

# AGENDA

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## A JOURNAL OF POLICY ANALYSIS & REFORM

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Volume 28, Number 1, 2021

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# ANALYSIS

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# Assessing the risks from Australia's economic exposure to China

James Laurenceson<sup>1</sup>

## Abstract

This paper suggests Australia's economic exposure to China creates three distinct risks: a Chinese growth shock that comes with a 'hard landing', a structural shift towards less import and natural resources-intensive Chinese growth, and the Chinese Government disrupting trade ties for coercive purposes. With external demand for Australia's goods and services largely exogenous, the scope to mitigate these risks by reducing exposure to China, without resorting to costly market intervention, is limited. At the same time, the probability and scale of each risk should not be overstated. Further undercutting the case for an intrusive public policy approach is the fact that effective mitigation mechanisms exist for the Australian economy as a whole, as well as for many businesses.

## Introduction

In 2011, then governor of the Reserve Bank of Australia (RBA) Glenn Stevens quipped: 'The proverbial pet-shop galah can by now recite the facts on Australia's trade with China' (Stevens, 2011). At the time, Australia's exports to China stood at \$78.1 billion and accounted for 24.5 per cent of total exports, or 5.5 per cent of GDP.

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Trade ties have since strengthened further, with exports reaching \$160.3 billion in 2020—36.7 per cent of total exports or 8.1 per cent of GDP (DFAT, 2021b; ABS, 2021b).

At an industry level, exposure to China can appear even starker. In 2019, 44 per cent of Australia's wine exports by value went to China (Wine Australia, 2020), while in 2019–20, China bought 82 per cent of Australia's iron ore exports (DIIS, 2021). In some sectors, exposure to China is expected to grow significantly. In 2017–18, Chinese tourists spent \$12 billion in Australia, accounting for 27.1 per cent of total inbound tourist spending (TRA, 2019). This is forecast to swell to \$34 billion by 2026–27, which is 35 per cent of the total (TRA, 2017).

This economic exposure to China has brought heightened perceptions of risk. According to public opinion polling performed by the Lowy Institute, in 2019, 74 per cent of respondents agreed with the statement that 'Australia is too economically dependent on China', while in 2020, 94 per cent supported Australian government policies 'to reduce our economic dependence on China' (Lowy Institute, 2021). The view that the Australian economy is 'too dependent' on China has also been espoused by a steady stream of commentators over the past decade. Yeates (2011) asked: '[O]ur economy hasn't been so dependent on one partner since Britain dominated trade and investment in the first half of last century. But when does a booming trade relationship become unhealthy dependence?' In 2016, Peter Jennings, Executive Director of the Australian Strategic Policy Institute (ASPI), claimed that Australia had an 'unacceptably high level of economic dependence on trade with China' (Jennings, 2016). In 2018, Paul Dibb, Emeritus Professor of Strategic Studies at The Australian National University, contended that '[w]e have become far too dependent on China for our economic wellbeing' (Dibb, 2018).

The risks that are assumed to flow from economic exposure to China have prompted calls for public policy to be used to cut this exposure. In 2018, ASPI's Jennings said the federal government needed to explain to state governments, businesses and universities 'why there should be limits to building economic dependence on an authoritarian state' (Jennings, 2018). In 2020, he followed up by opining that 'a view is hardening that economic dependence on the PRC [People's Republic of China] is dangerous and steps must be taken to reduce that dependence' (Jennings, 2020). Australian news reports have also cited unnamed intelligence sources urging the government to implement measures to reduce economic dependence on China (Earl, 2019). These calls find considerable support in the United States. In a 2019 report, Charles Edel and John Lee of the US Studies Centre said the 'United States would like Australia ... to lessen its commercial dependence on China'. They described the status quo as a source of American 'frustration', and argued in favour of 'active diversification' (Edel & Lee, 2019). In 2021, Matt Pottinger, a former Trump administration Deputy National Security Advisor, wrote:

Americans, Europeans, and people the world over are now increasingly clear-eyed about Beijing's intentions ... Elected leaders must now take the next step: applying their tough new line not just to Beijing but also to elite institutions in their own societies that need to join the fight against the CCP [Chinese Communist Party]. Because companies are economic actors, not political ones, it is the government's responsibility to establish guidelines for engaging with adversaries. (Pottinger, 2021)

This paper begins by clarifying that economic exposure to China creates three distinct risks. It is then shown that with external demand for Australia's goods and services largely exogenous, the scope to mitigate these risks by reducing exposure to China without resorting to costly market intervention is limited. Finally, the paper reviews available evidence on the probability and scale of each risk before drawing implications for public policy.

## Identifying the risks from China

The first risk stemming from economic exposure to China is the possibility that a growth shock in China comes with a 'hard landing', which might spill over to hurt Australia's own prospects. In 2018, Governor of the RBA Philip Lowe remarked:

Among the largest economic risks that Australia faces is something going wrong in China. And perhaps the single biggest risk to the Chinese economy at the moment lies in the financial sector and the big run-up in debt there over the past decade. (Lowe, 2018)

In the same year, the *Australian Financial Review's* Jacob Greber (2018) wrote: 'Never forget; if China goes down hard, there's a good chance Australia will too.'

The nature of this risk is not unique to the Australia–China economic relationship. Crosby and Bodman (2005) observed that it has been commonplace in Australia since the 1970s to hear the expression, 'When the US sneezes, Australia catches a cold'. The rise of China as a trading partner means that Australia may now be vulnerable to catching a cold from developments both in the United States and in China.

Yet in contemporary discussion, concerns about economic exposure are expressed far more frequently with respect to China than the US. This reflects two further risks that are more China-specific in nature.

Unlike the mature US economy, China's economy is not only growing rapidly but also undergoing large-scale structural change. In particular, China's 'new normal' on the expenditure side of its economy sees consumption taking a more prominent role compared with investment. This structural shift may negatively impact China's demand for Australia's natural resources. In 2014, Andrew Charlton, a senior economic advisor to former prime minister Kevin Rudd, contended:

The one thing everyone agrees on—including the Chinese themselves—is that the investment-led growth model cannot continue. This is the critical point for Australia. Whichever path China takes, the resources-intensive investment boom will slow down, with consequences for our exports. (Charlton, 2014, p. 56)

In a similar vein, Ross Garnaut, a former Australian ambassador to China and Professor of Economics at the University of Melbourne, warned that ‘Australia’s resources boom was a China boom’, but this was set to unwind because China’s ‘[d]emand for steel and therefore iron ore and coking coal is concentrated overwhelmingly in investment rather than consumption’ (Garnaut, 2015).

