GST and how to tax Australian banking

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Even after allowing for the new major bank levy, the Australian financial services sector will receive net tax concessions of $3 billion in 2017–2018, reflecting the sector's concessional input taxed treatment under the GST. Yet the big four Australian banks are highly profitable compared to their peers in advanced economies, creating scope for an economic rents tax. This article[1] assesses three tax reform options for financial services: (1) removing the concessional GST treatment (a Supplementary Financial Tax is proposed to do this); (2) introducing a financial services economic rents tax; or (3) exploiting the recently introduced major bank levy. The economic assessment finds that, per dollar of revenue raised, the economic rents tax does no economic harm, with moderate harm from full taxation under the GST, and considerable harm from the major bank levy. Economic impacts were estimated using CGETAX, the most comprehensive model available of the effects of tax changes on the Australian economy.

I. INTRODUCTION

On the Australian Treasury's estimates, the financial services sector receives $4.65 billion in GST tax concessions (on a 2017–2018 basis). These concessions are delivered through input taxation of most financial supplies, in conjunction with reduced input tax credits.[2]

These GST tax concessions are only partly offset by the newly introduced major bank levy.[3] The major bank levy raises $1.6 billion, leaving a net tax concession of $3 billion.

At the same time, the big four Australian banks are highly profitable. According to officers of the Reserve Bank of Australia,[4] the big four have obtained an average return on equity in recent years of 15%, well above that achieved by the major banks in most advanced economies. This provides scope for an economic rents or excess profits tax.

Against that background, this article provides an economic assessment of three options for reforming Australia's taxation of financial services. This follows on from work by the International Monetary Fund (IMF) in which it[5] put forward three similar options to the G20 countries as part of the response to the Global Financial Crisis.

The first option is to remove the concessional GST treatment. Evans[6] outlines how this can be done by introducing a Supplementary Financial Tax (SFT). The second option is to introduce an economic rents or excess profits tax. The third option is a financial services charge (FSC). The new major bank levy largely copies the UK FSC, which does not live up to the FSC design proposed by the IMF.

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[1] In accordance with our guidelines for this publication, this paper was, prior to acceptance, reviewed in its entirety by a suitably qualified expert who is independent of the author and, as such, complies with the Higher Education Research Data Collection (HERDC) Specifications for peer review.

[2] Australian Treasury, "Tax Expenditures Statement 2016" (2017); item H2 on p 109 and item H3 on p 110.

[3] Australian Government, "Major Bank Levy Bill 2017 Explanatory Memorandum" (2017).

[4] K Wilkins, G Gardner and B Chapman, "Developments in Banks' Funding Costs and Lending Rates" (2016) March quarter *Reserve Bank of Australia Bulletin* 21.

[5] IMF Staff, "A Fair and Substantial Contribution by the Financial Sector", Ch. 1 in S Claessens, M Keen and C Pazarbasioglu (eds), *Financial Sector Taxation: The IMF's Report to the G-20 and Background Material* (IMF, Washington, 2010).

[6] M Evans, *GST Equivalent Taxation of Financial Services (Supplementary Financial Tax)*, Report to the South Australian Department of the Premier and Cabinet (2014).

The economic assessment finds that the best of these three options is the economic rents tax, followed by full taxation under the GST, while the major bank levy is the least preferred option. Specifically, the drag on the economy per dollar of revenue raised is estimated at −10 cents, +33 cents and +81 cents, respectively.

This economic assessment was conducted using the CGETAX model. It is the most comprehensive model available of the effects of the taxation system on the Australian economy. In 2016, the Australian Treasury commissioned modelling with CGETAX of the proposed cut in the company tax rate from 30 to 25% (Independent Economics[7] and Murphy[8]). Importantly for this exercise, CGETAX is the only Australian model of its type that takes into account the Australian banking oligopoly and has a sufficiently fine breakdown of the Australian financial service industries to credibly simulate the three tax options.

This article is organised as follows.

The next three sections discuss in turn the three options for reforming Australia's taxation of financial services. Removing the concessional treatment under the GST is covered in Pt II, introduction of a financial services economic rent tax in Pt III and the major bank levy in Pt IV. For each option, the discussion covers the economic case for adoption, the design of the tax base and the likely revenue yield.

The final three sections present the quantitative economic assessment of each of the three options. Part V sets the scene by discussing the Australian banking oligopoly and its implications for tax policy. The modelling approach is outlined in Pt VI. Finally, the modelled economic impacts of each option are presented in Pt VII. Policy conclusions are drawn in Pt VIII.

II. FULL TAXATION OF FINANCIAL SERVICES UNDER THE GST

The lending and deposit-taking activities of the banking sector pose special challenges for making banking services fully taxable under the GST. GST can be readily applied to bank fees. However, banks earn much of their income from the margin between their lending and deposit rates, and it is difficult to allocate the revenue so earned to individual transactions so that GST can be applied in the usual way.

As a result, it is common international practice to make most financial services input taxed under a GST/VAT, which can represent a significant tax concession. Under input taxation, GST is not applied to the revenue generated from interest margins, but at the same time input tax credits are denied for the GST attached to the inputs used in generating that revenue.

There have been recent proposals to remove this tax concession by applying GST in a different way to financial services. The IMF proposed one way and more recently Evans has proposed another way that achieves the same objective more simply.

This section begins by explaining the economic case for removing the GST concession for financial services. It then explains the Evans approach to removing the concession through a new tax on revenue from financial intermediation, an SFT. It then develops the Evans proposal further by considering how the tax base for the SFT might be defined more precisely. Finally, this section estimates the likely revenue yield from removing this GST concession.

A. Economic case for removing the GST concession for financial services

Auerbach and Gordon[9] have established that, other things being equal, financial services would be taxable under a GST just like other goods and services, so there would be no concession. That is, the existing concessional tax treatment has arisen purely for administrative expediency, not because there is something special about financial services that justifies the concession.

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[7] Independent Economics, *Company Tax Scenario*, Report to the Department of the Treasury (28 April 2016).

[8] C Murphy, "The Effects on Consumer Welfare of a Corporate Tax Cut" (Australian National University (ANU) Working Papers in Trade and Development, 2016/10, 2016).

[9] A Auerbach and R Gordon, "Taxation of Financial Services under a VAT" (2002) 92 *The American Economic Review: Papers and Proceedings* 411.

Because the GST is intended to operate as a household consumption tax, without the concession, household use of financial services would become fully taxable, while business use would be tax free. The concession from input taxation frustrates this intention.

Under input taxation, GST is applied only to the non-labour inputs of banks, leaving their labour inputs and cash profits untaxed. This partial tax coverage under input taxation affects household and business customers of banks in different ways.

For households, the partial tax coverage under input taxation means that their consumption of financial services is undertaxed relative to their consumption of fully taxable goods and services.

For businesses, the partial taxation under input taxation means that their use of financial services is overtaxed relative to their use of goods and services that are tax free because they receive GST input tax credits. The GST charged on the taxable inputs of financial services providers is embedded in the cost of financial services to their business customers, who are not able to claim an input tax credit for that embedded cost.

Hence, compared to the situation with goods and services that are taxable under the GST, for input-taxed financial services household customers are undertaxed and business customers are overtaxed. Other things being equal, undertaxation of financial services supplied to households biases their consumption patterns in favour of financial services and away from goods and services that are taxable under the GST. Conversely, overtaxation of financial services supplied to businesses biases their input choices away from financial services and in favour of other business inputs.

B. The tax base for a GST on financial services

In view of the difficulty in allocating to individual transactions the revenue that banks receive from interest margins, Evans proposes sidestepping the need for an allocation. This would be achieved by taxing revenue from interest margins on a bank-by-bank basis rather than on a transaction-by-transaction basis. A similar enterprise-by-enterprise approach is already used in collecting GST from gambling, with GST applied to the difference between money received and money paid out.

Evans describes this bank-by-bank tax on interest margins as a SFT. With the SFT ensuring that interest margins are fully taxable, banks would receive full input tax credits, just like other providers of fully taxable goods and services.

The SFT has a potential drawback. Without further modification, it would be applied with respect to both household and business uses of financial services. This contrasts with the usual GST approach, under which registered business customers are able to claim GST input tax credits, thus lifting their GST tax burden. Business claiming of input tax credits is not feasible under the SFT, because the SFT is not allocated to individual customers.

