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US Corporate Tax Reform: Implications for the rest of the world

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Summary

On 27 September 2017, the United States (US) Administration and Republican Congressional leadership released a framework for US tax reform, including a reduction in the federal corporate tax rate from 35 to 20 per cent. This paper examines the likely impact of this reform on the US and the rest of the world, placing the US changes in the context of the global trend toward lower corporate taxes.

In theory, a corporate tax rate cut stimulates investment by making more investment opportunities sufficiently profitable to attract financing. The extent to which this is the case in practice will depend on how the tax cut is funded and whether investors consider the tax cut to be permanent. If the corporate tax rate cut results in an overall reduction in tax on US investments and investors believe that the tax cut is permanent, we are likely to see an increase in the level of US investment. If investors believe that the tax cut is temporary, the effect on US investment may be minimal. Ultimately, the economic impact of the plan on the US will depend on how time and compromise shape the final package.

If a US corporate tax cut does result in an investment boom, goods, labour and funds will be required. In a scenario in which the investment boom is largely funded domestically from US savings, negative impacts on the rest of the world are likely to be short-lived and modest.

Realistically, however, a US investment boom is likely to be only partially funded domestically and would draw funds and goods from the rest of the world. In this scenario, the rest of the world would experience a decline in capital stock resulting from the flow of capital into the US. The magnitude of the resulting welfare loss in those countries will depend on the size of the US corporate tax cut; how it is funded; the elasticity of the US labour supply response and the US saving response. For Australia, the size of the negative impact will also depend on how other countries respond.

While the size of the US economy means changes to the US tax system have particular significance, it is important to consider these reforms as part of an ongoing trend. As capital markets have become increasingly global and business location increasingly mobile, governments have sought to drive economic growth in their jurisdictions by lowering corporate tax rates. The US reforms have the potential to accelerate tax competition between jurisdictions, making Australia's current corporate tax rate increasingly uncompetitive internationally.

While the Administration and Republican Congressional leadership have indicated that they will 'set aside' the idea contained in the House Republicans' 2016 plan to move to a destination-based cash flow tax (DBCFT), this paper also provides a discussion of the theoretical underpinnings of the proposal.

1. Introduction

On 27 September 2017, the United States (US) Administration and Republican Congressional leadership released a framework for US tax reform, including a reduction in the federal corporate tax rate from 35 to 20 per cent. This paper examines the likely impact of this reform on the US and the rest of the world, placing the US changes in the context of the global trend toward lower corporate taxes.

The key elements of tax framework with respect to corporate tax are:

- a reduction in the federal corporate income tax rate from 35 to 20 per cent;
- immediate expensing of depreciable assets (except structures) for at least 5 years;
- limitations on interest deductions;
- the removal of the domestic production deduction;
- an exemption for dividends paid by foreign subsidiaries to US companies (where the US company owns 10 per cent or more of the foreign company); and
- a one-time tax on overseas profits.

These proposals were reflected in the draft of the Tax Cuts and Jobs Act released by the House Ways and Means Committee on 2 November 2017.

2. Impact of US corporate tax reform on investment

Corporate income tax drives a wedge between the before tax return on an investment and the required after tax return. In theory, the after tax risk-adjusted rate of return that investors require in order to make an investment is the same in each country because capital funding is internationally mobile. Some investment opportunities that might have been sufficiently profitable under a lower corporate income tax rate will not be financed under a higher corporate income tax rate because the tax pushes the after tax return below the globally required rate.

In theory, a corporate income tax rate cut stimulates investment by making more investment opportunities sufficiently profitable to attract financing. The extent to which this is the case in practice will depend on a number of factors including, how the corporate tax rate reduction is funded and whether it is permanent. A key question is whether, as a result of the reform package, the overall level of tax paid on a project is lower, taking into account the deductibility of expenses and other available concessions as well as how other (or future) changes in the tax system impact costs such as wages and intermediate inputs.

Commentators observe that there are two routes corporate tax reform could take through the US Congress given that the Republicans do not have a filibuster proof majority in the Senate. The first route involves securing some Democrat support. The second route is via budget reconciliation – a special legislative process by which bills can be passed by simple majority and cannot be filibustered. Under the Byrd Rule, budget reconciliation can only be used if a bill does not increase the deficit beyond the budget window (normally 10 years).

The manner in which the tax cut is funded will have an impact on the extent to which it stimulates investment and economic activity. Funding options that do not increase the overall level of tax on investment or input costs are likely to have the highest growth potential.

2.1 Funding options

2.1.1 Base broadening

The framework announced on 27 September 2017 contains some base broadening measures including the removal of the domestic production deduction and limitations on interest deductibility.

While the reduction in the company tax rate will lower the cost of capital, changes to other tax settings may increase the cost of capital. For example, less generous depreciation deductions will increase the cost of a capital asset (and therefore lower the after tax return of an investment). This means that broadening has the potential to offset the investment impact of the rate reduction that it pays for.