The third risk reflects a fear that economic exposure provides China with leverage to exert coercive pressure. In 2014, former US Secretary of State Hillary Clinton said of Australia’s extensive trade ties with China (McGeough, 2014):

It’s a mistake whether you’re a country, or a company or an individual to put ... all your eggs in the one basket.

[This] makes you dependent, to an extent that can undermine your freedom of movement and your sovereignty, economic and political.

In 2016, ASPI’s Jennings warned:

We’ve never had a greater dependency with any country ... The risk that creates for us is if Beijing wants to adopt politically coercive policies, it’s in a fairly strong position to do so with us because of that level of trade dependence. (Barrett & Wong, 2016)

In 2017, Rory Medcalf, Director of the National Security College at The Australian National University, said the reason Australia needs to worry about China is that, unlike democratic countries such as the US, China ‘tends to link its commercial and political demands on other countries’ (Medcalf, 2017). In 2018, Peter Hartcher, political and international editor for the *Sydney Morning Herald*, made a similar assertion:

China wields its trade as a political weapon, as nations including South Korea, Norway, Japan and the Philippines have all discovered painfully. Whenever a foreign country celebrates a trade breakthrough into the Chinese market, the Chinese government celebrates the creation of a future point of political leverage. (Hartcher, 2018)

## **Interrogating cutting economic exposure to China**

With economic exposure to China creating three distinct risks, the question that follows is whether these risks can be mitigated by reducing this exposure, while simultaneously increasing it elsewhere? In response to Clinton’s warning that



Australia should not put all its eggs in the China basket, then communications minister Malcolm Turnbull observed: 'I'm sure that we'd love to export vast quantities of iron ore to the United States but they've never shown any enthusiasm in buying them' (Turnbull, 2014).

This gets at an essential point: the reason Australia trades with China reflects the fundamental economic complementarities between the two countries—in straightforward terms, China wants what Australia produces—as well as the fact that China has the purchasing power to pay the prevailing market prices for these goods and services. This basic economic equation does not exist to the same extent between Australia and other countries.

This is not to argue that greater trade diversification is not desirable or that it should not be pursued. Rather, it is to emphasise that economic exposure is driven first and foremost by businesses and households interacting in markets, not politicians or bureaucrats located in capital cities. Since 2012, official Australian government documents have emphasised that the focus for foreign policy is the Indo-Pacific region. In strategic terms, this encompasses major powers such as India, Indonesia, China, Japan and the United States—a multipolar region that is resistant to the emergence of a new and potentially unfavourable hegemon. There is an economic dimension, too, with aspirations of more diversified trade. The Australian Government has actively sought to promote this outcome through multilateral trade agreements such as the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) and the Regional Comprehensive Economic Partnership (RCEP), as well as bilateral free-trade agreements (FTAs) with South Korea, Japan and Indonesia. FTAs with the United Kingdom and the European Union (EU) are in the pipeline. Efforts to forge an FTA with India have been unsuccessful to date but the Australian Government commissioned a report by former Department of Foreign Affairs and Trade (DFAT) secretary Peter Varghese to guide deeper long-term economic engagement. Varghese (2018, p. 6) argues that '[a] strong economic relationship with India strengthens Australia's economic resilience'. This is because 'India—[with] a large and young population—adds balance and spreads risk in Australia's economic relationships' (Varghese, 2018, p. 6). Varghese's report set out an ambitious target to triple Australia's exports to India from \$14.9 billion to \$45 billion by 2035 (measured in today's dollars).

Yet the primacy of markets and the fact that demand for Australian exports is driven by exogenous forces are plainly evident in trade data. In 2012, China accounted for 24.4 per cent of Australia's exports. This compared with 35.5 per cent to the rest of Asia, 4.9 per cent to the US and 4.7 per cent to India. Yet by 2020, despite a host of government-led diversification initiatives during the intervening years, China's share had increased to 36.7 per cent, while the share of the rest of Asia fell to 30.5 per cent and India's to 3.9 per cent. The US share increased modestly to 6.3 per cent (DFAT, 2021b).

Future efforts to promote greater trade diversification will run up against the same market forces that have determined the pattern of Australia's trade to date. These could drive Australia's exposure to China down, as Charlton (2014) and Garnaut (2015) flag. But this does not require market intervention to bring about, nor is it guaranteed. For example, while touting the potential of the Indian market, Varghese (2018, p. 5) also recognises:

India's economy will be big but not as big as China's (which is currently five times its size). China's economy would have to crash and India's grow at over 10 per cent a year for several decades for India to catch up. Neither is likely.

While achieving the target of tripling exports to India and reaching \$45 billion by 2035 would be impressive in a bilateral context, it still lags far behind the \$160.3 billion that China bought last year. The Australian Government's Foreign Policy White Paper, released in 2017, included the baseline projection that China's economy would double in size by 2030. In purchasing power parity terms, China's economy is expected to swell by \$21 trillion. By way of comparison, this is greater than the new purchasing power expected to be added in the US, Japan, India and Indonesia combined (DFAT, 2017).

What this means is that the only way the Australian Government could decisively bring about a reduction in economic exposure to China is by intervening in markets to disrupt bilateral trade, such as using quotas, tariffs or outright bans, despite Australian and Chinese companies and households regarding these exchanges as being mutually beneficial. This means that public policy used in this way would come at a guaranteed cost. In singling China out, it would also be inconsistent with the global trade rules that Australia regularly reiterates its support for and on which it relies to protect its interests. Another, less direct, option would be for the government to try to influence the risk assessments formed by businesses, which they then apply to their engagement with China. Still, whether talking up the risk in trade ties with China will have an impact on businesses' decision-making depends as much, if not more so, on the actions of the Chinese Government. That is, the key driver is again exogenous.

With the scope for mitigating risk by reducing exposure to China limited, at least in a way that does not bring about significant self-inflicted costs, what remains is to explore the probability that a given China risk will materialise and the scale of the impact on the Australian economy should it do so.

## If China sneezes, will Australia catch a cold?

The sustainability of Chinese economic growth has long been questioned (Chang, 2001; Lee, 2007). In recent years, these fears have centred on domestic vulnerabilities such as rising indebtedness and external challenges such as the fallout from the US–China trade war.

