%)	2,127 (7.2%)
$1,001-$10,000	6,856 (21.3%)	4,985 (16.8%)
$10,001-$100,000	17,371 (53.9%)	5,079 (17.1%)
$100,001-$1,000,000	5,551 (17.2%)	1,437 (4.8%)
$1,000,000+	292 (0.9%)	107 (0.4%)
Median additional tax liability	$28,102.68	$9,127.92
Mean additional tax liability	$88,958.67	$83,076.05
Total estimated tax revenue	$2.78B	$1.14B

(a) Funds with negative earnings in any period are exempt from the new tax in that period – negative earnings can be used to offset future positive earnings (Treasury, 2023: p. 11).
(b) Estimated additional tax liability for these funds is less than $1.

The results show a small minority of negative or near-zero earning members in 2021, during what was widely a bull capital market. This reverses during the bear market in 2022, where more than half of all affected members reported negative earnings. This is in line with what we would expect, with the total estimated additional tax revenue attributable to SMSF members similarly dependent on the broader economic climate (i.e., $2.78B in 2021 versus $1.14B in 2022). As with any modern wealth distribution, the results in Table 4 also return a highly positively skewed breakdown of the backtested member-level liabilities (this is why we use logarithmic brackets in Table 4). This means that, even among the top ~4.0-4.5% of highest net worth superannuation balances, the vast majority of the total taxation burden from the proposed tax change is estimated to be borne by the top 1% of members.[3] For example, of the $2.78B in total estimated additional tax revenue that this tax would've generated in 2021, the top 323 SMSF member accounts would've contributed 27.6% (or ~$768.3M). Likewise, the top 297 SMSF members account for approximately 59.2% (or ~$697.7M) of the $1.18B in total estimated additional tax revenue that this tax would've generated in 2022.

[3] Note, this is referring to the top 1% of the top 4.5%, so in effect we're referring to the top ~0.05% of SMSF members with regard to overall wealth.

Finding 2: *The distribution of added tax liability amounts across individuals is highly skewed. In 2021, we estimate a mean added liability of almost $89,000 versus a median added liability of approximately $28,000. In 2022, we estimate a mean added liability of just over $83,000 versus a median added liability of around $9,000.*

Finding 3: *The skewness we observe in the member-level backtested tax liabilities implies that the largest share of new total tax revenue will be contributed from the top 1% of affected members. This would have been over 27% in 2021, and almost 60% in 2022.*

2.4 Alternative calculation method

In Table 5 we briefly evaluate an alternative method to Treasury's approach for estimating member earnings. The alternative is based on using *Label O 'Allocated earnings or losses'* from the member section of the SMSF annual return.

Table 5. Tax liability estimates – alternative calculation method

	2021	2022
SMSFs with negative earnings[a]	711 (2.2%)	14,207 (47.9%)
SMSFs with near zero earnings[b]	219 (0.7%)	546 (1.8%)
SMSFs with tax liability amount		
$1-$1,000	1,255 (3.9%)	2,286 (7.7%)
$1,001-$10,000	6,879 (21.3%)	5,458 (18.4%)
$10,001-$100,000	17,355 (53.8%)	5,572 (18.8%)
$100,001-$1,000,000	5,545 (17.2%)	1,497 (5.0%)
$1,000,000+	292 (0.9%)	111 (0.4%)
Median additional tax liability	$28,039.34	$9,079.34
Mean additional tax liability	$88,890.03	$78,945.44
Total estimated added tax revenue	$2.78B	$1.18B

(a) Funds with negative earnings in any period are exempt from the new tax in that period – negative earnings can be used to offset future positive earnings (Treasury, 2023: p. 11).
(b) Estimated additional tax liability for these funds is less than $1.

The results from Table 5 are almost identical to those from Table 4. Using amounts entered under *Label O 'Allocated earnings or losses'* from the member section of the annual return yields quantitatively similar, and often identical, results to constructing earnings from the various input line items as outlined by Treasury (2023).