That said, industry concessions and other forms of targeted corporate tax relief can cause capital to be (mis)allocated to particular types of investments if the concessions are not addressing market failures. This can result in otherwise productive investments going unfunded, causing overall efficiency losses. Removing these distortions and using the resulting revenue to fund an economy wide tax cut could therefore result in a more productive stock of capital with an increase in economic efficiency and total US output.

2.1.2 Tax mix switch

Reform that is both growth enhancing and revenue neutral could be achieved by reducing the corporate tax rate at the same time as increasing reliance on less distortive taxes, like broad-based consumption or land taxes. For example, studies have found that eliminating US corporate tax and making up for the lost revenue by increasing consumption taxes would significantly boost investment and economic activity in the long run.¹ However, we note that the framework announced on 27 September 2017 does not include any proposal to introduce or increase other taxes.

2.1.3 Expenditure cuts

The inclusion of spending cuts in the reconciliation bill could also assist in making the package deficit neutral outside of the budget window. For example, President Trump's 2018 Budget Proposal, 'A New Foundation for American Greatness' outlines a range of expenditure cuts; however, that document assumes the tax reform package is revenue neutral (that is, the spending cuts outlined in the budget proposal are not linked to the tax reform package).

2.1.4 Economic growth dividend

To the extent that a corporate tax cut stimulates economic growth, part of the revenue lost as a result of a lower rate will be made up for through the expansion of the corporate tax base (that is, increased corporate profits) as well as that of other taxes (for example, sales and personal income taxes).

For example, Australian Treasury modelling estimates that the size of the Australian economy is expected to permanently increase by just over one per cent in the long term given a 5 percentage point reduction in the Australian corporate tax rate. In the modelling scenario, the total revenue loss from the company tax cut that is recovered in the long run through increased economic growth is

¹ Enrique G Mendoza, and Linda L Tesar, 'Why hasn't tax competition triggered a race to the bottom? Some quantitative lessons from the EU' (2005) 52(1) *Journal of Monetary Economics*, pages 163-204; Enrique G Mendoza, and Linda L Tesar, 'The International Ramifications of Tax Reforms: Supply-Side Economics in a Global Economy' (1998) 88(1) *American Economic Review*, pages 226-245.

estimated to be around 45 cents per dollar of net company tax cut, with 8 cents accruing to State and Territory Governments and 37 cents to the Commonwealth Government.²

US Treasury Secretary Steven Mnuchin has indicated that the administration will at least partially rely on such a growth dividend to fund the proposed cut in the corporate rate.

2.2 Expectations as to whether the tax cut will be permanent

For the proposed corporate income tax cut to stimulate investment as intended, it is important that investors and businesses expect it to be permanent. If investors and businesses believe the lower tax rate is temporary, the tax position of investments generating returns beyond the 10 year budget window (i.e. long lived capital) would be uncertain. If this uncertainty means that businesses do not respond to the reduced tax rate by investing, the corporate tax cut will not generate increased activity.

Business expectations about the permanency of the corporate tax cut will be higher if the corporate tax cut is funded. From a practical perspective, this limits the risk that the corporate tax cut would be made to sunset within the budget window so as to qualify for the budget reconciliation process.

Even putting the budget reconciliation process aside, businesses may consider a tax cut funded by government borrowing to be unsustainable over the long term as government debt must be paid at some point in future. In anticipation of future tax increases, businesses may save rather than invest – this is the idea of Ricardian Equivalence. At the same time, increased government borrowing may put pressure on interest rates, increasing the rewards for saving. Whether an unfunded corporate tax cut would have this effect in practice is questionable. For example, governments can always look to cut spending or to sell assets as an alternative to raising taxes. As the impact of such cuts on individual actors in the economy is inherently uncertain, a tax cut funded by increased government debt may not actually cause businesses to save rather than invest.

3. Impact of a US investment boom on the rest of the world

As discussed above, the manner in which the US corporate tax cut is funded will influence whether and to what extent it leads to an increase in US investment. As time and compromise are likely to change the shape of the final package, the growth potential of the final tax reform package is uncertain. This makes it impossible to predict the impact on the rest of the world with any precision.

Nevertheless, if a substantial cut in the US corporate income tax rate does result in an investment boom in the US, the rest of the world is likely to experience reduced foreign investment and, as a consequence, lower GDP and real wages than might otherwise be the case. This negative impact should more than offset any boost the rest of the world receives from increased demand for goods from the US.

This section discusses the reasons for this and the factors which would influence the magnitude of these negative effects. If a US corporate tax cut does result in an investment boom in the US, this investment boom would require goods, labour and funds. The magnitude of the negative impact on the rest of the world will depend on whether or not these inputs – particularly goods and funds – can be domestically sourced or whether they must be sourced from other countries.