Nonetheless, the current consensus forecast remains that robust Chinese growth will continue into the medium term. In May 2021, the Australian Treasury (2021) outlined its expectation that Chinese GDP growth would average 6.4 per cent between 2021 and 2023. This assessment is corroborated by peak international economic institutions. The latest numbers from the World Bank (2021) see China growing at an average annual rate of 6.4 per cent to 2023, compared with an advanced-economy average of 3.9 per cent. Similarly, the International Monetary Fund (IMF, 2021a) expects Chinese growth to average 6.9 per cent in 2021–22, compared with 5.0 per cent for advanced economies, and Chinese growth being maintained at an average 6.0 per cent between 2021 and 2025 (IMF, 2020). Of course, there is always the possibility of these forecasts being derailed. Modelling by Tyers and Zhou (2019), for example, points to significant growth costs for China if the trade dispute with the US worsens.

Assessing the impact of a hypothetical Chinese growth shock on Australia is the job of economic modelling and, in recent years, several such efforts have been produced that draw on a range of methodologies.

The exercise yielding the most concerning results is Deloitte's (2017). This is a large-scale structural equation model similar in construction to the Treasury Macroeconomic (TRYM) model used by the Australian Treasury. The specific shock modelled was Chinese GDP growth slowing sharply from 6.5 per cent to less than 3 per cent over a 12–18-month period, followed by a gradual recovery. The impact was Australia's national income being 7 per cent, or \$140 billion, lower in 2019. At that time, there would be 550,000 fewer jobs than would otherwise have been the case. In the long run, Australia's economy would be 2 per cent smaller than had the Chinese shock not occurred.

Various other studies, however, have produced more sanguine results.

Cashin et al. (2016) used a global vector autoregression model (GVAR) to explore the impact of a 1 per cent decline in Chinese GDP over a one-year (short-run) time horizon. GVARs are data-driven models, dynamic in nature, include multiple linkages (such as trade and financial links) and summarise both the direct and the indirect impacts of a shock. The results suggested that a 1 per cent decline in China's GDP would cause Australia's GDP to decline by around 0.1 per cent. Recall that Australia's trend rate of GDP growth is 2.5–3 per cent. This suggests the impact of a

Chinese ‘hard landing’ would be negative and material but far from causing a certain recession. Cashin et al. (2016) also put the impact on Australia in a comparative context. Contrary to the perception that Australia’s economy is unusually exposed to developments in China, the Australian response is found to be in line with that recorded in the US, slightly smaller than in Japan and South Korea, and much smaller than in the Association of Southeast Asian Nations Plus-5 (ASEAN-5). However, a caveat attached to these findings is that a VAR-based analysis may struggle to project the impact of a major and sudden disruption in Chinese growth given no such historical shock has occurred.

Dizoli et al. (2016) use the IMF’s Flexible System of Global Models, a multi-region general equilibrium model of the global economy, to consider the impact of a sharp slowdown in China sparked by an adverse event in the financial sector. A multi-region analysis adds value in that, as Tyers (2016) shows, a Chinese growth shock would have complicated effects both in China and abroad, cutting across wages, the cost of living, interest rates and other variables. Dizoli et al. (2016) assumed that prices for assets such as equities and real estate fall by 10 per cent in the first year, while the corporate risk premium increases by 150 basis points. In response, China’s GDP falls by 1.6 per cent below the baseline. The impact on Australia is found to be that, as China’s GDP falls by 1 per cent, Australia’s GDP falls by 0.2 per cent. Therefore, Dizoli et al. (2016) point to the negative impact on Australia being about double that of Cashin et al. (2016) but still considerably short of a recession. Dizoli et al. (2016) also find that the impact on Australia would be higher than in the US, in line with the experience of Japan and lower than in South Korea.

Inoue et al. (2018) also use a GVAR to examine the impact of a 1 percentage-point drop in Chinese GDP growth on various countries, including Australia. Both short-run and long-run outcomes are presented. The conclusion is that Australia’s GDP growth rate would fall by 0.06 percentage points in the short run, moderating to 0.045 percentage points over time. Therefore, like Cashin et al. (2016) and Dizoli et al. (2016), this suggests that even if the magnitude of the negative Chinese shock was significantly larger, the impact on the Australian economy would be manageable. Also chiming with Cashin et al. (2016) is the finding that the impact on Australia would not be unusually large relative to that on other high-income countries such as the US, the EU, Japan and South Korea.

Another paper to take a VAR approach is Groenewald (2018), which concluded that a permanent 3 percentage-point fall in Chinese GDP growth, from 10 per cent to 7 per cent, would reduce Australia’s GDP growth rate by between 0.15 and 0.24 percentage points in the short run and 0.42 and 0.57 percentage points in the long run. Once again, the impact is material but not recession-inducing. Groenewald (2018, p. 1) summarises: ‘While not trivial, given Australia’s current growth rate, these estimates are hardly enough to justify prophecies of doom.’

Karam and Muir (2018) draw on the IMF's multi-region dynamic stochastic general equilibrium (DSGE) model of the global economy. DSGE models have strong connections to macroeconomic theory in that they model dynamics based on optimising behaviour by businesses and consumers. Karam and Muir (2018) present results flowing from a Chinese shock not only for Australian GDP but also for other key variables such as the real exchange rate and consumption. This makes the findings less of a 'black box' compared with other previous studies. The negative shock considered is described as a Chinese 'disorderly rebalancing' scenario that manifests as a 2 per cent lower-than-expected productivity growth path in the first year (the short-run impact), followed by a 1 per cent lower-than-expected productivity path in the subsequent three years. This means China's real GDP is 5 per cent below the baseline in the longer term. In conjunction with this adverse productivity shock, household wealth takes a 10 per cent hit and corporate risk premiums rise. This registers as a further 2 per cent fall in real GDP from the baseline scenario in the short run, taking the total short-run impact to 4 per cent. In the long run, the impact of the 'disorderly rebalancing' is real GDP in China being 10 per cent lower than would otherwise be the case.

The impact on Australia is complicated. As expected, in the short run, real GDP falls relative to the baseline scenario. This is in the order of 0.4 per cent. Australia's commodities exports fall, and services exports to China are also reduced. However, the GDP outlook improves moving into the medium term owing to a depreciation in Australia's real effective exchange rate, making Australia's exports more competitive on global markets; exports of final and intermediate goods, as well as services, to all countries increase. The medium-term and longer-term impacts on Australia's GDP are, in fact, positive relative to the baseline by around 0.4 per cent. The qualification is that consumption in Australia falls by between 2 and 3 per cent in both the short run and the long run owing to the higher cost of imported goods and services because of the weaker exchange rate.