To address this, Evans proposes that the SFT charged to each financial institution is discounted so that the tax levied only reflects household use and not business use. For example, if 40% of the margin-based income of a financial service provider were attributed to business customers, the SFT tax rate would be discounted from 10 to 6%. In this way, the SFT would operate as a pure household consumption tax.

This puts financial services on the same tax footing as other goods and services that are taxable under the GST. It is only the mechanism for achieving a tax-free outcome for sales to businesses that differs. For other goods and services, this is achieved by taxing each sale to business but then offsetting this by providing an input tax credit. The SFT follows the simpler approach of not taxing sales to businesses in the first place.

It is important that discount rates reflect variations, both across providers and over time, in the business customer share of financial services subject to SFT. This variation in the discount rate with the business customer share is required if the SFT is to be passed on exclusively to household rather than business customers, and hence achieve its aim of being a consumption tax.

Such discount rates are already part of the New Zealand GST. There, GST input tax is applied, but discounted to reflect the business customer share of services. As Evans notes, the New Zealand financial

service providers that calculate these discount rates are subsidiaries of Australian Authorised Deposit-taking Institutions, so it would be feasible for analogous discount rates to be calculated in Australia. In any case, to ease the compliance burden, discount rates could be calculated initially and then updated at regular intervals. The most recently estimated share of interest margins attributable to business customers would be used as the discount rate until the next update.

To implement the SFT, the tax base (the interest margin income of banks) needs to be defined. The GST is a cash flow-based tax so the default option would be to use a cash flow measure of income from financial intermediation. This cash flow is equal to the inflows from new deposits and interest received on loans net of the outflows from new loans and interest paid on deposits. Fee income would not be included in the SFT as it would be taxed separately on a transaction-by-transaction basis. A disadvantage of the cash flow approach is that SFT collections could be volatile, as the tax base includes new deposits net of new loans, and deposits and loans may not grow smoothly.

SFT (cash base) = (new deposits + interest on loans)
– (new loans + interest on deposits)

An alternative approach that generates a more stable tax base is to use an accrual measure of income from financial intermediation. This is based on the concept that financial service providers generate income by charging more than a reference rate for loans, while paying less than the same reference rate for deposits. This accrual base is similar to the cash base in that it includes interest income from loans net of interest payments on deposits. However, instead of deducting the cash outflow from new loans, the accrual base deducts the opportunity cost of loans, as measured by a reference rate of interest applied to the stock of loans. Similarly, instead of adding the cash inflow from new deposits, the accrual base adds the value of access to deposit funds, as measured by the same reference rate of interest applied to the stock of deposits.

SFT (accrual base) = FISIM = (interest on loans – interest on loans at reference rate)
+ (interest on deposits at reference rate – interest on deposits)

The accrual base for measuring margin-based financial services income is adopted in the System of National Accounts 2008 (SNA08). In SNA08 it is known as financial intermediation services indirectly measured or FISIM (European Communities, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations and World Bank[10]). Diewert[11] makes the economic case for valuing financial intermediation services in this way.

A disadvantage of the accrual approach is that it is necessary to estimate the reference rate of return. SNA08 suggests that "the rate prevailing for inter-bank borrowing and lending may be a suitable choice as a reference rate" (European Communities, p 583). However, Diewert argues that "a natural choice for the reference rate is … the average cost of raising financial capital from debt and equity financing". Diewert's position is supported by the theoretical analysis contained in the full technical version of this article.[12]

A simpler approach would be to narrow the definition of the tax base to interest income from loans net of interest payments on deposits. However, this is a step away from a pure measure of income because it ignores the cost of funding any gap in the difference between the value of loans and the value of deposits (through debt and/or equity). This cost is taken into account under both the cash and accrual approaches.

Ignoring the cost of funding the gap between loans and deposits would create a tax distortion favouring funding of loans through deposits rather than through debt and equity. On the other hand, the

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[10] European Communities, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations and World Bank, *System of National Accounts 2008* (New York, 2009).

[11] W Diewert, "The Treatment of Financial Transactions in the SNA: A User Cost Approach" (2014) 1 *Eurostat Review on National Accounts and Macroeconomic Indicators* 73.

[12] C Murphy, "How to Tax a Banking Oligopoly" (Arndt-Corden Department of Economics seminar paper, ANU, 18 July 2017).

existing corporate tax system already has a bias against equity funding because interest costs of deposits and debt are deductible but there is no deduction for an imputed cost of equity.

In summary, the three alternative approaches to defining the tax base for the SFT each have disadvantages. The cash flow approach may generate a volatile revenue stream. The accrual approach involves the uncertain exercise of estimating a reference rate of interest and moves away from the cash flow basis of the rest of the GST system. The approach of simply taxing interest income from loans net of interest income from deposits would lead to a tax bias favouring funding of loans through deposits.

For compatibility with the national accounts data used in the economy-wide model, the modelling in this article assumes an accrual or FISIM base rather than a cash base for the SFT. However, in principle, the behavioural responses would be the same under both approaches, so the modelling results can provide a guide to the likely effects irrespective of the actual choice of tax base.

The IMF[13] proposed a different method of removing the GST tax concession for financial services. Financial services would continue to be GST input taxed. In addition, a type one Financial Activities Tax (FAT1) would be applied on a bank-by-bank basis to "the sum of wages and 'profits' defined in cash flow terms (that is, with full expensing of investment and no deduction for financial costs)" (IMF Staff,[14] p 65). The FAT1 provides a deduction for non-labour inputs because it assumes that input taxation remains in place. In contrast, the Evans SFT provides no such deduction because input taxation is removed.

Thus, the IMF proposal relies on a combined FAT1/input taxed approach to tax margin-based financial services. This reliance on two taxes makes it more complex than the Evans proposal, which taxes margin-based financial services using a single tax, the SFT. The greater complexity of the two-tax FAT1/input taxed approach leads this article to focus on the Evans single-tax SFT approach as a method of eliminating the GST concession for financial services.

A limitation of the SFT as a way of overcoming the GST tax concession is that the SFT is a production-based tax, whereas GST is an expenditure-based tax. As an expenditure-based tax, GST is intended to apply to imports but not exports, whereas a production-based tax does the reverse. Applying the SFT to imports of financial services is probably impractical as this would involve taxing foreign-based suppliers of financial services into Australia. Auerbach and Gordon note that taxing imports is a general problem in applying GST to financial services. However, in Australia exports and imports of financial services are small relative to the domestic market (less than 1%) so in practice this issue is relatively minor.

For the purposes of the modelling in this article, it is assumed that the complications with the tax base are successfully addressed. Specifically, it is assumed that the SFT for margin-based financial services and the GST for fee-based financial services operate together in a way that is exactly equivalent to a pure tax on household consumption of the financial services that are currently input taxed. This assumption is a modelling simplification, rather than a prediction that a perfect regime can be expected in practice.

C. Revenue from fully applying GST to financial services

The Australian Treasury (2017) publishes estimates of the direct budget cost of GST concessions for financial services as part of the annual Tax Expenditures Statement (TES). Estimates from the 2016 TES are shown in Table 1. There are two items that are pertinent here. The larger item refers to the cost of the input taxed treatment. The smaller item is the additional cost of reduced input tax credits within the input taxed system. Under the reduced credit acquisitions provisions, input taxed financial service providers are able to claim partial input tax credits, generally at 75% of the full

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[13] M Keen, R Krelove and J Norregaard, "The Financial Activities Tax", Ch. 7 in S Claessens, M Keen, and C Pazarbasioglu (eds), *Financial Sector Taxation: The IMF's Report to the G-20 and Background Material* (IMF, Washington, 2010).

[14] IMF Staff, n 5.

rate, with respect to specified taxable inputs, instead of no input tax credits. The aim of providing these partial input tax credits is to achieve tax neutrality between insourcing and outsourcing of the specified inputs.

The overall cost of the input taxed treatment, relative to a hypothetical taxable treatment, is given by the sum of the two items in Table 1. Hence, the Australian Treasury estimate of the cost of the tax concession is $4.05 billion on a 2015/2016 year basis or $4.65 billion on a 2017/2018 year basis.