² Michael Kouparitsas, Dinar Prihardini and Alexander Beames, 'Analysis of the long term effects of a company tax cut' (Treasury Working Paper 2016-02, May 2016). These estimates vary depending on assumptions about how the shortfall net of second round effects is financed.

3.1 Base case: US production and savings increase

In order to help us to think about the potential effects on rest of the world, we first examine the circumstances in which a US investment boom might be supplied and funded domestically.

An increase in US investment should drive up aggregate demand in the US economy. As US companies build new factories, expand their production, upgrade their technology and invest in intangible assets (for example developing intellectual property), they would demand more goods (for example, they would need more intermediate inputs – more steel, more software and so on). These goods either would need to be made in the US or imported.

In order to make these goods domestically, US businesses would need to hire more workers and so the demand for labour will increase. If we assume, for the time being, that labour supply responds, then three things would happen: (1) the demand for goods could be met to some extent by the domestic market; (2) labour income would rise as households work more; and (3) households save more as a result of their increased income.

Under these conditions, the demand for goods is met largely by US production and the demand for funds is met largely by US saving. Only a modest amount of funding is pulled from the rest of the world. In this scenario, the rest of the world would experience a small decline in investment. Increased investment in the US would eventually lead to diminishing returns but after tax returns would stabilise at a rate above their previous level in the long run if US saving does not completely meet the demand for funds. This is because the tax cut has permanently reduced the gap between before and after tax returns and the US is a price setter in the international funds market. As other countries experience some capital outflow, their rates of return increase until they reach the long run US after tax rate. Once these rates converge, funding flows stabilise. In the interim, however, there would have been a permanent increase in US investment. In this scenario, the short run negative impact on the rest of the world would be modest.

The situation in the goods market is similar. Assuming US domestic production increases in response to the increase in aggregate demand created by the investment boom, the demand for goods would be largely met domestically. Nevertheless, there would still be some gap to be filled by imports. If imports into the US rise to satisfy surging investment demand, the international price of those imports should increase during the life of the boom.

In these circumstances, Australia could experience higher import prices in the short term. Consider, for example, that China is America's biggest source of imports as well as Australia's biggest source of imports. To the extent that Australia and the US have similar import profiles, US demand is likely to bid up the price of goods that Australia imports. If this is the case, Australian import volumes may decline slightly in the short term before recovering in the long run as US investment growth wanes.

On the other hand, Australian exports may receive a temporary boost as a result of increased US demand. The net short term trade impact on Australia will depend on whether the price of our exports increases relative to the price of our imports (in other words, it depends on what happens to our terms of trade). But even if there is a positive trade impact, this would be outweighed by the negative investment impact.

3.2 A more likely outcome: goods and funds are sourced from the rest of the world

There are a lot of 'ifs' in the above discussion. In particular, for this relatively benign scenario to play out, we would need:

- an elastic US labour supply response; and
- an elastic US saving response.

In regard to labour supply, the US economy appears to be at or very near to full employment, with an unemployment rate of 4.4 per cent as of August 2017.³ Immigration reform might further limit the ability of labour supply to respond to an increase in aggregate demand. If there is no additional capacity in the labour market, then aggregate demand would have to be met through a steeper increase in imports.

If US labour supply is inelastic, then employment would not increase but wages would. Despite having more disposable income, households may not be inclined to save more in the short term if they see the boom as permanent. At the same time, a US investment boom would increase the demand for funds, causing interest rates to rise.⁴

For households, higher interest rates have two competing effects. First, higher interest rates mean larger returns for a given level of saving, increasing lifetime income (the 'income effect'). The income effect encourages both present and future consumption. Second, higher interest rates increase the opportunity cost of current consumption (the 'substitution effect'). The substitution effect encourages saving.

If the substitution effect dominates, households would respond by cutting current consumption and increasing saving to buy into the boom. In this scenario, a US investment boom could be at least partially funded by US domestic saving. Given the potential size of the shock, however, it seems more likely that the income effect would dominate the substitution effect. If households see the boom as being sustained and leading to permanently higher income in the future, they might increase consumption – rather than saving – in the short term. If the income effect dominates the substitution effect, saving is unlikely to increase (they may even fall).

In the event that labour and saving are less elastic than assumed in the first scenario for these reasons, the negative impact on rest of the world, including Australia, would be larger.

If labour supply does not respond, the US would need to import more goods from the rest of the world and import prices would go up further than in the first scenario outlined above. While the aggregate impact on Australia's trade balance may be similar, the import and export responses would both be larger and so the impacts on particular industries may be more dramatic.