In June 2019, the RBA released its own estimates of the implications of a Chinese growth shock using its new macroeconomic model of the Australian economy (Guttman et al., 2019). Chinese GDP growth was cut from around 6 per cent to 2 per cent. It then considered three scenarios, the most dramatic of which supplemented the GDP growth shock with other elements of a disorderly downturn in China and ruled out an Australian policy response. This found that Australia's GDP would be 2.5 per cent lower relative to the baseline after three years. This translates to an annual growth rate of around 1.9 per cent versus a baseline of 2.75 per cent. Another scenario allowed for an Australian monetary policy response and the exchange rate to depreciate; both could reasonably be expected were such a shock from China to eventuate. The impact in this case was that Australia's GDP would be just 0.3 per cent less than the baseline after three years, cutting around 0.1 percentage points from the annual growth rate.

To summarise the economic modelling results: all studies are unanimous in their conclusion that in the non-consensus but plausible event of a Chinese ‘hard landing’, the short-run impact on the Australian economy would be negative and material. However, in terms of the magnitude of this negative impact, there is more to suggest that Australia would avoid a recession rather than succumb to one.

The weight of these findings may be explained by several factors. One is identified by Karam and Muir (2018) and Guttman et al. (2019)—namely, the exchange rate performs its mitigation role as a ‘shock absorber’ for the Australian economy. Another explanation stems from the observation that while China is by far Australia’s largest overseas customer, the Australian economy is far more reliant on domestic demand. For example, in 2020, domestic final demand comprising household and government consumption and private and public sector investment totalled \$1.9 trillion (ABS, 2021b)—more than 11 times the value of exports to China. The Australian Trade and Investment Commission (Austrade, 2015) also reported that Australia’s overall export dependence did not stand out as being high in an international context. A third explanation relates to the channels through which a shock in one country spills over to have an impact in Australia. Australian economic outcomes have long been influenced by developments in the US despite the modest value of Australia’s exports to that country. This is due to the importance of investment linkages. In 2020, the two-way stock of investment between Australia and the US stood at \$1.8 trillion. In contrast, Australia’s two-way stock of investment with China was just \$143 billion (ABS, 2021a).

## **Will consumption-driven growth in China hurt Australia’s exports?**

In 2010, consumption accounted for 49.3 per cent of China’s GDP. By 2020, this had risen to 54.3 per cent (CEIC Data, 2021). Yet any negative impact on Australia’s mining and energy exports has largely failed to materialise—so far. There are several reasons for this.

First, while Garnaut (2015) forecast that China’s steel production would fall to around 600 million tonnes by 2030 (down from more than 800 million tonnes in 2014) and that ‘much of the shrinkage will happen early’, as of year-end 2020, this had not occurred (Table 1). In fact, China’s steel production has expanded. This outcome is not entirely surprising: Australia’s resources companies have consistently maintained the view that China’s steel demand would not plummet. In 2018, BHP was continuing to forecast ‘slow, but sustainable growth’ in China’s steel consumption through the mid-2020s (Stinger & Ingles, 2018). Some previous research that models China’s steel demand based on fundamental drivers such as the rate of urbanisation and extent of automobile penetration also concludes that

a peak will not be reached until the mid-2020s (Mackay et al., 2010). As economic pressures on China have risen, stemming from events such as the trade dispute with the US, the Chinese authorities have also tended to reach for resource-intensive stimulus packages focused on infrastructure and construction, keeping global iron ore prices at higher levels than would otherwise have been the case (Weinland & Ju, 2019).

Second, Australian iron ore exports have displaced some of the domestic Chinese iron ore that previously fed the country's steel mills (Table 1).

**Table 1. China's steel and iron ore production and imports (million tonnes)**

Year	China's iron ore production	China's crude steel production	China's iron ore imports from Australia
2010	357.0	638.7	265.5
2015	123.5	803.8	607.6
2019	241.3	995.4	664.6
2020	n.a.	1,064.8	713.0

Note: China's iron ore production is converted to correspond with global average iron content.

Sources: World Steel Association (2020, 2021); CEIC Data (2021).

Third, as a broad category, Australia's mineral and fuel exports to China have received a boost from other structural changes in China. These include an increased emphasis on environmental outcomes that has seen growing Chinese demand for relatively clean energy sources such as Australian liquefied natural gas (LNG). China's emergence as a hub for electric vehicle production has also boosted its interest in other Australian mineral exports such as lithium (The Economist, 2017) (Table 2).

Finally, more consumption-driven growth in China has supported demand for Australia's non-mineral and fuel exports, such as agriculture, forestry and fisheries goods, as well as services (Table 2).

**Table 2. Components of Australia's exports to China (A\$ billion)**

Year	Minerals and fuels	Agriculture, forestry and fisheries	Services
2010	47.0	4.6	6.5
2015	53.1	11.0	11.0
2019	118.1	16.8	19.3
2020	123.4	13.4	12.4

Sources: DFAT (2021a, 2021b).

That said, an argument could still be made that China's shift to an economy driven by consumption is only in its early stages, and whether the value of Australia's exports can continue to hold up if the shift proceeds more rapidly is an open question.

A recent study that sheds light on the impact on Australia of a more pronounced shift in the structure of China's economy is Ma et al. (2017). The authors use Chinese and international input–output tables to model the implications of Chinese structural change. Input–output tables depict interindustry relationships within an economy and show how changes in one sector might spill over to others. Ma et al. (2017) begin by confirming that Chinese consumption has a significantly lower import intensity than Chinese gross capital formation. They then consider an overnight 15 percentage-point rotation in Chinese domestic expenditure from gross capital formation to consumption using 2011 GDP shares as the baseline. In other words, while the size of China's economy is assumed to remain constant, the consumption share of GDP rises from around 50 per cent to 65 per cent of GDP, while the gross capital formation share falls from 48 to 33 per cent. As expected, the overall impact on Australia is negative, with the costs largely borne by the mining sector; in contrast, agriculture, forestry and fishing, food and beverage manufacturing and education and tourism services receive a boost. However, while the net impact is negative, its scale is put at only 0.3 per cent of Australia's gross value-added or GDP. Recall that Australia's trend rate of GDP growth is 2.5–3 per cent. Recall also that what is being modelled is a large and immediate change in the structure of China's economy. In practice, this change will occur more gradually (even if at a faster rate than in recent years) and China's economy will also continue to expand. This growth will lead to increased demand for imports. The latest forecasts from the IMF (2021b) are that the volume of China's imports will rise by 35 per cent over the period 2020–26. Another potentially instructive finding of Ma et al. (2017) is that the overall negative impact on Australia's economy of a shift in the structure of Chinese expenditure in favour of consumption is in the middle of the pack internationally. This again qualifies the claim that Australia's economy is exposed to an unusually high level of risk stemming from trade with China.