TABLE 1. Cost of Existing GST Concession for Exempt Financial Services ($ Million)

	2012/2013	**2015/2016**	**2017/2018**
Financial supplies – input taxed treatment	2,450	3,250	3,700
Financial supplies – reduced input tax credits	600	800	950
Total	3,050	4,050	4,650

Source: Australian Treasury (2017).

The Australian Treasury does not consider that these cost estimates have high reliability. It gives a medium-low reliability rating to the cost of the input taxed treatment and a low reliability rating to the cost of reduced input tax credits. This is consistent with the fact that the Australian Taxation Office Taxation[15] Statistics do not provide much detail on GST collections, compared to the fine detail provided on personal income tax and company income tax collections.

Given these uncertainties, a costing of the tax concession was prepared for this article, drawing on the detailed industry information in the product details version of the 2012/2013 ABS input–output tables. This costing for the 2012/2013 year and an uprating to the 2015/2016 year are summarised in Table 2.

The estimated direct revenue gain from eliminating the existing tax concession is based on the two calculations as shown in Table 2. The first calculation estimates the revenue collected under the current practice of input taxing certain financial services. This calculation does not include financial services that are GST-free (health insurance) or taxable (general insurance and auxiliary finance and insurance services). This existing revenue is estimated at $2.6 billion in 2012/2013, rising to $2.9 billion in 2015/2016.

The second calculation estimates the revenue collected from a pure consumption tax on the currently input taxed financial services, where consumption is defined as in the national accounts. The tax rate is set at 10% in line with the prevailing rate of GST. The prospective revenue is estimated at $5.6 billion in 2012/2013 rising to $6.9 billion in 2015/2016.

Thus, the revenue gain from eliminating the existing GST concession for input taxed financial services is estimated at $(6.9 − 2.9 =)$ $4.0 billion on a 2015/2016 year basis, as shown at the foot of Table 2. This is very close to the Treasury estimate of $4.05 billion for the same year that is shown in Table 1.

Both sets of revenue estimates share the same limitation that they only take into account the direct effect on budget revenue. That is, they make no allowance for the indirect effects on the budget arising from any behavioural responses to removing this tax concession. The modelling results presented later in this article do allow for such behavioural responses and associated indirect budget effects. As detailed in Pt VII, these behavioural responses reduce the estimated revenue yield by around 20%. Taking this into account, a conservative, rounded estimate of the cost of this tax concession is $3 billion.

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[15] Australian Taxation Office, "Taxation Statistics 2014–15" (2017); the ATO annually publishes "Taxation Statistics" <www.ato.gov.au>.

TABLE 2. Direct Cost of Existing GST Concession for Exempt Financial Services ($ Million)

	2012/2013	2015/2016
Existing revenue from input taxed financial services		
[1] fully taxable intermediate inputs	17,222	18,974
[2] 25% of reduced credit intermediate inputs	1,335	1,471
[3] gross fixed capital formation	7,638	8,668
[4] = [1] + [2] + [3] total tax base	26,195	29,112
[5] taxed at 10%	2,620	2,911
of which:		
[6] GST embedded in charging of business customers	1,393	1,548
[7] GST embedded in charging of household customers	1,227	1,363
Tax revenue if presently input taxed financial services are taxable		
[8] Household consumption of currently input taxed financial services	57,342	70,413
[7] GST embedded in charging of household customers	1,227	1,363
[9] = [8] − [7] tax base	56,115	69,050
[10] taxed at 10%	5,612	6,905
[11] = [10] − [5] cost of existing GST concession	**2,992**	**3,994**

III. A FINANCIAL SERVICES ECONOMIC RENTS TAX

Economic rent is payment to a factor of production in excess of the amount needed to bring that factor into production. Taxes on such excess payments are favoured because they should not affect economic behaviour. Financial services are a candidate for an economic rents tax because they are considered to be a major source of oligopoly rents.

This section begins by explaining the economic case for a financial services economic rents tax. Like the SFT, this tax can be applied on either a cash flow or accruals basis and both options are considered. Finally, this section estimates the likely revenue yield from a financial services rents tax.

A. Economic case for a financial services economic rents tax

Internationally, the financial services sector generates above-normal profits or economic rents. "It might be argued that there is a possibility of economic profits being a feature of the financial sector, given the usual dominance of a few large firms".[16]

In fact, as shown in Pt V, the Australian banking sector, like the Canadian banking sector, stands out for the high rate of oligopoly rents that it generates. Part V explains how this oligopoly power has important implications for tax policy, so it would be a misstep to uncritically apply international practice in taxing the Australian banking sector.

Because by definition an economic rents tax applies to excess returns, it can be expected to be borne by bank shareholders rather than by bank customers. For the same reason, it should not affect bank investment because it only taxes returns over and above those required to induce investment. This lack of behavioural responses to an economic rents tax makes such taxes highly efficient.

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[16] R Boadway and M Keen, "Theoretical Perspectives on the Taxation of Capital Income and Financial Services", Ch. 2 in P Honohan (ed), *Taxation of Financial Intermediation: Theory and Practice for Emerging Economies* (The World Bank (Washington), Oxford University Press (New York), 2003).

B. The tax base for a financial services economic rents tax

A financial services economic rents tax can be applied on either a cash flow or accrual basis. These two alternative versions are now considered in turn.

Like the cash flow version of the SFT, a cash flow rents tax applies to inflows from new deposits and interest received on loans net of the outflows from new loans and interest paid on deposits. Fee income is also taxed. As an excess profits tax, this tax differs from an SFT by providing deductions for expenses. These deductions are on a cash flow basis and cover labour, capital and purchases of other goods and services. The cash flow base can be written as shown in equation [3].

Cash flow (R + B base) = fee income + interest on loans – interest on deposits – labour costs
– other expenses – (capex + new loans – new deposits)

The cash flow tax can be likened to corporate tax. The key difference is that all investment costs are expensed immediately. Investment costs are defined widely to include both capital expenditure and expenditure on new loans net of new deposits. Because of this immediate expensing, there is no separate deduction for depreciation expenses.

This definition of the cash flow tax base includes real transactions (R) and banking transactions (B) involving loans and deposits. It can therefore be referred to as an R + B base. A theoretical justification for defining the base in this way is provided in Murphy.[17] It is also consistent with the view of Diewert[18] and the practice in the national accounts for measuring income from financial intermediation.

At the same time, the Meade Report recommended a different base, which takes into account real (R) and financial (F) transactions. These financial transactions include not only loans and deposits, as in the R + B base, but also debt. Similarly, the IMF Staff[19] support the idea of an R + F base. They described this as a type two Financial Activities Tax (FAT2).

Cash flow (R + F base) = cash flow (R + B base) + new debt – interest on debt

Boadway, Bruce and Mintz[20] vary the R + B base in the opposite direction. Their real (R) plus financial assets (A) base includes income from loans but does not provide a deduction for interest paid on deposits or debt.

Cash flow (R + A base) = cash flow (R + B base) + interest on deposits – new deposits

In any case, in implementing a cash flow version of an economic rents tax on financial services, a choice would need to be made between the options of an R + B, R + F or R + A base.

The immediate expensing of investment costs under the cash flow version of an economic rents tax is a major point of difference with the existing corporate income tax. Instead, the accrual version of an economic rents tax takes the existing corporate tax as its starting point.

The general idea of the accrual version is to provide a deduction for the normal return on capital, irrespective of whether capital is financed by debt or equity or a combination of both. The two main forms are the allowance for corporate equity (ACE) tax and the allowance for corporate capital (ACC) tax.

The ACE provides a deduction or allowance for an imputed return to equity. This deduction for the cost of equity, together with the existing deduction for debt interest, means that capital costs are fully deductible, irrespective of the method of financing. The ACE could serve as an economic rent tax on financial services.

The ACC replaces the existing debt interest deduction with a wider allowance that deducts an imputed return on the written-down value of depreciable assets. However, as part of not providing a

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[17] Murphy, n 12.

[18] Diewert, n 11.

[19] IMF Staff, n 5.

[20] R Boadway, N Bruce and J Mintz, "On the Neutrality of Flow-of-Funds Corporate Taxation" (1983) 50 *Economica* 49.

deduction for interest expenses, the ACC also does not tax interest income. This makes it unviable, in unmodified form, as a tax on financial services because a large part of the income of the financial services sector is derived from interest margins.