Finding 4: *Estimating member earnings using Label O 'Allocated earnings or losses' from the SMSF annual return yields close to identical results to those from the current formula proposed by Treasury.*

2.5 Member liquidity – unbalanced panel

Table 6 evaluates how well prepared SMSF members are to meet the new tax obligation using our unbalanced sample. Data limitations restrict our ability to statistically model member liquidity in two key dimensions. First, we are unable to observe member behaviour in the lead up period, or any hypothetical equivalent, to the implementation of the tax reform. Hence, our results are subject to variation based on how individuals might prepare for the reform. Second, the added tax liability is proposed to accrue to members themselves. While members can cover the eventual expense with funds external to super, we do not have access to member data outside of super, and hence cannot model member liquidity outside of super either. Given these limitations, we model the ability of SMSF members to meet the increased tax burden based solely on the liquidity available within their superannuation holdings.

Table 6. Tax liability estimates – member cash and term deposit balances

	2021	2022
Members with estimated tax liability greater than account cash balance + $5,000	3,532 (11.0%)	1,047 (3.6%)
Members with estimated tax liability and account cash balance within ± $5,000	784 (2.5%)	658 (2.2%)
Members with estimated tax liability less than account cash balance – $5,000	27,683 (86.5%)	27,782 (94.2%)

We find that a large majority of affected SMSF members seem well prepared to meet the burden of the proposed tax increase (see Table 6). Based on our backtesting, in 2021 (2022), we show that more than 86% (94%) of affected members would have had additional tax liabilities that are less than their cash and term deposit balance minus $5,000.[4] Perhaps more importantly, we also observe a clear minority (around 3-11% of affected members, depending on the period of interest), for whom meeting their obligations under the proposed tax reform would pose a potentially undue burden (i.e., their estimated tax liability is at least $5,000 greater than their account cash balance). This burden is associated with (1) the risk of a liquidity shock, because their cash balances are insufficient to meet the new liability, and (2) further possible transaction (and other) costs for the funds of these members. In total, we see that as many as several thousand SMSF members might find themselves in this position in any given year, so this motivates our final analysis below.

Finding 5: *Based on our unbalanced panel, we estimate that somewhere between 3% and 11% of all SMSF members will find it difficult to cover the new tax expense from liquid assets within their superannuation, with this proportion increasing more during strong economic conditions and periods of capital market growth.*

2.6 Member liquidity – balanced panel

Our analysis in Section 2.5 above is based on our unbalanced panel. However, within our unbalanced panel, we also have access to a balanced panel subset that allows us to track a large number of funds across both 2021 and 2022. We use the balanced panel to examine the extent to which the financial position of SMSF members deteriorates in 2022, if they would have paid an additional tax liability in 2021. The results are displayed in Table 7.

[4] We note that this is likely to include these members incurring additional costs/ losses associated with term deposit early exit fees and forfeited interest payments. Our data does not segregate cash from term deposits so we are unable to estimate the precise extent to which member cash balances are subject to realisation costs.

Table 7. Tax liability estimates – augmented balances

	2021	2022	2022-Augmented[a]
Members with estimated tax liability greater than account cash balance + $5,000	3,242 (12.1%)	820 (3.1%)	3,605 (13.5%)
Members with estimated tax liability and account cash balance within ± $5,000	639 (2.4%)	700 (2.6%)	529 (2.0%)
Members with estimated tax liability less than account cash balance – $5,000	22,828 (85.5%)	25,189 (94.3%)	22,575 (84.5%)

(a) The results in this column are based on augmented cash balances for 2022, calculated as each member's 2022 cash balance minus any additional tax liability payable from 2021.