Dizoli et al. (2016), cited in the previous section, also undertook a modelling scenario relevant to the international spillovers of structural changes in China's economy in favour of consumption. The authors considered a situation in which public investment as a share of Chinese GDP declined by 1.5 per cent in each year over a five-year period. The saved resources were transferred to households, leading to a commensurate increase in consumption. China's GDP declined relative to the baseline, with the magnitude of the spillover being that a 1 per cent decline in China's GDP would lead to a 0.11 per cent decline in GDP in Australia. Once again, the elasticity of the Australian response is shown to be non-trivial but modest.



## Will geopolitical disputes with China strike Australia's exports?

In 2020, Australia's exports to China accounted for 8.1 per cent of Australia's GDP. China's exports to Australia amount to just 0.4 per cent of China's GDP. Political economist Albert Hirschman popularised the idea that such asymmetric trade dependence can give rise to coercive leverage in the event of geopolitical disputes:

The influence which country A acquires in country B by foreign trade depends in the first place upon the total gain which B derives from that trade; the total gain from trade for any country is indeed nothing but another expression for the total impoverishment which would be inflicted upon it by a stoppage of trade. (Hirschman, 1945, p. 18)

Yet the theoretical foundations underpinning such an argument have been challenged, including by Hirschman himself in later work (for example, Hirschman, 1978). Wagner (1988) begins a critique with the observation that the distribution of the gains from trade is determined by bargaining, not ultimatum. The outcome of bargaining is summarised in the terms of trade; no country is ever in the business of trading on terms weaker than market forces permit. For example, in the late 2000s, Australia was already highly dependent on China as a market for iron ore but, owing to China's booming demand and constraints on global supply, the price of iron ore tilted the gains from this trade firmly in Australia's favour. China has remained the predominant market for Australian iron ore. However, between 2014 and 2018, China's demand grew at a slower rate and global supply increased. This eroded Australia's bargaining position, and the falling price of iron ore shifted the gains from trade more in China's direction. Since 2020, Australia's position has again been strengthened. The point is that the distribution of the gains from trade reflect the outcome of bargaining given the economic realities on the ground.

Against this backdrop, might China threaten to curtail trade—that is, deprive Australia of the gains from trade—in a bid to coerce Australia to modify its political positions? Given that issues such as asymmetric trade dependence have already been factored into the distribution of the gains from trade, Wagner (1988) argues that making such a political demand would inject a new element into the bargaining process. If China were to demand a political concession from Australia, this would reduce the utility Australia derives from its trade with China. If Australia's utility from trade with China falls, the logical consequence is a shift in relative bargaining power, but in Australia's favour. Wagner (1988, p. 469) concludes:

Bargainer 1 [for example, China] must therefore decide whether he prefers less money and Bargainer 2's [for example, Australia's] political support, or more money without his political support. If he [China] prefers the former then he will want to make this demand, but otherwise he will not.

Further, even if China did make such a demand, Australia would still have no incentive to acquiesce unless it were compensated for doing so. If such a deal were struck, in which China gave Australia additional bargaining gains from trade in exchange for Australia giving China political concessions, Wagner (1988, p. 469) surmises: ‘Because both would be made better off by such a trade, neither could be said to have been coerced.’

Such theoretical insights are potentially illuminating because they help to explain why, despite the political relationship between Australia and China deteriorating sharply since 2017 (Zhou & Laurenceson, 2021), and frequent claims that China has a predilection for pursuing economic coercion, pinning down actual incidents has proven harder. While Medcalf (2017, p. 2) asserted that China ‘tends to link its commercial and political demands on other countries’, he also conceded that despite Canberra having on occasion ‘seriously annoyed’ Beijing, China ‘hadn’t directed economic pressure specifically at Australia’. This largely remained the case through to the end of 2019 (Laurenceson et al., 2020).

It is also a relevant point of context that a liberal-democratic US regularly engages in economic coercion, too—qualifying the extent to which any Chinese coercive pressure stems from the nature of its political system rather than its status as a great power. An April 2019 report by the Washington-based Center for New American Security highlighted that ‘[c]oercive economic measures have been a longstanding tool of American foreign policy, dating back to the early 19th century’ and, in recent years, these have become ‘increasingly important’ (Harrell & Rosenberg, 2019, p. 2). Since 2018, China has been a particular focus of US coercive pressure. This has included measures judged inconsistent with global trade rules (Baschuk, 2020).

China’s reluctance to target Australia with coercive pressure ended in 2020. By the end of that year, access to the Chinese market was disrupted or blocked entirely for around a dozen Australian exports. Yet big-ticket export items like iron ore continued to be traded as before—which is not surprising given China’s own economic self-interest. In 2020, China faced a global market in which Australia accounted for 53 per cent of global seaborne iron ore supply (DIIS, 2021). Owing to an upswing in global iron prices, even as multiple Australian exports were being disrupted, the overall value of Australia’s goods exports to China in the first half of 2021 was 37 per cent higher than the previous record set in 2019 (Glasgow, 2021).

Aside from China having a dependence on Australia for items like iron ore, there are several other factors that act to restrain China’s willingness to use coercion and Australia’s willingness to acquiesce if it does.

For starters, there is the bargaining reality outlined by Wagner (1988). It is true that by not acquiescing to coercive pressure from China, Australia faces a potential cost from disrupted trade. But by acquiescing Australia faces a certain cost from

shifting its political positions in ways it considers to be against the national interest. Acquiescing also does not prevent repeated demands in the future. In other words, the bargaining reality means there is a strong, inbuilt incentive for Australia not to acquiesce. Since China began to target Australia in 2020, public attitudes towards China have soured rapidly and support for the Australian Government maintaining its political positions has strengthened. Lobbying pressure from affected businesses has been limited, too (Power, 2020). In other words, the cost to the Australian Government of acquiescing has increased.

Next, Australian targets of coercion have access to mitigation mechanisms that reduce the costs incurred. Laurenceson and Pantle (2021) show that for nine of the 12 Australian goods hit with disruption by China since 2020, a guide to the costs incurred by businesses is less than 10 per cent of total export value. Some of the industries that had the largest exposure to China, such as barley and cotton, subsequently incurred the lowest cost when the Chinese market was closed. The most valuable mitigation mechanism for businesses has been ready access to global markets. When the Chinese Government closed its market to Australian goods, Chinese importers had to connect with alternative suppliers. This, in turn, created opportunities for Australian exporters in the markets these suppliers previously serviced.