The ACC tax base could be extended to include imputed income from financial intermediation, similar to the concept of FISIM used in the national accounts. This ACC + FISIM base would be a viable form of economic rent tax on financial services.

In summary, there are a range of options for introducing an economic rents tax on financial services. The cash flow versions include the R + A, R + B and R + F bases, while the accrual versions include the ACE and ACC + FISIM bases. Each of these options could be examined more closely in the event of a decision to introduce such a tax. Further, the economic rents tax could be applied only to the financial services sector or across all industries.

Boadway and Bruce[21] point out that the ACC tax serves as an economic rents tax even if the rate of accounting depreciation is set arbitrarily. This is because if depreciation rates are set lower/higher than justified, this is automatically compensated for by allowance deductions being calculated on a higher/lower base of depreciable assets. Boadway, Sato and Tremblay[22] refer to this generalisation of the ACC as the Capital Account Allowance (CAA) tax. If the rate of depreciation is set to 100% allowing immediate write-off, the CAA tax becomes a cash flow tax. Thus, the CAA tax is a generalisation that includes both the cash flow tax and the ACC tax as special cases.

For compatibility with the national accounts data used in the economy-wide model, the modelling in this article assumes a rent tax with an accrual base. This also provides greater compatibility with the existing corporate income tax system.

Each of the rent taxes described here is designed to tax economic rents in the financial services sector that are captured in profits. However, IMF Staff[23] argue that some of these rents may be captured through inflated remuneration of senior employees. Hence, there may be a case to extend the tax base to include an estimate of economic rents that are captured in employee remuneration. IMF Staff[24] estimate that rents may account for 12% of total remuneration in the financial services sector.

C. Revenue from a financial services economic rents tax

To estimate the likely direct revenue yield from this tax, an assumption needs to be made for the tax rate. Further, the overall revenue gain yield will depend on whether the new economic rent tax is deductible when assessing company income tax, like the Petroleum Resources Rent Tax, or non-deductible. For the illustrative purposes of this section, it is assumed that the financial services economic rent tax is set at a rate of 5% and is non-deductible.

In principle, the tax rate could be set substantially higher than 5% for a greater revenue gain without leading to a disincentive to investment. However, the higher the rate, the more international profit shifting that can be expected to occur to avoid both the rent tax and the existing company tax. Furthermore, rent taxes have other limitations that call for moderation in the tax rate including the difficulties in isolating rents from normal returns to capital and complications from mergers and acquisitions.

Under those policy assumptions and on a 2015/2016 year basis, the estimated annual revenue gain from the proposed financial services economic rent tax rounds to $3.3 billion, as calculated in Table 3. This substantial revenue yield is despite the low assumed tax rate of 5%, which highlights the potential of this tax base as a means of raising a substantial amount of revenue.

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[21] R Boadway and N Bruce, "A General Proposition on the Design of a Neutral Business Tax" (1984) 24 *Journal of Public Economics* 231.

[22] R Boadway, M Sato and J-F Tremblay, *Cash-Flow Business Taxation Revisited: Bankruptcy, Risk Aversion and Asymmetric Information* (Oxford University Centre for Business Taxation, WP15/31, 2015).

[23] IMF Staff, n 5.

[24] IMF Staff, n 5.

	2012/2013	2015/2016
[1] gross operating surplus for financial services	72,316	89,829
[2] depreciation of financial services	9,072	10,404
[3] = [1] − [2] net operating surplus for financial services	63,244	79,425
[4] capital stock for financial services	106,951	111,076
[5] = 10% × [4] real required return on capital for financial services	10,695	11,108
[6] = [3] − [5] economic rent for financial services	52,549	68,317
[7] = 98% × [6] economic rent for input taxed financial services	51,476	66,923
[8] taxed at 5% (non-deductible for company tax)	**2,574**	**3,346**

Source: ABS Cat 5204.0, Australian System of National Accounts 2015/2016.

This annual revenue estimate of $3.3 billion only takes into account the direct effect on budget revenue. It does not allow for indirect effects on the budget arising from interactions of the rent tax with other taxes, apart from company income tax. In particular, by reducing company earnings, the rent tax will lead to reduced dividends and capital gains, leading to some loss of personal income tax collected from resident shareholders. Such interactions with other taxes are taken into account in the modelling presented in Pt VII. As detailed in Pt VII, these tax interactions reduce the estimated revenue yield by around $0.2 billion. Taking this into account, a conservative, rounded estimate of the revenue gain for a 5% rent tax on the exempt financial services sector is $3 billion. This happens to be the same as the estimated rounded, revenue cost of this sector's GST concession.

IV. THE MAJOR BANK LEVY

In reporting to the G20 as part of its response to the GFC, IMF Staff[25] proposed that individual countries introduce a levy on financial institutions, which it referred to as a Financial Services Contribution (FSC). The FSC can be viewed as a user pays charge or insurance premium for the significant insurance that government provides for the financial services sector. The insurance benefits provided by government can include explicit and implicit deposit insurance and guarantees of other liabilities, as was seen in Australia at the time of the GFC.

A. Economic case for an FSC

The IMF Staff[26] identify two benefits from introducing an FSC.

First, provided an institution's FSC liability is calibrated to the level of its risk taking, an institution is able to reduce its FSC liability by incurring less risk. Thus, the FSC can provide an incentive to reduce systemic risk. Prudential regulation in the form of capital adequacy requirements under Basel III are also designed to curb excessive risk taking. IMF Staff[27] discuss the relative merits of both approaches and recommend that both taxation and regulation be used, but in a complementary way. For example, because capital adequacy requirements focus on assets, taxation might focus on liabilities.

Second, the FSC can help pay for future government support of the sector arising from future financial failures. Of course revenue from an FSC can also be used for general government funding purposes.

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[25] IMF Staff, n 5.

[26] IMF Staff, n 5.

[27] IMF Staff, n 5.

B. The tax base for the major bank levy

In July 2017 Australia introduced an FSC in the form of the major bank levy.[28] The major bank levy applies to authorised deposit-taking institutions (ADIs) with total liabilities of greater than $100 billion (Australian Government). In practice, this means that the levy applies to the five major banks, ANZ, Commonwealth Bank of Australia, National Australia Bank, Westpac and Macquarie Bank.

The levy is imposed at an annual rate of 0.06% on around 75% by value of the liabilities of the ADIs. The main exclusion is deposits that are protected under the Financial Claims Scheme (FCS), namely the first $250,000 of an entity's deposits with any ADI. Another exclusion is Tier 1 capital, which includes common equity. The effect of these exclusions is that the levy applies to all debt and some deposits.

In introducing the major bank levy, the Australian Government emphasised the levy's role in reducing systemic risk and in contributing to general revenue raising, the same reasons advanced by the IMF for an FSC. However, the major bank levy largely copies the UK FSC, which does not live up to the FSC design proposed by the IMF. In particular, the major bank levy is not well designed to reduce systemic risk for three main reasons.

- First, the five banks each pay the same levy rate of six basis points irrespective of their respective levels of risk taking. This is contrary to the IMF's advice (IMF Staff,[29] p 17) that "the amount paid by any institution should reflect its contribution to systemic risk". Imposed at a flat rate, the levy does not provide an incentive to reduce risk taking.

- Second, smaller banks are not subject to the levy. Smaller bank contribute to systemic risk and indeed may be more risky than the larger banks because smaller size reduces the opportunity for reducing risk through diversification.

- Third, the major bank levy does not apply to deposits that are covered under the FCS but does apply to other deposits. Exempting deposits that are currently explicitly insured by government for free, while taxing deposits that are not, is the opposite to what is required for the major bank levy to operate as a user pays charge for government insurance of the sector.

C. Revenue from the major bank levy

With the major bank levy not well designed to reduce systemic risk, the main remaining justification for it is as a means of raising revenue from the financial services sector. The Australian Government estimates that the major bank levy will contribute around $1.5 billion to its budget balance on an annual basis.

TABLE 4. Impact on the Fiscal Balance of the Major Bank Levy ($ Million)

	2017/2018	2018/2019	2019/2020
Major Bank Levy	1,600	1,500	1,500

Source: Australian Government (2017).