In our view, this result is critical. We show a more than 4-fold increase (from 820 to 3,605) in the number of SMSF members who would've experienced a liquidity shortfall in 2022, once we account for the incurred expense of meeting the new tax liability in 2021, relative to just looking at 2022 member accounts in isolation. This suggests an additional, potentially cumulative, adverse effect of the new tax on SMSF liquidity over time. Our estimates suggest that approximately 13.5% of our balanced panel affected members (or 3,605 out of 26,709) would have incurred additional tax liability exceeding their cash and term deposit balances plus $5,000 within 2 years of introduction, back-tested post-2021. At that rate, a conservative floor estimate for the total number of illiquid SMSF members is approximately 6,800 (~ 13.5% of 50,408), within the first 2 years of adoption. In the medium to long term, we would expect that the ratio of illiquid SMSF members reaches some low equilibrium, whereby most members meet the additional tax burden by liquidating assets to cover cash shortfalls on a needs basis in advance of the expense. However, this is likely to have negative implications for the financial performance of the impacted funds.

Finding 6: *Using our balanced panel, we estimate an approximate 4-fold increase in the 2022 rate of liquidity problems, from 3.1% to 13.5%, once we account for the cumulative burden of meeting the added tax expense in successive periods.*

2.7 Unrealised capital gains commentary

In this section we discuss some of the implications of taxing unrealised capital gains, an implicit feature of the proposal. Taxation on unrealised capital gains is rare among OECD countries, and rarer still in OECD pension systems. Australia's tax system clearly delineates between income and capital gain taxes (CGT), and the CGT regime, which has been in place now for almost 40 years, is based primarily on realised gains evidenced by completed transactions. Given both the benchmarking to other OECD nations and Australia's own economic history, we interpret the structure of the current proposal - to reduce superannuation tax concessions for individuals with TSBs in excess of $3 million - as a somewhat radical departure from existing taxation policy, with potentially far broader consequences than just those outlined by Treasury in their consultation paper.

While we are aware that a similar argument for taxing unrealised capital gains has been put forward by the White House Office of Management and Budget (OMB, 2021), it is important to emphasise that the OMB considers this only in the context of individual 'super-wealth'. Their analyses are in no way related to the retirement system in the United States. Given the rather substantial difference between a Forbes 400 billionaire and an Australian farmer who holds their $3.5M farm in a SMSF, we question whether Australia's mandatory retirement savings system is the appropriate vehicle to address super wealth and wealth inequality. At face value, the new tax mechanism, and in particular the proposal to include unrealised capital gains in earnings estimates, seems at odds with the purpose of superannuation as a long-term investment vehicle aimed at providing financial security in retirement. We outline our most critical concerns below:

1. Our results above suggest a substantial liquidity burden for a non-negligible proportion of affected SMSF members. Asset rich, income poor members are unlikely to be able to cover the additional tax liability. We also find that this problem is likely to worsen over time, as unrealised capital gains accrue while existing liquidity diminishes based on prior years.

2. Our backtesting results also indicate that the inclusion of unrealised gains in the calculation of member earnings (based on annualised differences in member TSBs)

can produce substantial year-on-year volatility in the taxation environment for superannuation. We see a large difference in the number of funds impacted by the tax change in 2021 versus 2022, with this seemingly directly related to the performance of capital markets in those years. Including unrealised gains likely exacerbates these fluctuations, adding to the lack of clarity for members around their liabilities and obligations on an annual basis, and making it more difficult for members to plan strategic investments in the short term.

3. Selling illiquid assets is typically associated with substantial transaction costs, and the Government's proposal to cover the new liability with funds external to superannuation is unlikely to be possible for all affected members. Those who cannot afford to cover the new liability with external funds will need to take assets out of the protected environment of superannuation, impairing compounded returns in the medium to long term, and systematically reducing the ability of the associated funds to provide financial security to their members at retirement. Likewise, any forced asset sales are also likely to incur added transaction costs associated with market timing and other macro-economic factors. This further exacerbates the potential losses associated with meeting the new liability, undermining the legislated purpose of superannuation.