At a national level, mitigation measures can also be pursued even while maintaining exposure to China. Reilly (2012, p. 393) remarked that 'Australia has responded to deepening economic dependence upon China with classic balancing strategy: strengthening security ties with its Asian neighbours and the United States while bolstering its military capacity'.

The efficiency of responding to an economic risk with balancing in the security realm is arguable, but the basic proposition is that China's economic rise presents Australia with opportunities through trade but potential security risks if China converts this economic power to military power and uses it in a way that is contrary to Australian interests. Maintaining economic exposure allows for the opportunities to be seized, while building military coalitions helps to mitigate the security risks. Other available national-level mitigation mechanisms include 'self-insuring' through the Future Fund maintained by the Department of Finance. What is notable, however, is the limited scale of contributions made to the fund even as a booming iron ore price since 2020 delivered billions into Australian Treasury coffers (Department of Finance, 2021). This represented a missed opportunity to further enhance Australia's capacity to absorb shocks, whether these be in the form of economic coercion from China or otherwise. Yet another mitigation option is public investment to diversify Australia's industrial base. In 2020, iron ore accounted for one-third of Australia's goods exports and China accounted for 68 per cent of global seaborne iron ore

imports (DIIS, 2021). These numbers make plain that if mining remains the biggest sector of the Australian economy by value, and iron ore maintains its prominent place in Australia's goods export basket, China will inevitably be a principal market.

It is also worth noting that the Australian case in successfully resisting coercive pressure applied by China is not unique. Goh (2016), for example, shows that China's success in translating economic ties into political influence has been limited even among its closest and weakest neighbours.

Finally, in his original work, Hirschman foreshadowed the construction of an international mitigation mechanism to constrain the ability of larger countries to wield economic power over smaller ones:

[T]he exclusive power to organize, regulate, and interfere with trade must be taken away from the hands of single nations. It must be transferred to an international authority able to exercise this power as a sanction against an aggressor nation. (Hirschman, 1945, p. 79)

An international body to set and enforce trade rules was manifest in the formation of the General Agreement on Tariffs and Trade in 1948 and, subsequently, the World Trade Organization (WTO) in 1995. The Australian Productivity Commission (2017) reports that in the case of China's dispute with Japan over rare-earth metals trade in 2010, Japan, the US and the EU took action against China in the WTO and China 'accepted the ruling against it'. When South Korea faced economic coercion from China in 2017, it immediately notified the WTO that China's actions may be in violation of its trade agreements (Kim & Chung, 2017). Such recourse to the WTO raises reputational costs for China even before any legal process begins. Reich (2017) found that after having been a member of the WTO for nearly two decades, China has yet to be found in continued violation of a ruling against it. Australia has already begun WTO proceedings against China for two of the goods recently disrupted (Sullivan, 2021). WTO rules are incomplete and receiving a judgement is a technically demanding and time-consuming endeavour. Nonetheless, it serves to strengthen the hand of smaller target countries.

## Conclusion

Deepening trade ties and growing economic exposure have raised concerns that Australia's economy may have become 'too dependent' on China, creating risks. This paper began by identifying three distinct risks: the risk of a growth shock spilling over to have negative consequences in Australia, the shift in China's growth model in favour of consumption reducing demand for Australia's natural resources and the Chinese Government using economic links to apply coercive pressure on Australia to shift its political positions.

With external demand for Australian goods and services largely exogenous, the scope to mitigate these risks by reducing exposure to China is limited, at least without incurring significant self-inflicted costs. This then prompted a consideration of the probability that a given risk from China would materialise, as well as an assessment of the impact on Australia should it do so.

A Chinese ‘hard landing’ remains a non-consensus forecast. Both Australian and international institutions expect China to continue to grow robustly into the medium term. If a Chinese ‘hard landing’ does occur, economic modelling is unanimous in its conclusion that, in the short run, the impact on Australia will be material and negative. However, the weight of evidence also suggests that Australia will not be pushed into recession. In the medium and long terms, ‘shock absorbers’ in Australia’s economy such as a flexible exchange rate will mitigate the blow. Other factors also work in Australia’s favour, including the predominance of domestic demand and the modest investment links between Australia and China that might otherwise also transmit a shock between the two countries. Modelling further suggests that the scale of impact on Australia of a ‘hard landing’ in China will be no more material than in many other high-income countries.

The impact of the shift in China’s growth model towards consumption has been far from negative for Australia’s exports to date. That said, there remains the possibility that a more consumption-driven Chinese economy could curtail demand for goods such as iron ore in the future. Modelling confirms that Chinese consumption is less import and resources-intensive than Chinese investment. At the same time, it also points to the scale of the negative impact from structural change in China on Australia’s exports being modest. Meanwhile, amid structural change, China’s economy will also continue to expand, boosting imports. Modelling finds that, as with a ‘hard landing’ scenario, the impact on Australia of structural change in China is no more significant than for other high-income countries.

It is perhaps the coercive risk that has been most acutely highlighted in Australian commentary in recent years. Since 2020, this risk has been a reality, with around a dozen Australian export products disrupted. Yet big-ticket items mostly continue to flow as before owing to China’s own economic self-interest, and ready access to global markets meant that many of the Australian businesses no longer able to access the Chinese market were able to successfully mitigate the impact by diverting sales elsewhere. Numerous national-level mitigation mechanisms are also available to the Australian Government if it chooses to use them.

Trade, by definition, is mutually beneficial. The fact that two-way trade between Australia and China now amounts to \$246.3 billion—3.4 times that with the US, in second place—implies that these benefits are large. While Australia’s exposure to China also entails risks, the available evidence reviewed in this paper suggests that the probability and scale of each of these risks should not be overstated. Given that

the Australian economy as a whole, as well as many businesses, already has access to effective mitigation mechanisms, the link between exposure and risk is weaker than commonly assumed. And since market intervention is not cost-free, the case for using intrusive public policy to reduce exposure to China is also more dubious than much conventional wisdom suggests.

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# ARGUMENT

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# International resonances of the #FeesMustFall movement in South African universities, 2015–2017

Douglas Blackmur<sup>1</sup>

## Abstract

The FeesMustFall confrontation in the South African higher education system between 2015 and 2017 revealed a wide range of shortcomings and failures on the part of all participants including students. Violence proved an effective instrument in a constitutional democracy to change public policy. The urgency of addressing the cost/revenue imbalances in the higher education system was exposed. The FeesMustFall crisis revealed various tensions and pressures in higher education that may be of considerable relevance globally.