V. THE BANKING OLIGOPOLY AND ITS TAXATION IMPLICATIONS

This section begins by presenting evidence of oligopoly power in the Australian banking sector. It then considers the implications of this oligopoly power for the optimal approach to taxing financial services. For example, the oligopoly rents generated from this market power provide scope for a financial services economic rents tax, which was the subject of Pt III. Further, the presence of oligopoly power can make other taxes, such as the existing GST input tax, more economically harmful.

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[28] Under the *Major Bank Levy Act 2017*.
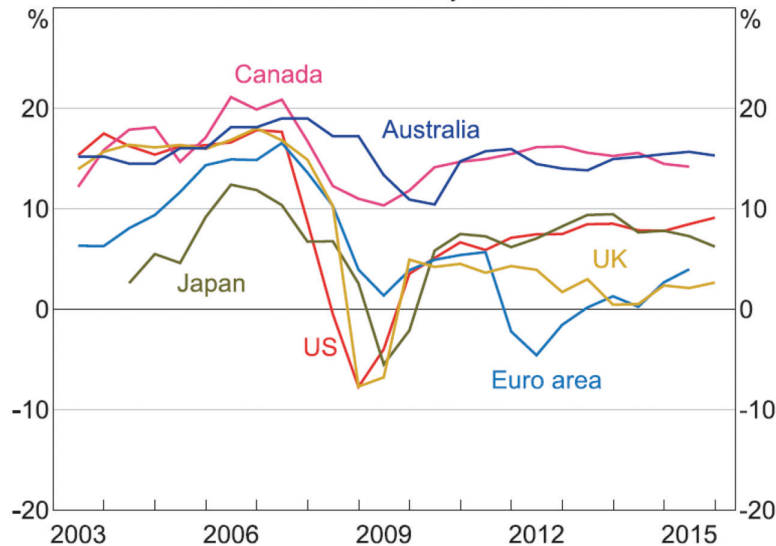
[29] IMF staff, n 5.

A. Australian banking oligopoly

In introducing the major bank levy, the Australian Government[30] noted the high profitability of Australian banks:

> The major Australian banks are amongst the most profitable banks in the advanced world. Rates of return on equity of Australia's largest banks have averaged around 15 per cent over the past five years, far exceeding those in the United States, Europe and Japan, and matched only by Canadian banks.

This statement is supported by estimates produced at the Reserve Bank of Australia, as seen in the following chart. This persistent high profitability is consistent with the exercise of significant market power.

Graph 12
Large Banks' Return on Equity*
After tax and minority interests

* Number of banks: Australia (4), Canada (6), Euro area (41), Japan (4), United Kingdom (4) and United States (18); adjusted for significant mergers and acquisitions; reporting periods vary across jurisdictions

Sources: Banks' annual and interim reports; Bloomberg; RBA; SNL Financial

Source: Reproduced from Wilkins, Gardner and Chapman.

In the CGETAX model of the Australian economy used in this article, the higher than normal profitability of certain industries, including banking, is captured using a price mark-up factor. This mark-up factor refers to the ratio of price to the marginal cost of production, where costs incorporate a normal return on capital such as would be expected under perfect competition. Thus, in industries found to be operating under perfect competition, the price mark-up factor equals unity. In industries operating as oligopolies, mark-up factors exceed unity.

The CGETAX estimates of price mark-up factors in financial services are presented in Table 5. These estimates are derived from the CGETAX database, which in turn draws on the ABS input–output tables for 2012–2013. In the table the financial services sector has been subdivided according to its three different treatments under the GST.

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[30] Australian Government (2017) p 26.

TABLE 5. Oligopoly Price Mark-up for Categories of Financial Services ($ Million, 2012–2013; Mark-up Is a Ratio)

	Rent $ Billion	Production $ Billion	Mark-up Ratio
Finance	54.1	110.2	1.96
Life Insurance and superannuation	1.9	26.0	1.08
GST input taxed financial services	*56.0*	*136.2*	*1.70*
Health insurance	0.3	3.8	1.08
GST-free financial services	*0.3*	*3.8*	*1.08*
General insurance	0.9	12.1	1.08
Auxiliary finance and insurance services	0.0	44.6	1.00
GST taxable financial services	*0.9*	*56.8*	*1.02*
All financial services	**57.1**	**196.8**	**1.41**

Source: CGETAX database.

Note: mark-up is calculated as the ratio of the value of production to the value of production net of oligopoly rent.

From Table 5, the mark-up factor for financial services as a whole is estimated at 1.41. The striking feature of the table is the relatively high estimated mark-up factor for the input taxed or exempt financial services of 1.70. This reflects the very high mark-up factor of 1.96 in finance, which is dominated by banking.

These estimates of price mark-ups in financial services in Australia can be compared to estimates for other countries. Christopoulou and Vermeulen[31] estimate mark-ups over the period 1981–2004 in 50 industry sectors in a cross-section of countries. For the financial intermediation industry, they estimate mark-ups of 1.39 for the United States and 1.56 for the EU. Within the EU, they find mark-ups ranging from 1.29 for Spain to 1.88 in Germany. While Australia and Canada were not included in the study, they were identified above as having unusually profitable banking systems, so their mark-up factors would be expected to be around the top of the range for other countries. This is the case for Australia, with the estimated mark-up of 1.96 being similar to the estimated German mark-up of 1.88.

The assumption that high profitability industries engage in mark-up pricing is consistent with theoretical models of oligopoly that assume a fixed number of suppliers, such as the Cournot model. The idea of a fixed number of suppliers seems plausible in Australia because the big four banks have long been dominant. This dominant position has been reinforced by approvals to take over potential competitors. Examples of this include the Westpac takeover of the St George Bank and the Commonwealth Bank takeover of BankWest.

A similar type of banking oligopoly appears to operate in Canada, except that there is a "big five" rather than a "big four". As noted above, bank profitability is high in Canada, similar to Australia. The Canadian "big five" are the Bank of Montreal, the Bank of Nova Scotia, the Canadian Imperial Bank of Commerce, the Royal Bank of Canada (RBC) and Toronto-Dominion Bank.

B. Tax policy implications of a banking oligopoly

Reinhorn[32] analyses the optimal approach to applying a consumption tax, such as a GST, when oligopolies practising mark-up pricing operate in some industries. Because such oligopoly behaviour leads to excessive prices, he finds that the oligopoly industries should be taxed at lower rates than the competitive

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[31] R Christopoulou and P Vermeulen, "Markups in the Euro Area and the US over the Period 1981–2004: A Comparison of 50 Sectors", (2010) 42 *Empirical Economics* 53.

[32] L Reinhorn, "Optimal Taxation with Cournot Oligopoly" (2005) 5 *Advances in Economic Analysis & Policy* 1.

industries. As Reinhorn[33] emphasises, "this reduction in tax rates is not a reward for monopolists. Rather, it is 'compensation' for consumers".

Such market power is of particular concern when considering taxes that apply to an oligopolist's costs. The existing GST input tax on financial services and the major bank levy are both examples of this. Under mark-up pricing, these taxes on production costs can be expected to be marked up before being passed on to customers.

The same oligopoly power can also give rise to economic rents. In principle, these rents can be taxed perfectly efficiently, as discussed in Pt III. Rent taxes are not likely to be passed on to consumers and so are expected to be fully borne by shareholders.

In terms of economic efficiency, a consumption tax such as the proposed SFT falls in between a tax on costs and a tax on rents. Because it is based on the final, marked-up price to consumers, in effect it combines an efficient tax on the oligopoly mark-up with an inefficient tax on the costs of production to which that mark-up is applied. The overall effect is that the consumption tax is predicted to be fully passed on to consumers, but without a mark-up.

The high estimated mark-up factors for Australian financial services suggest that market power may have a major bearing on this article's evaluation of tax policy options. The existing GST input tax and the new major bank levy are likely to be highly inefficient because they are likely to be passed on to customers with a mark-up added. The proposed consumption tax would be less inefficient because it is likely to be passed on without the addition of a mark-up. The proposed rent tax is likely to be the most efficient tax because it is likely to be absorbed by shareholders. These qualitative conclusions on the efficiency of each tax are all borne out by the quantitative modelling results reported in Pt VII.