To the extent that the boom is not financed by US domestic saving, it would initially need to be funded from the existing global supply of funds, meaning the rest of the world gets less. Lured by a higher after tax return on investment, investors will shift funds from overseas to the US. If the US investment boom results in higher capital inflows, the rest of the world, including Australia, will experience higher capital outflows. The negative impact on investment in Australia could be larger than in the first scenario outlined above in both the short run and the long run. This is consistent with the analysis of Mendoza and Tesar whose analysis shows that US tax corporate tax reductions have negative spillovers for the rest of the world in both the short and long run.⁵

While the US would experience higher GDP and real wages, other countries, including Australia, could experience a permanent reduction in the level of GDP and real wages unless they take steps to maintain their competitiveness. In its April 2017 World Economic Outlook, the IMF noted that a US fiscal expansion – reduced labour income taxes, corporate income taxes and increased infrastructure spending – could benefit other countries in the short term by increasing demand for goods imported by the US.⁶ But the same US policy change could cause negative spillovers in the long term if other

³ US Bureau of Labor Statistics, *Labor Force Statistics from the Current Population Survey* <<https://data.bls.gov/timeseries/LNS14000000>>.

⁴ We note that reductions in Australia's corporate tax rate are not likely to impact interest rates in this way, given the size of our economy.

⁵ Enrique G Mendoza, & Linda L Tesar, 'The International Ramifications of Tax Reforms: Supply-Side Economics in a Global Economy' (1998) 88(1) *American Economic Review*, pages 226-245.

⁶ IMF, 'World Economic Outlook, April 2017: Gaining Momentum?' (2017), pages 37-38.

countries do not respond by cutting their own corporate taxes or by introducing other competitiveness enhancing policies. In that instance, those countries will likely lose investment to the US. In addition, the US fiscal expansion should raise global interest rates. That could put stress on many emerging market economies, dampening global economic activity.

3.3 Industry impacts

The degree to which particular industries would experience reduced investment (and therefore economic activity) as funding is diverted to the US depends on the mobility of that industry's factors of production – that is, capital and labour.

In relatively mobile industries like advanced manufacturing, some future investment and associated economic activity may be lost to the US. Industries like advanced manufacturing do not tend to rely on fixed factors. Rather, such industries tend to be located in countries with skilled workforces and strong institutional settings – features shared by many OECD countries. As such, location decisions for these sorts of industries are susceptible to changes in the level of tax that a country applies to an investment.

Relatively immobile industries like mining, retail and agriculture are less likely to experience reduced investment as a result of US tax reform. The key factors of production of these industries – mineral deposits and arable land – are more difficult to move.

Within the US, we would expect a lower corporate tax rate and associated reduction in the required pre-tax return on corporate investment to lead to changes in the structure of the US economy in aggregate, including a reallocation of investment from housing and other non-corporates to corporate entities.

3.4 Impact on base erosion and profit shifting

A reduction in the US corporate income tax rate could also put pressure on other countries' corporate tax revenue collections through increased profit-shifting activity.

Incentives for engaging in profit-shifting increase as tax differentials between countries increase.⁷ Currently, the statutory tax rate differential between Australia and the US federal rate is about 5 percentage points in Australia's favour (that is, the US federal rate is 5 percent higher). If the US were to cut its corporate tax rate to 20 per cent, the statutory tax rate differential between Australia and the US would be 10 percentage points in favour of the US (although this would drop to 5 percentage points by 2026 under the Australian Government's Enterprise Tax Plan).

Consider the case of a US company selling products to a related Australian distributor. In monetary terms, a \$10 increase in the price of the goods could result in \$3 less tax being paid in Australia by the Australian distributor with only \$2 more tax being paid in the US by the US company – a tax saving for the multinational group of \$1.

Thus an increase in the statutory rate differential between two countries increases the tax savings that can be achieved via related party transactions. This has the potential to put additional strain on transfer pricing rules. Australia could see a decline in corporate tax revenue as a result.

4. The US tax cut in an international context

Ultimately, the impact on Australia will depend on how the rest of the world responds to US corporate tax reform and its flow on effects. Given the history of global tax competition, it seems

⁷ For a summary of recent studies see OECD, *Measuring and Monitoring BEPS: Action 11 Final Report* (2015) <<http://www.oecd.org/tax/measuring-and-monitoring-beps-action-11-2015-final-report-9789264241343-en.htm>>, pages 88-99.

likely that other countries would respond to changes in US corporate tax settings by lowering their corporate income tax rates and/or by introducing more preferential allowances for capital investment.

This represents the continuation of an ongoing trend. As capital markets have become increasingly global and business location increasingly mobile, corporate income tax has an increasingly distortive effect on location decisions. Governments have sought to spur investment and drive economic growth by lowering rates. The OECD average corporate income tax rate has dropped from 32 per cent in 2000 to 24 per cent today.⁸

Over the past decade many economies have already cut their rates.