4. As far as we can tell, Treasury provides no method to appropriately adjust for cases where unrealised capital gains reverse in later periods. Tax paid on unrealised capital gains in one year is not refundable against unrealised capital losses in the next, with losses instead only allowed to be carried forward as an offset against future earnings. This is highly problematic given the general nature of the capital markets. For instance, we commonly see cases where a string of 'bull market' years would require SMSF members to pay incremental tax on their unrealised capital gains over each period. As is often the case, such 'bull markets' can end in the sudden sharp decline of a 'bear market'. Conditional on the timing of investment horizons, we see the potential for individuals to effectively be cumulatively taxed on investments that make an overall loss, without any real recourse to recover their tax expense. For those that enter retirement phase, or even for those with TSBs that remain below the $3 million threshold in subsequent years, the resulting tax offset will be worthless while the tax paid on their prior year unrealised gains will be very tangible. This deserves further attention.

Based on the evidence we present in this report, and in light of the additional concerns we highlight in this section, our primary recommendation is that legislators carefully reconsider the implications of this proposal and, in particular, the tax treatment of unrealised capital gains implied by basing member earnings estimates on adjusted annual changes in TSBs. The calculation is simple, and simplicity is appealing in the context of tax reform, but we argue that the potential consequences from the proposal, as currently structured, are far from simple. On the contrary, they could potentially be quite complex for a non-negligible sub-group of the ~80,000 superannuants estimated to be impacted by Treasury. While we do not speculate on the prospective form of a (hypothetically) revised super tax reform package here, we can comment on the potential effects of amending the proposal to focus only on realised capital gains.

Adjusting the calculation of member earnings to only reflect realised capital gains, rather than both realised and unrealised gains, is likely to have two key implications. First, it will reduce the total tax revenue generated by the proposed reform in the short term. All else equal, excluding unrealised capital gains will reduce current period member earnings and this will flow through to a reduced bottom line revenue. However, there is a secondary trade-off. Excluding unrealised capital gains from the current period member earnings calculation leaves a larger asset base within the superannuation system. With returns compounding over time, a larger current period asset base, in turn, grows the overall tax base for future periods. This is further reinforced by the fact that some members will also be able to avoid most of the transaction costs (i.e., losses) associated with being compelled to sell illiquid assets solely to meet any new tax obligation.

Under normal market conditions, a larger superannuation asset base, subject to lower transaction costs, is very likely to generate greater bottom line total tax revenue for the Federal Government in the medium to long term, as unrealised gains are realised over the superannuation lifecycle. Assuming the 15% lift in the marginal tax rate applied to member balances over $3 million is retained, our view is that this trade-off would be net positive for both total tax revenue generated and for the individuals affected by the reform. Deferring the taxation of unrealised gains until they are realised is very likely to “grow the pie” for both superannuants, and for those taxing superannuants, in the longer term.

Section 3: Conclusion

This report presents findings from analyses backtesting the Australian Government's *'Better targeted superannuation concessions'* proposal over the financial years ending in 2021 and 2022. Using a large representative sample of SMSF members, we provide estimates for the number of affected individuals and for the extent of the potential financial impacts from the proposal. While we highlight several concerns, there are two that are related and stand out as requiring the most urgent attention from legislators. Basing the tax calculation on adjusted annual changes in superannuation balances has the effect of including a component in the liability payable for unrealised capital gains. This, in turn, places some members at risk of a liquidity shortfall in meeting their obligations under the proposed changes. We recommend that legislators carefully reconsider the implications of this proposal in its current form.

References

Australian Taxation Office (ATO) (2023) ‘Self-managed super fund statistical report – March 2023’. Issued 22 May 2023, Canberra.

Office of Management and Budget (OMB) (2021) ‘What is the average federal individual income tax rate on the wealthiest Americans’? Published 23 September 2021. Available online: https://www.whitehouse.gov/cea/written-materials/2021/09/23/what-is-the-average-federal-individual-income-tax-rate-on-the-wealthiest-americans/

Treasury (2023) ‘Better targeted superannuation concessions – Consultation paper’. Issued 31 March 2023, Canberra.