For a theoretical analysis of the incidence of different taxes on banking under a Cournot oligopoly see Murphy (2017). His analysis covers GST input tax, a GST output tax, payroll tax, company tax, a bank levy and an economic rent tax.

VI. Modelling approach

This section explains how the financial services tax policy proposals are assessed using economy-wide modelling. Three main tax policy proposals are modelled. The first proposal is to introduce an SFT to nullify the financial services GST concession. The second proposal is to introduce a financial services economic rents tax. The third proposal, to introduce a bank levy, has recently been implemented in the form of the major bank levy. These proposals are modelled using CGETAX, the same model used in modelling for the Australian Treasury of the proposed cut in the company tax rate from 30 to 25%.

This section begins by providing an overview of CGETAX. It then sets out the details of how the economic cost of selected taxes on financial services has been modelled in CGETAX. The modelling results are provided in Pt VII.

A. Model overview

CGETAX was used to model for the Australian Treasury the proposed cut in the company tax rate from 30 to 25%.[34] CGETAX has also been used to model the relative efficiency of all of the major Australian taxes.[35]

Computable General Equilibrium (CGE) models, such as CGETAX, model the interaction of the household, business, government and foreign sectors in economic markets. The household and business

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[33] L Reinhorn, "Optimal Taxation with Monopolistic Competition" (2012) 19 *International Tax and Public Finance* 216.

[34] Independent Economics, n 7; Murphy, n 8.

[35] C Murphy, "Efficiency of the Tax System: A Marginal Excess Burden Analysis" (Australian National University (ANU) Tax and Transfer Policy Institute Working Paper, 2016/4, 2016).

sectors aim to maximise their utility and profit, respectively. Prices adjust in each market until supply is balanced with demand.

CGETAX is a long run model, meaning that its results refer to the ongoing effects on the economy after it has fully adjusted to a policy change. This is appropriate because government policy options should be assessed primarily on the basis of their lasting impacts, although it is also appropriate to take adjustment costs into consideration.

When an economic activity is taxed heavily, economic returns are reduced, which can lead to a tax-driven, economically inefficient shift away from that activity and towards other less-heavily taxed activities. The extent of such shifts and associated economic losses depends on the substitutability between activities, as measured by various elasticities. CGE models provide a means of quantifying these shifts and losses.

CGETAX includes the following features for modelling tax inefficiencies:
- tax disincentives to supply labour;
- tax disincentives to invest;
- tax disincentives to save;
- the concessional tax treatments of housing, superannuation and dividends;
- the progressive nature of the personal income tax system;
- profit shifting by MNCs;
- oligopoly power in industries with persistently above-normal rates of return on capital;
- two hundred and seventy-eight industries so that more narrowly based taxes can be modelled; and
- the snapshot of the economy provided by the ABS input–output tables for 2012–2013.

CGETAX is uniquely placed among Australian CGE models for analysing tax policy towards financial services. There are two main reasons for this.

First, as shown in Table 6, CGETAX distinguishes 13 financial service sectors, whereas other comparable models distinguish only three financial service sectors. This finer detail enables the model to fully differentiate between sectors according to their GST status. Other models treat insurance as a single sector even though different forms of insurance are subject to three different GST treatments. The fine level of industry detail in financial services is also useful in better defining the scope for the financial services rents tax and the major bank levy as detailed in Table 6.

TABLE 6. Financial Service Sectors: Tax Treatments

Code	Description	GST treatment	Rent tax	Major bank levy
6201A	Depository Financial Intermediation – margin-based	Exempt	Yes	Yes
6201B	Depository Financial Intermediation – other	Exempt	Yes	Yes
6201C	Non-Depository Financing	Exempt	Yes	No
6201D	Financial Asset Investing	Exempt	Yes	No
6301A	Life Insurance	Exempt	Yes	No
6301B	Health Insurance	Free	No	No
6301C	Motor Vehicle Insurance	Taxable	No	No
6301D	Other General Insurance	Taxable	No	No
6301E	Superannuation Funds	Exempt	Yes	No
6301M	Marine insurance provision (Margin)	Taxable	No	No
6401A	Financial Asset Broking Services	Taxable	No	No
6401B	Other Auxiliary Finance and Investment Services	Taxable	No	No
6401C	Auxiliary Insurance Services	Taxable	No	No

Second, as discussed in Pt V, CGETAX allows for the presence of oligopoly in certain sectors, most notably financial services, whereas other Australian CGE models unrealistically assume perfect competition in every industry. The CGETAX approach of assuming that oligopolies engage in mark-up pricing is the most common approach to oligopoly in CGE models.[36] As explained in Pt V, taking into accounting the presence of an oligopoly in banking fundamentally changes the assessment of tax policy towards financial services.

B. Policy scenarios

CGETAX is used to evaluate the relative merits of four different taxes on financial services. These financial service taxes are as follows: (1) the existing GST input tax; (2) the proposed GST consumption tax; (3) a potential economic rents tax; and (4) a bank levy. The coverage of each tax is shown in Table 6.

This evaluation is undertaken by comparing outcomes for the economy and government budgets between four alternative policy scenarios and a baseline scenario. In the policy scenarios, the existing tax regime of the baseline scenario is varied by introducing or removing a particular tax on certain financial services. That is, each of the four policy scenarios varies a single-tax assumption, relative to the baseline scenario.

- *Baseline scenario*: This scenario is based on existing tax policy, which includes GST input taxation of financial services.
- *Consumption tax scenario*: This scenario is based on the Evans proposal to remove the GST concession for financial services by making them taxable instead of GST input taxed. That is, financial services become subject to a consumption tax.
- *Economic rent tax scenario*: This scenario varies the baseline scenario by introducing a tax on economic rents in the input taxed or exempt financial services sector. The rent tax is set at 7%, but is assumed to be deductible for company tax and so leads to some loss in company tax revenue. This is broadly equivalent to setting the rent tax rate to 5%, and assuming it is not deductible for company tax. For simplicity, in Pt VII it is described as a 5% rent tax.
- *GST-free scenario*: This scenario varies the baseline scenario by making financial services GST-free.
- *Bank levy scenario*: This scenario varies the baseline scenario by introducing a bank levy. The major bank levy applies at the same rate of six basis points irrespective of the profitability of the banking sector. Consequently it is modelled as a tax on production costs. This approach to the bank levy is justified more formally by the analysis in Murphy.[37] As a tax on production costs, the bank levy is likely to be passed on to customers after a mark-up has been applied.

In modelling the economic rent tax on financial services, it is assumed that there is no shifting of profits to other jurisdictions to avoid the rent tax. Most of the exempt financial services are provided by organisations that are Australian based and focused. Hence they have little opportunity to shift profits offshore and in any case they may be reluctant to do so because of the loss of franking credits to distribute to shareholders. Profit shifting is much more of a concern with respect to foreign-based multinational companies that operate in Australia.

The economic impacts of any of the four taxes can be assessed by comparing economic outcomes in a scenario in which a tax is present with the outcomes in a scenario in which the tax is absent, with other taxes remaining unchanged. The scenario comparisons needed to assess each tax are as follows.

[36] R Roson, *Introducing Imperfect Competition in CGE Models: Technical Aspects and Implications* (Fondazione Eni Enrico Mattei, 2006).

[37] Murphy, n 12.

- • economic rents tax: economic rent tax scenario vs baseline scenario;
- • input tax: baseline scenario vs GST-free scenario;
- • consumption tax: consumption tax scenario vs GST-free scenario; and
- • bank levy: bank levy scenario vs baseline scenario.

VII. MODELLING RESULTS

As foreshadowed in Pt VI, this section reports on the modelling results from CGETAX on the economic costs of four taxes on financial services. The GST input tax and the major bank levy are existing taxes. A consumption tax (as proposed by Evans) and an economic rent tax are potential taxes.

The economic cost of each tax is measured by its average excess burden (AEB). The AEB concept and AEB estimates for each tax are explained in Pt VII A. More extensive estimates of the economic impacts of each tax are presented in Pt VII B. Finally, Pt VII C considers how the AEB estimates would change if the market for financial services were to become perfectly competitive.

For simplicity, this section often refers to "financial services". However, this should always be read as a reference to financial services that are subject to the tax in question, as detailed in Table 6.