- Canada reduced its federal company tax rate from around 22 per cent to 15 per cent between 2006 and 2012 (bringing its combined average federal-provincial rate down from 33.93 to 26.10).
- Singapore cut its rate from 20 per cent to 17 per cent between 2007 and 2010.
- Tax rates have dropped in the UK from 30 per cent in 2007 to 19 per cent today, and are scheduled to fall further to 17 per cent by 2020.
- Across the Tasman, New Zealand cut its company tax rate from 33 per cent to 28 per cent between 2008 and 2011.
- More recently, other OECD economies have implemented company tax rate reductions.
 - Norway's rate was recently reduced from 27 per cent to 24 per cent between 2015 and 2016.
 - Israel reduced its rate from 26.5 per cent to 24 per cent between 2015 and 2017.
 - Japan lowered its effective rate from 32.11 per cent to 29.97 percent in 2016, with a further reduction to 29.74 per cent scheduled in 2018.
 - In December 2016, the French Parliament approved the Finance Bill for 2017, which includes a progressive reduction in the company tax rate from 33 per cent to 28 per cent over the period 2017 to 2020. Furthermore, French President Emmanuel Macron announced as part of his election campaign his intentions to extend this tax cut further to 25 per cent.

Countries that further cut their tax rates in response to the US may avoid the negative impact that the US cuts would otherwise have on investment, GDP and wages but will compound these impacts for countries that do not move their rates. For example, if EU member states and Canada responded by cutting their own corporate tax rates, investment in these jurisdictions would pick up relative to doing nothing. While some of that investment may come from their own saving, it would also increase the pull on funds from the rest of the world. Such responses would increase the potential negative impact on investment in Australia.

5. Destination-based cash flow tax

As flagged above, the House Republicans previously proposed that the US move to a destination-based cash flow tax (DBCFT). Nevertheless, in a joint statement on tax reform in July the Administration and Republican Congressional leadership indicated that 'while we have debated the pro-growth benefits of border adjustability, we appreciate that there are many unknowns associated with it and have decided to set this policy aside in order to advance tax reform'.

⁸ OECD, *Tax Database: Table II.1 Corporate income tax rate (2016)* <http://www.oecd.org/ctp/tax-policy/tax-database.htm#C_CorporateCapital>.

While a DBCFT seems off the table for now, it is an idea that might well be considered at some time in the future and the potential implications may be significant. As such, this section outlines of how it might work and the issues such an approach could raise.

The House Republicans’ plan would have seen a significant reduction in US corporate tax funded largely by taxing imports.

In a traditional ‘sourced-based’ company tax system like Australia’s, companies are taxed on their profits at the location where goods or services are produced (the ‘source’ of the profits). A DBCFT is different in two key ways.

- As a destination-based tax, it imposes tax in the country where the goods/services are sold. This entails border adjustment – export revenues are exempt from tax, imports are not deductible.
- As a cash flow tax, it seeks to tax the difference between an entity’s cash inflows and outflows, rather than its profits. This means that capital expenditure can be deducted immediately rather than depreciated over time.

While the potential trade effects of border adjustability have attracted a lot of media attention, the more significant feature of the border adjustment is that it could potentially pay for substantial reductions in US corporate income tax.

Holding US prices constant, destination-based taxation should raise more revenue in the short run than source-based taxation in countries that consistently run trade deficits, like the US and to a lesser extent Australia.⁹ If a country imports more than it exports then, all things being equal, it would collect more revenue by taxing domestic expenditure than by taxing domestic production.

Figure 1: Destination vs Source

		Production	
		Domestic	Foreign
Consumption	Domestic	GNE-M GDP-X	M
	Foreign	X	-

As discussed above, the tax base for source-based corporate taxation is domestic production. This is the sum of the first column in Figure 1: final domestic expenditure (GNE) plus exports (X) with deductions for imports (M) and wages (W).

$$T_s = (GNE - M) + X - W$$

In other words, the tax base for source-based corporate taxation is domestic value add or gross domestic product less wages.

⁹ Some economists argue that a trade deficit should be thought of as a foreign loan which needs to be repaid at some point, and so destination-based taxation would be revenue neutral in the long run. See for example, Johannes Becker and Joachim Englisch, *A European Perspective on the US Plans for a Destination Based Cash Flow Tax* (Oxford University Centre for Business Taxation Working Paper WP 17/03, 2017) <http://www.sbs.ox.ac.uk/sites/default/files/Business_Taxation/Docs/Publications/Working_Papers/Series_17/WP1703.pdf>, page 4. Others argue that it is possible for the US to run a current account deficit on a sustainable basis: See for example, Michael Kouparitsas, *Is the U.S. Current Account Sustainable?* (Chicago Fed Letter, No 215, June 2005).

$$T_s = \text{GNE} - M + X - W = \text{GDP} - W$$

By comparison, the tax base for destination based taxation is final domestic expenditure less wages. This is sum of the first row in Figure 1.

$$T_D = (\text{GNE} - M) + M - W = \text{GNE} - W$$

The difference between the source base (T_s) and the destination base (T_D) is net exports ($M - X$) or the trade balance.

$$T_D - T_s = \text{GNE} - \text{GDP} = M - X$$

Therefore the tax base under destination based taxation will be larger than under source based taxation if the trade balance is negative – that is if $M - X > 0$.