This article explores the resonances in contemporary international university reform debates of the issues raised between 2015 and 2017 in the often-violent FeesMustFall (FMF) movement's challenges to the fundamental values, purposes, governance, operations and financing of South African universities. Such challenges continue sporadically to the present. There is a considerable literature on the actions and consequences of FMF. A prominent contribution was made by Adam Habib, the then vice-chancellor of the University of the Witwatersrand (Wits) (Habib, 2019), and a critical examination of this was offered in 'Adam Habib's rebels and rage: Reflecting on #FeesMustFall—A critical appraisal' (Blackmur, 2019). The references in this article, and in Habib's book, provide a useful, but relatively small, sample of the literature.

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A central concern of this article is whether South Africa's experience of FMF's assault on the higher education system has lessons of international interest. To this end, several themes are explored in the analysis that follows. They include:

1. The evolution of FMF.
2. The exceptional physical violence used by many participants in the FMF protests.
3. The motives for the FMF assault on the South African university system.
4. The financing of higher education qualifications.
5. Managing the costs of conducting higher education in traditional bricks-and-mortar institutions and the costs of alternative systems of qualification delivery.
6. FMF challenges to established values of institutional autonomy, intellectual inquiry and academic freedom.
7. The quality of strategic thinking in South African universities.

## **The evolution of FMF**

There were several seemingly isolated serious incidents on various university campuses in South Africa in the first six months of 2015. Physical attacks were made on statues of, for example, Cecil Rhodes and King George V; the use of Afrikaans as a language of instruction came under attack (reminiscent of the 1976 Soweto student riots); demands to rename buildings named for apartheid-era politicians were made; and, in some cases, the financial challenges faced especially by black students in accessing and/or attending university were the focus of attention. Many of these individual protests called for what was referred to as the decolonisation of universities, including the content of curriculums. University councils and vice-chancellors seemed generally sympathetic to much of this agitation, and various statues, memorials, apartheid-era building names and the language of instruction, for example, were changed accordingly. The ultimately successful 'Rhodes Must Fall' agitation at the University of Cape Town later resonated at Oxford University in the United Kingdom with demands that the statue of Rhodes be removed from Oriel College. The universities were less amenable, however, to accepting demands to cease the outsourcing of certain services that were directly related to the level of university costs. On the matter of fees, the universities sympathised with students who were experiencing financial difficulties but noted that only the national government had the power over policy and taxpayer resources to address these. Vice-chancellors noted, furthermore, that the government had for several years been reducing real per student taxpayer subsidies. The rise in the level of student agitation had, nevertheless, sounded warning bells in government quarters. In mid-October 2015, the Minister for Higher Education and Training hosted a stakeholder meeting on matters of university reform.



What were in many respects isolated protests assumed an increasingly coordinated and national character after 14 October 2015, when protests erupted in response to reports that a university (Wits) intended to increase its fees for 2016 by 10.5 per cent. From this time, the sobriquet 'FeesMustFall' was used to denote a 'movement' that rapidly became increasingly complex, loosely structured and tactically diverse; prone to ever-increasing, sometimes unclear, demands; internally defined along lines of, for example, skin colour, gender and political party allegiance; and, at times, very violent. These descriptions, however, fail to capture adequately the dynamic nature of FMF, which is explored by Chikane (2018; see also Booysen, 2016; Jansen, 2017; Dlamini, 2019; Habib, 2019; Blackmur, 2019). Social media was an important coordinating device that magnified the movement's national impact. Few institutions in South Africa were untouched. Most supported the key objectives, if not all the means, of a cleverly crafted campaign that ultimately demanded free (to students), 'decolonised' higher education (including support from some university staff). The voices of the masses of urban and rural poor and the unemployed were, however, not invited and were unheard, although FMF spokespeople asserted that their actions and demands were, in the final analysis, in the interests of the poverty-stricken, the black majority and the marginalised. This last claim is contestable, of which more later.

Despite the amorphous nature and shifting leadership of FMF, its energies were increasingly concentrated on the demands for a 'decolonised', fee-free higher education for all students nationally. Government attempts to relieve the pressure by initially limiting the 2016 fee increases to 6 per cent, later revised to 0 per cent, were contemptuously rejected. It is impossible to measure the levels and fluctuations in the degree of support in the whole South African student body for the activities and goals of FMF, but the government probably underestimated them. The support was sufficient for FMF to adopt and implement tactics that, in 2016, 'led to an eruption of the most violent protests on university campuses in the country's history': the protestors 'took fire to lecture theatres, cars, libraries, computer laboratories, statues, university paintings, administration buildings, [student] residences, and the offices of vice-chancellors' (Jansen, 2017, p. xi). The violence took other forms, such as abusive language, prevention of teaching and research, disruption of classes, intimidation, humiliation and ageist insults. It also involved the police and private security firms. 'What was once a largely peaceful and broad-based student protest movement had become increasingly disruptive, violent and even racist in its character and demands' (Jansen, 2017, p. xii). An example of this racism occurred at a student demonstration outside a Cape Town police station during which '[a] call was made for all white students in attendance to form a line between the police and protestors. It was believed that by merely being white, police would refrain from attacking them' (Chikane, 2018, p. 169, see also p. 177).

In 2016, the government appointed a Commission of Inquiry into Higher Education and Training (the Heher Commission) to examine the feasibility of fee-free higher education and training. From early 2017, a parallel, behind-the-scenes political process was taking place at the level of the African National Congress (ANC), public service and national Cabinet. Consideration was given to a funding plan presented by Morris Masutha, a government adviser with close connections to President Jacob Zuma, the cost of which was conservatively estimated at ZAR40 billion annually. The Heher Commission's report was publicly released on 13 November 2017. Its principal recommendation was that the funding of higher education qualifications be based on a cost-sharing model of government-guaranteed income-contingent loans sourced from commercial banks (for all the recommendations, see The Presidency, 2017). There was, however, little opportunity for public debate of these recommendations. In mid-December 2017, Zuma committed to Masutha's proposals whereby students from families with an annual income under ZAR350,000 would be funded by a bursary scheme. The wind was, at least for a few years, taken out of the Heher Commission's sails: approximately 90 per cent of tertiary students were eligible for funding under Zuma's model (Habib, 2019, p. 190; Wangenge-Ouma, 2021).