A. AEB estimates

The total burden on households from a government imposing a particular tax includes both the burden of paying the tax plus the excess burden from the inefficiencies introduced through the tax's distorting effects on economic decision-making. There may be distortions to labour supply, investment, saving and other economic decision-making. The AEB measures the excess burden of the tax, relative to the amount of revenue that is raised.
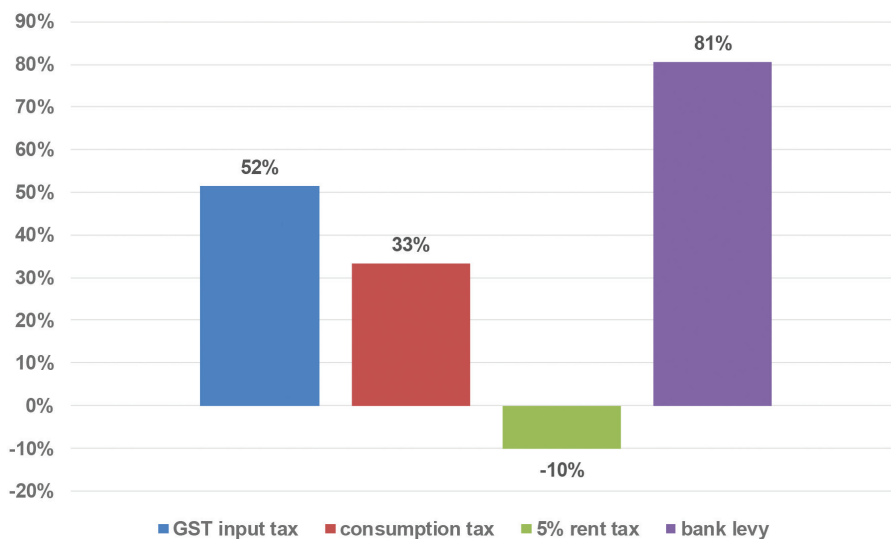
The AEB of a tax can be defined more precisely as the consumer loss per dollar of gain in the government budget from imposing the tax. In modelling the AEB, the gain to the government budget is assumed to be returned to the consumer as a lump-sum transfer ("transfer") so there is no income effect from the tax on consumers. Rather, the measured consumer loss only reflects the distorting effects on economic decision-making from the tax, that is the excess burden. The assumption of a lump-sum transfer to rebalance the budget is a device to allow the efficiency of each tax to be compared on the same footing; it is not intended as a realistic assumption about how government budgets are adjusted in practice.

In Chart 1, the bank levy stands out as being a particularly inefficient way of raising revenue. It has an estimated AEB of 81%. This compares to a marginal excess burden (MEB) of only 24% from raising additional revenue by raising the general rate of GST incrementally.

The high AEB for the new bank levy arises from the high degree of market power enjoyed by providers in this sector. As set out in Table 5, the estimated mark-up factor applied to marginal costs is 1.96 for banking services that are subject to the bank levy, well above the mark-up factor of unity that applies under perfect competition. This high mark-up factor means that prices are inflated well above the marginal cost even before the bank levy is considered. The bank levy and the high mark-up applied to it exacerbates this overpricing. This overpricing leads to underconsumption of banking services, relative to the efficient outcome that would prevail under perfect competition.

Similarly, the existing GST input tax on exempt financial services stands out as another inefficient way of raising revenue. It has an estimated AEB of 52%.

The explanation for the high AEB for the existing GST input tax is similar to that for the bank levy. As set out in Table 5, the estimated mark-up factor applied to marginal costs for GST exempt financial services is 1.70. This mark-up is not quite as high as for the more narrowly defined banking services but is nonetheless well above the mark-up factor of unity that applies under perfect competition. Hence the AEB for GST input tax is high, but not as high as for the bank levy.

CHART 1. Average Excess Burdens of Taxes on Financial Services (% or Revenue)

The high AEBs for these two taxes highlight the inefficient nature of taxing the inputs of oligopolists engaged in mark-up pricing. Such taxes are passed on with a mark-up to consumers, who already face excessive prices based on a mark-up of marginal costs.

The economic rent tax on exempt financial services is at the other extreme of being a highly efficient way of raising revenue. The base for such a tax is the mark-up itself. As explained in Pts III and V, in principle such a tax does not affect the behaviour of the oligopolist and none of the tax is passed through to customers. Rather, the rent tax is paid entirely out of the mark-up and hence is borne by the owners of the oligopoly.

If all owners of the oligopoly are Australian residents, the rent tax has no effect on national income. Rather, the rent tax recycles national income from the owners of the oligopoly to the recipients of the hypothetical lump-sum transfers paid by government from the tax proceeds. However, to the extent that the owners of the oligopoly are foreign residents, there is a gain in national income as income is transferred from foreign owners to Australian residents. Thus, Chart 1 shows an AEB of −10%.

As explained in Pt II, removing the GST concession for exempt financial services as proposed by Evans would shift the tax base to household consumption of such services. This would be in keeping with the GST treatment of other taxable goods and services. The estimated AEB for this consumption tax treatment of exempt financial services is estimated at the medium rate of 33%.

This AEB for consumption tax is more favourable than for the GST input tax that it would replace because a consumption tax is based on the final, marked-up price to consumers. It therefore combines an efficient tax on the oligopoly mark-up with an inefficient tax on the costs of production to which that mark-up is applied. The overall effect is that the consumption tax is fully passed on to consumers. This is well below the mark-up factor of 1.70 that applies to GST input tax.

The modelling results can be summarised as follows. With respect to GST, the consumption tax based on the Evans proposal is more efficient than the existing GST input tax. Further, the proposed economic rent tax stands out as the most efficient way of raising revenue from financial services, while the major bank levy stands out as the least efficient.

B. Wider economic impacts

Table 7 extends the AEB results to show impacts on other key indicators of each of the four taxes on financial services. It also shows the impact of switching from a GST input tax to a GST consumption tax on those services.

Note that the revenue estimates already presented in Pts II, III and IV use more detailed, up-to-date information and hence are likely to be more accurate than those presented in Table 7. The role of the revenue estimates in Table 7 is in estimating the AEBs.

TABLE 7. Effects of Financial Services Tax Scenarios on Key Indicators (%)

Financial services tax	GST input tax	Consumption tax	Consumption vs input tax	5% rent tax	Bank levy
Consumer welfare (2015/2016, $ billion)	−1.3	−1.6	−0.3	0.3	−0.9
Budget gain ($ billion)	2.5	4.8	2.3	2.7	1.2
Average excess burden (%)	50%	32%	13%	−11%	79%
Household consumption (%)	−0.24%	−0.30%	−0.05%	0.03%	−0.16%
GDP (%)	−0.21%	−0.23%	−0.01%	0.00%	−0.15%
Business investment (%)	−0.24%	−0.14%	0.10%	0.00%	−0.20%
Employment (%)	−0.15%	−0.19%	−0.04%	−0.01%	−0.08%
Real wage (%)	−0.48%	−0.62%	−0.13%	0.01%	−0.29%

The estimated effects of the switch from GST input tax to a GST consumption tax are seen in the third column of results in Table 7. It shows that the proposal has the favourable effect of raising additional revenue with only a slight excess burden for consumers. In particular, switching from a GST input tax to a GST consumption tax on the exempt financial services would raise an additional $2.3 billion in annual revenue while reducing consumer welfare by only $0.3 billion, as shown by the third column of results. By comparison, raising the same amount of additional revenue through an increase in the general rate of GST would leave consumers worse off by $0.6 billion on an annual basis (an MEB of 24% applied to an additional $2.3 billion in revenue).

Table 7 shows how these favourable impacts of the Evans proposal arise from both removing the existing GST input tax and introducing the consumption tax. Taking the government budget impact as an example, removing the existing GST input tax comes at an annual budget cost of $2.5 billion (first column of results), while introducing the consumption tax provides a gross budget gain of $4.8 billion (second column of results), leaving the net budget gain from the Evans proposal of $2.3 billion (third column of results), as referenced above.

The result that consumer welfare is reduced by only $0.3 billion also reflects the net impact of both tax changes. The GST input tax (first column of results) reduces consumer welfare by $1.3 billion while the consumption tax (second column of results) reduces consumer welfare by $1.6 billion, so replacing the former with the latter reduces consumer welfare by $0.3 billion (third column of results).