In 2015, the value of US exports as a percentage of GDP was 12.6 per cent, while the value of US imports was 15.4 per cent.¹⁰ The difference – the trade deficit of 2.8 per cent of GDP – is the addition to the tax base.

US corporate tax revenue as a percentage of GDP is currently around 2 per cent.¹¹ A 35 per cent federal corporate tax rate therefore implies a tax base (taxable corporate profits) of around 6 per cent of GDP (that is, $0.02/0.35=0.06$). As such, an addition of 2.8 percent of GDP would increase the corporate tax base by around 50 per cent (that is, $2.8/6=0.57$).

The introduction of border adjustments could therefore fund a substantial corporate tax rate reduction in the US.

It is important to note that the additional revenue obtained from taxing the trade deficit through the border adjustment could be less than initially anticipated if the US dollar appreciates to offset the impact of the border adjustment in the manner explained by Auerbach and Holtz-Eakin.¹² If the US dollar appreciates, the US dollar price of imports (before tax) will fall, reducing the additional revenue obtained from moving to destination-based taxation. On the other hand, the additional revenue could increase if the adjustment comes through an increase in factor prices (wages and so on) rather than the nominal exchange rate due to increased collections of personal income tax and taxes on inputs.

Replacing source-based corporate tax with a DBCFT could result in a substantial reduction in tax on US investment (see Appendix for further detail). In fact, the introduction of a DBCFT in the US could lead to an investment boom of such a size that it would swamp the direct effects of the border adjustment and cause the price of imports to rise, increasing tax revenues.

Challenges of moving to a DBCFT

While theoretical analysis and recent US modelling suggest that moving from a corporate income tax to a DBCFT would produce significant economic welfare gains for the US, moving to a DBCFT would be no easy task. Some of the key challenges are explored further below.

Losses

To reap the pro-growth benefits of the DBCFT, any company in a negative net cash flow position would need to receive a tax refund in the income year (see Appendix for further detail). If this 'loss' does not give rise to a negative tax liability (that is, a cheque from the government), then there could be a net positive tax on investments generating normal returns. As a way to avoid this outcome, taxes that aim to tax only economic rents tend to allow losses to be carried forward and increase the value of those carry-forward losses by an 'uplift factor'. This uplift factor compensates the company

¹⁰ World Bank, *World Development Indicators* (accessed 6 April 2017).

¹¹ OECD, *Revenue Statistics – OECD countries: comparative tables* (accessed 6 April 2017).

¹² Alan Auerbach and Douglas Holtz-Eakin, *The Role of Border Adjustments in International Taxation* (American Action Forum, 2016) <<https://www.americanactionforum.org/research/14344/>>.

for the returns they otherwise could have generated by investing the money received from the government (the tax cheque). Otherwise, the real value of this tax credit would erode over time.¹³

This is what the House Republicans propose:

‘Net operating losses (NOLs) will be allowed to be carried forward indefinitely and will be increased by an interest factor that compensates for inflation and a real return on capital to maintain the value of amounts that are carried forward.’¹⁴

Nevertheless, it is foreseeable that some exporters will always be in a net negative cash flow position (once exports revenues are disregarded for the purpose of calculating their tax liability). If these firms were to continue operating principally as exporters, they would be unable to utilise these losses. A firm in this position would have a strong incentive to structure in a way to access the losses. One option might be to merge with or acquire an importing firm (with DBCFT liabilities) in order to get the benefits of these losses. This may result in widespread tax-driven merger activity between firms – mergers which would have no apparent commercial rationale other than the utilisation of tax losses.¹⁵

Transitional arrangements

Another challenge is how to transition from a profit-based tax to a cash flow tax.

One option is rapid transition with no grandfathering arrangements. This would avoid the cost of running two systems in parallel or sustaining grandfathering arrangements but would disadvantage firms who made investment decisions under the old corporate income tax system. For example, consider a firm building a factory with the expectation that the cost of the plant, machinery and building could be deducted over the life of the factory. It would face a substantial penalty if, under the switch to a cash-flow tax, it was no longer able to depreciate its existing assets but was not eligible to expense the investment because the factory was built before the implementation of the DBCFT.

‘Free-entry’ is an alternative transition path, under which taxpayers would be able to get an immediate deduction equal to the value of their existing capital upon commencement of the DBCFT.¹⁶ To mitigate the substantial impact this approach would have on medium term revenue collections, transitional rules could theoretically be designed to apply the old rules (i.e. depreciation) to existing investment decisions and the new rules (expensing) to new decisions.

¹³ Setting an appropriate uplift factor is not without its challenges. The Australia’s Future Tax System Final Report concluded that the appropriate uplift factor is equal to the risk-free rate of return and that the government bond rate could provide a proxy for this. This is because the tax credits are effectively a loan from the company to the government. This may be appropriate if the government has a contractual obligation to honour its promise to credit the tax losses at the uplift rate that applied when the investment was made. Nevertheless, companies, and indirectly their financiers, run the risk of law changes reducing the value of the tax credit. For example, a future government may seek to raise additional revenue from the tax by reducing the uplift factor or otherwise limiting the carry forward of losses. This suggests that the hypothetical loan from the company to the government is not risk free and so should generate a return above the risk free rate. In setting the risk premium there is a trade-off between revenue security and the economic impact of the tax. If this risk premium is set too low, the tax will impact firms’ investment decisions. If set too high, government revenues will be reduced.

¹⁴ Committee on Ways and Means, *A Better Way: Our vision for a confident America* (24 June 2016) <http://abetterway.speaker.gov/_assets/pdf/ABetterWay-Tax-PolicyPaper.pdf>, page 26.

¹⁵ US Treasury, *What Would a Cash Flow Tax Look Like For U.S. Companies? Lessons from a Historical Panel*, (January 2017), <<https://www.treasury.gov/resource-center/tax-policy/tax-analysis/Documents/WP-116.pdf>>, page 15.

¹⁶ See Deiter Katz, *Towards a Practical Cash-Flow Tax* (New Zealand Treasury Working Paper 99/01, 1999) page 9.

New Zealand Treasury staff have given some thought to how such transition rules might be designed. In Working Paper 99/1, the author proposed a mechanism which would involve subjecting all assets to the cash-flow tax rules from an implementation date but making adjustments which claw back the benefits conferred by the cash flow to the extent there remains old capital in a business.¹⁷ The author concluded that the difficulties around the transition path are ‘substantial and involved’ but not insurmountable.¹⁸

Integrity issues

Proponents of the DBCFT argue that it would, if adopted multilaterally, cut through the swathe of issues being addressed as part of the G20-OECD BEPS project. Many if not most of the issues being considered under the BEPS process derive from the source-based nature of company taxation. In addition, cash flows are clearly identifiable and difficult to distort, whereas the concept of taxable income and profits are subject to a range of accounting methodologies and attribution – all of which can be gamed. That said, a DBCFT would likely have its own array of integrity issues.

As a DBCFT is similar to a value-added tax (VAT), it could be susceptible to common types of VAT fraud such as missing trader schemes¹⁹ and refund fraud.²⁰ A DBCFT could also encourage companies to shift the origin point for its sales. For example, a US company producing and selling its goods domestically would be liable to pay tax on its sales less the cost of producing its goods. To minimise the tax it pays, it could instead export to a subsidiary company overseas that would then sell back to US customers directly. The US based company would not be liable for tax on its sales (as they are exported) but would still be eligible to claim a tax refund for its domestic costs. It is not clear whether sales made directly to consumers by foreign companies would be subject to the DBCFT as articulated in the House Republicans’ Blueprint; but, it would seem necessary in order to protect the integrity of the tax base.

Finally, a cash flow tax would also reduce the effectiveness of the role that company tax plays in the implementation of personal income tax. Individuals can use companies to store their savings. Taxing companies and individuals at a similar rate minimises the incentives for individuals to lower the tax they face by re-characterising individual income as company income and storing it there. In this way, corporate income tax serves as a ‘backstop’ for the personal income system. Under a DBCFT, it would be possible – depending on how it is implemented – for companies to pay no tax if all earnings are reinvested. This creates a significant gap between the personal income tax rate faced by individuals and the company tax rate, increasing the incentive for taxpayers to store wealth in companies or reclassify personal income (like wages) as business income.

6. Conclusion

The economic impact of the Republicans’ tax plan will depend on how time and compromise shape the package that is ultimately legislated. Key in this regard is the size of the cut, how it is funded and whether investors believe it is a permanent reduction.

¹⁷ Ibid, page 12 onwards.

¹⁸ Ibid.

¹⁹ These schemes involve a series of linked transactions where a company imports a good tax free and then on-sells it to another domestic company incurring a tax liability, but goes ‘missing’ before paying that liability. A subsequent company is then able to claim a tax refund (or in the case of a DBCFT, an immediate deduction) for the cost of the goods it has purchased, while re-exporting the goods to avoid paying tax on its sales. The result is the government would pay out refunds but not receive the associated revenue. Missing trader fraud can be difficult to detect because the company claiming the tax refund appears to be legitimate.

²⁰ As outlined earlier, under a pure cash-flow tax any company in a negative net cash flow position would need to receive a tax refund in the income year it is incurred. This introduces a revenue risk as companies could fraudulently claim cash flow deficits in order to receive payments from government (as can be the case with VAT refunds). This may be one reason why refundability is not part of the House Republican’s plans.

A permanent US corporate tax cut is likely to stimulate an investment boom in the US. To the extent that this boom is not financed by US domestic savings, it will need to be funded from the global supply of capital. In this scenario, it is likely that some investors would shift funds from other countries to the US, chasing relatively higher after tax risk-adjusted rates of return.