The favourable outcome from the Evans proposal reflects the benefit from switching from the existing GST input tax with its high AEB of 52% to the consumption tax with its medium AEB of 33%. This makes it possible to raise additional revenue with only a small net cost to consumer welfare.

Another important focus of this article is the effects of introducing a rent tax on the exempt financial services. Table 7 (fourth column of results) shows that this would raise a further $2.7 billion in annual revenue. It would also improve consumer welfare by $0.3 billion on an annual basis. This improvement in consumer welfare arises from the transfer from foreign owners of exempt financial service providers to Australian residents.

The bank levy offers the poorest trade-off of the four taxes between revenue raising and economic costs. The budget gain is only $1.1 billion yet the loss in consumer welfare is as high as $0.9 billion. This reflects the high AEB of this tax.

The impacts on consumer welfare flow through a similar pattern of impacts on the related indicator of real household consumption. That is, the bank levy, GST input tax and the consumption tax have

negative impacts while the rent tax has positive impacts, as it generates a gain to consumers from the income transfer from foreign owners of exempt financial service providers to Australian residents.

The bank levy, GST input tax and GST consumption tax all exacerbate the overpricing in the financial services sector that results from oligopoly power. The resulting suppression of demand makes this sector artificially small relative to other sectors. This leads to lower productivity for the economy overall, which is reflected in losses in economy-wide real GDP, real wages and labour supply in Table 7. In contrast, the rent tax does not affect pricing of financial services. Thus, it has only minimal, indirect impacts on real GDP, real wages and labour supply in Table 7.

Table 7 also provides insights into the likely equity impacts of the tax proposals. These equity impacts are now considered, taking the Evans proposal, the bank levy and the rent tax in turn.

Despite raising additional annual revenue of $2.3 billion, the Evans proposal leads to only a minor increase in the cost of living, as reflected in a fall of only 0.13% in the real wage (third column of results). This consumer-friendly nature of the Evans proposal arises because it replaces a GST input tax that is subject to an oligopoly mark-up with a consumption tax that is not. Hence most of the incidence of the additional taxation falls on the owners of financial service providers, rather than on their customers. As long as the benefits from the additional government expenditure funded by the Evans proposal are distributed evenly, wage earners and benefit recipients are likely to finish better off and shareholders in financial service providers worse off. This pattern of winners and losers is consistent with the small overall impact on consumer welfare shown in Table 7.

The bank levy is the least consumer friendly of the four taxes. The contribution to the budget balance of $1.1 billion comes at the cost of a fall in the real wage of 0.29%. Relative to the budget cost, this fall in the real wage is the highest of all four taxes. This reflects the high price mark-up applied to banking services.

The proposed economic rent tax on financial service providers is strikingly consumer friendly. Additional annual revenue of $2.7 billion is raised without any increase in the cost of living, as the real wage rises by 0.01% (fourth column of results). This is because the incidence of the rent tax falls wholly on the owners of financial service providers, including foreign shareholders. This contribution from foreign shareholders in financial service providers accounts for the overall positive impact on consumer welfare shown in Table 7 (fourth column), with an annual gain of $0.3 billion. Wage earners and benefit recipients will be better off as long as they receive at least some of the benefits from the additional government expenditure funded by the rent tax. Foreign shareholders will be worse off, while the outcome for local shareholders in financial service providers depends on whether they benefit sufficiently from the additional government expenditure to cover their shareholder loss.

C. Perfect competition

The role of oligopoly power in financial services in influencing the AEB estimates is now investigated. This is done by resimulating all four scenarios under the unlikely, polar assumption that all industries in the economy, including even financial services, are virtually perfectly competitive (all mark-up factors that are above unity are moved 99% of the way to unity). This is rather unrealistic. However, it serves the useful role of providing an understanding of how oligopoly power influences the AEB estimates. The AEB estimates under oligopoly and perfect competition are compared in Chart 2.
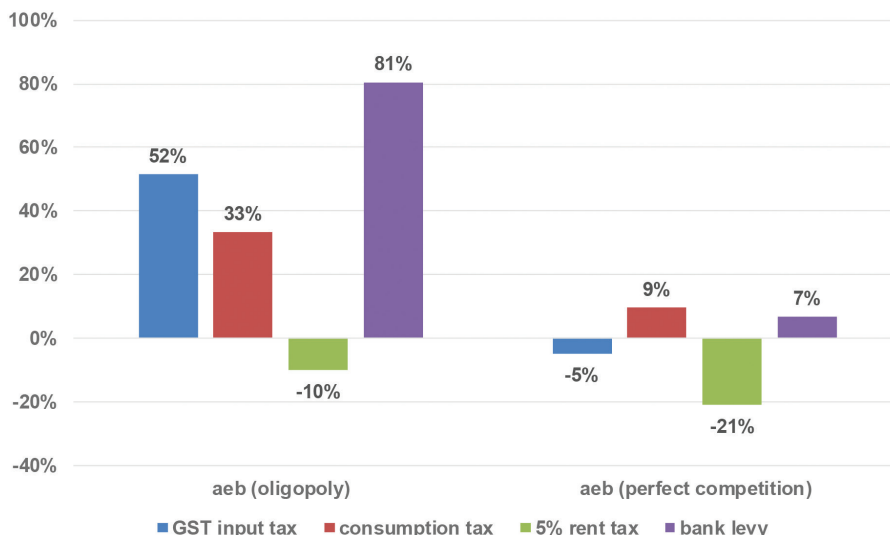
One apparent similarity in the AEB estimates is for the economic rent tax on financial services. However, assuming virtually perfect competition practically eliminates the base for this tax so it would not raise significant revenue. Hence, the associated AEB of 21% is of little significance.

The AEBs for the bank levy, GST input and consumption taxes are all much lower under perfect competition than under oligopoly, that is they become relatively efficient taxes. Under perfect competition prices for financial services are close to marginal cost. It is then optimal to apply some commodity taxation to financial services in line with the GST and other commodity taxes applied in other sectors.

While a financial services rent tax appears attractive in the current environment, the best outcome for consumer welfare would be achieved if competition policies were successful in eliminating the high

price mark-up factors found in the financial services sector. That would result in a very large gain in consumer welfare and the potential role for a financial services rent tax would disappear. However, in the meantime, taxing the mark-up through an economic rent tax offers a particularly efficient way of raising revenue.

CHART 2. AEBs of Taxes on Financial Services and Market Competition (% or Revenue)

VIII. POLICY CONCLUSIONS

The Australian financial services sector will receive net tax concessions of $3 billion in 2017–2018. This reflects the $4.65 billion budget cost of the sector's concessional input taxed treatment under the GST, only partly offset by the budget contribution from the major bank levy of $1.6 billion. Yet the big four Australian banks are highly profitable compared to their peers in advanced economies, creating scope for an economic rents tax.

This article assessed three tax reform options for financial services: (1) removing the concessional GST treatment as proposed by Evans;[38] (2) introducing a financial services economic rents tax; or (3) exploiting the recently introduced major bank levy.

Economic impacts were estimated using CGETAX, the most comprehensive model available of the effects of tax changes on the Australian economy. It is uniquely suited to modelling proposals for reforming the taxation of financial services because of its fine level of industry detail within financial services and because it takes into account the banking oligopoly, which has major implications for tax policy assessments.

The economic assessment finds that, per dollar of revenue raised, the economic rents tax does no economic harm, with moderate harm from full taxation under the GST, and considerable harm from the major bank levy. Specifically, the drag on the economy per dollar of revenue raised is estimated at −10 cents, +33 cents and +81 cents, respectively.

This suggests that a financial services economic rent tax should be introduced. The introduction of this could be smoothed for the financial services sector by timing it to coincide with the proposed cut in the company tax rate from 30 to 25%.

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[38] Evans, n 6.

Removing the GST tax concession for financial services should also be considered. This could be complementary to introducing a financial services economic rent tax as both taxes need to address the same issue of measuring income generated by financial intermediation.

The major bank levy should be abandoned unless it is fundamentally redesigned as a user pays charge for the government guarantees that support the banking system, in line with the FSC design proposed by the IMF.

While improved tax policy towards financial services offers consumers substantial benefits, achieving the long-term objective of greater competition in financial services offers consumers even greater benefits.