Increased investment in the US would eventually lead to increasingly lower returns on investment as investment becomes more marginal. At the same time, returns on investment in other countries increase as they lose marginal investment to the US. Funding flows will stabilise once these rates converge, although the new global after tax rate of return will be higher than before the US tax cut if US saving does not completely meet the demand for funds. This is because the tax cut has permanently reduced the gap between before and after tax returns and the US is a price setter in the international funds market. In the short run, however, there would have been a permanent increase in US investment.

While the US would experience higher GDP and real wages as a result of this increased investment, other countries, including Australia, could experience a permanent reduction in the level of GDP and real wages. Given the history of global tax competition, it seems likely that other countries would respond to changes in US corporate tax settings in order to avoid such consequences. The impact on Australians will ultimately depend on the cumulative effect of such changes and how Australia responds.

Appendix: Destination Based Cash Flow Tax

Cash flow taxation vs income taxation

Instead of the current approach of taxing 'profits', a cash flow tax seeks to tax the difference between an entity's cash inflows and outflows. The key change is to allow investment expenditure to be deducted immediately rather than depreciated over the life of the asset.

Ordinary corporate income tax drives a wedge between the before-tax return on an investment and the after-tax return. In theory, the rate of return that investors require in order to make an investment is the same in each country because the capital markets are global. Some investment opportunities that might have been sufficiently profitable under a lower corporate income tax will not be financed under a higher corporate income tax because the tax pushes the after tax return below the globally required rate.

By comparison, cash flow taxes have the acknowledged advantage of having no effect on the cost of capital.²¹

Box 1: Example of the application of cash flow taxation to an investment generating normal returns

Company A is considering the purchase of an asset. The asset is anticipated to produce a return of \$100 in the year after it is purchased. It will then be worthless.

The value of the asset to Company A in today's dollars is \$95 (that is, the net present value of the future return, or the nominal value of the future return discounted by an assumed risk free interest rate of 5 per cent).

If a cash flow tax of 20 percent is applied, Company A's tax liability in the year the asset is purchased is $95 \times 0.2 = 19$. In other words, the tax authority refunds Company A \$19.

In the second year, Company A's tax liability is $100 \times 0.2 = \$20$, the net present value of which is \$19.

As a result, the net tax on the investment, expressed in present value terms, is 0 and the return on investment is $[(100-20)-(95-19)]/(100-20) = 5$ per cent.

Mirrlees et al describe cash flow taxes as not taxing 'the normal return on corporate investment'.²² In fact, the normal return is technically subject to tax but neutrality is achieved because the government subsidises the purchase of the asset through the provision of a tax refund in the year it is purchased. The end result is that the net tax on an investment generating normal returns is zero.

This feature of the House Republicans' plan was the key 'pro-growth' element. The Tax Foundation estimated that the 'cash-flow' element of the plan would increase GDP over the long term by

²¹ The Meade Committee, *The Structure and Reform of Direct Taxation*, (1978); Mirrlees et al, *Chapter 17: Taxing Corporate Income*, in 'Tax By Design' (2001), <<http://www.ifs.org.uk/docs/taxbydesign.pdf>>, page 419; Australia's Future Tax System Committee, *Australia's Future Tax System Final Report Volume 2 (The Henry Review)* (2009) <http://taxreview.treasury.gov.au/content/FinalReport.aspx?doc=html/Publications/Papers/Final_Report_Part_2/index.htm#Volume2>, pages 279-284.

²² Mirrlees et al, above n 19.

5.4 per cent, while the contribution of the tax cut was estimated to be 1.7 per cent and the contribution of border adjustability was -0.4 per cent.²³

While cash flow taxes generally do not reduce the rate of return generated by an investment, this is not the case where the investment generates economic 'rents' – that is, above-normal profits.

Box 2: Example of the application of cash flow taxation to an investment generating above normal returns

Take the example above. Company A purchases the asset for \$95 but in this case expects a return of \$200 in the following year.

Under perfect market conditions, other firms would enter the market bidding up the cost of the asset, or increasing the supply and reducing returns so that asset would be valued at the net present value of the future returns. However, Company A has monopoly power and so is a price setter in the market for the asset it purchases and the products it sells.

As in the previous example, Company A receives a tax refund of \$19 in its first year.

In the second year, however, Company A earns a \$200 return on the asset and so has a tax liability of \$40. In this case, the tax on the investment expressed in present value terms is $-19 + 38 = \$19$.

Cash flow taxation is attractive to many because it only taxes economic rents and so is considered to be non-distortionary.²⁴

²³ Tax Foundation, *Details and Analysis of the 2016 House Republican tax Reform Plan* (5 July 2016), <<https://taxfoundation.org/details-and-analysis-2016-house-republican-tax-reform-plan/>>.

²⁴ Not all economists agree that rents have no economic function. If they do serve an economic function, taxing economic rents may not be cost free. For example, Frank H Knight argued that profit is a reward for the taking of risk in an unpredictable world. See Frank H Knight, *Risk Uncertainty and Profit* (1921).