## **The exceptional physical violence of many FMF participants**

An important dimension of the FMF campaign against the national government and universities that was not reflected in contemporary international higher education reform debates was its frequent and exceptional use of violence against people and property. Violence also characterised police and private security company responses to the protests. Prominent in the protests was Rekgotsofetse Chikane, who subsequently wrote that

violence became an opioid for all involved ... Violence between students and police, between institutions, and even among students themselves, all contributed to a cycle in which violence begot violence ... Throughout 2016 and 2017, #MustFall movements became enamoured with violence. Sometimes this was righteous, occasionally vindictive and, more often than not, quite ugly. (Chikane, 2018, pp. 211–12)

He went on to say: 'If 2015 signalled the start of the revolution, the next two years tested our appetite for it. It constantly asked the question: how willing were we to forgo our humanity to achieve our goal?' (Chikane, 2018, pp. 213–14; see also Jansen, 2017, pp. 243–49).

Is there a convincing explanation for this violence? Chikane claims:

Our justification for the use of violence was predicated on the addiction and defence of our use of the opioid of ‘Fanon’ to understand our society. The rhetoric used to justify the violence ... had a variety of forms. One was the belief that our violence was due to the violent environment in which a black child grows up; that to be violent was only a response [to] and a product of the violence that surrounded us all our lives ... Another common justification for violence was that we were embarking on a process of decolonisation. Because colonisation was a violent process, its undoing would in turn require a violent act. (Chikane, 2018, pp. 225–26)

Such decolonisation was part of a composite goal: fee-free quality ‘decolonial’ education (Chikane, 2018, p. 229). Why was this goal of such extreme importance to FMF participants and supporters that it was pursued by often-violent means? In the next section, I offer some conjectures with respect to such motives in the hope that future research will establish whether they have any explanatory merit. Whatever the motives, however, the exceptional violence of the FMF campaign was highly effective in forcing the government to concede to FMF’s central demands regarding fees. In a country with only a thin veneer of law and order, sustained violence against the higher education system was a critical ingredient in forcing changes to public policy. In this respect, the restraints on violence found in many other countries were rejected by significant groups in South African society.

## **The grounds by which the FMF justified its assault on the South African university system**

Possession of a university degree(s), for almost all aspirants, is a fundamental requirement for entry to, and continued membership of, the South African economic, political and social elite. The economic return to higher education qualifications in South Africa is extremely high by international standards (Habib, 2019, p. 182). Youth unemployment is exceptionally severe and social support for the unemployed and otherwise disadvantaged is meagre. The distribution of income is close to the most unequal in the world. Failure to acquire a university degree thus means almost certain exclusion from ‘first world’ labour markets, top-level incomes and high social status in South Africa and internationally.

Significant increases in university fees (and other costs of university study) thus pose a threat to the future of most students (and, often, their families). This is arguably sufficient to explain the sustained and angry revolt against significant increases in fees and, later, against any fees. This relatively narrow, self-interested emphasis was, however, downplayed in FMF public explanations of its policies and actions. Instead, emphasis was placed on claims that the bulk of black university students were poor and thus unable to afford the rising costs of obtaining a university qualification;

this, it was claimed, offended social justice principles. Abolishing fees was seen as the answer to this conundrum. Some FMF members also asserted that their actions would complete the unfinished business of liberating South Africa; an element of revolutionary zeal was present. Others explained FMF's actions as being designed to provide the poor, the unemployed and the marginalised with 'economic freedom'; the often-violent struggle was for 'the greater good' (Chikane, 2018, pp. 229, 230, 231, 233, 234).

In some respects, FMF was part of a process that had been in the making for some years. With the growth of student numbers, universities 'were starting to sink under the weight of social demands from the new entrants to higher education'. Taxpayer support was less and less adequate to meet all the costs of attending university and

many poor students from communities on welfare brought ... the expectation that they would be cared for beyond tuition fees ... if the university—in their minds an extension of government services—did not deliver ... then protests, even violent ones, were a perfectly rational strategy for extracting their demands. (Jansen, 2017, p. 10)

The fiscal weight of the 'welfarisation' of South African universities sits in stark contrast to the extensive provision of extracurricular benefits used to attract students to some universities in, for example, the United States.

## **The financing of higher education qualifications**

Placing the demands for no fees (and other concessions) in a social justice framework, however, exposed a serious contradiction in the FMF's explanations of its motives and actions. Threats to students' access to the highly remunerative professional South African labour market posed by upfront fees and other costs were understandably resisted by FMF. On the other hand, the legacy of apartheid in general and decades of exposure to substandard primary and, for some, secondary education meant the poor and unemployed could not access labour markets to the extent necessary to provide even a basic income. Unlike the students, they could not use the welfarisation of the university and labour markets as a vehicle for poverty reduction. This could, and can, only occur by means of increasing transfers from the national budget.

Taxpayer funding to meet the demands of FMF would also have to be drawn from the national budget. Far from uplifting the poor, FMF was competing with them, since satisfaction of its demands meant taxpayer resources that were otherwise available for poverty reduction would have to be allocated instead to assisting students to access highly profitable labour markets. The only way this competition could have

been avoided was if students obtained loans that covered all the costs of a university degree against their increased earnings contingent on holding such a qualification. Another advantage of this approach, moreover, was that any links between access to university and individual and/or family incomes or wealth would be irrelevant (Blackmur, 2019, pp. 51–57).

The government rejected this approach with the implementation of the Zuma model. Political, and apparently significant community, support was given to the principle of taxpayer funding of free tertiary education for many students, even though most would eventually be remunerated far better than they would have been had they not acquired a tertiary qualification, and far higher than the majority of other South Africans. The trade-off in yielding to demands for taxpayer-funded free higher education was, in the final analysis, against the poor (Blackmur, 2019, p. 60). There was, however, an alternative. Students could have agreed to take full-cost loans against their much higher future incomes on condition the government increased, for example, social grants by an equivalent amount. Students could thus have used their bargaining strength to forge a direct link between their acquisition of qualifications, their enhanced employment conditions and their desire to see radically improved social justice for the poor (Blackmur, 2019, p. 60).

This reasoning has universal relevance. All countries must decide how the acquisition of post-compulsory education qualifications will be funded. It could be argued that a system of income-contingent loans will never be adopted in South Africa given student and other opposition. Against this, adoption of such a system may become close to inevitable if fiscal, debt, unemployment and exchange rate pressures render any fee-free model incapable of being financed by taxpayers (Vally, 2021). Policymakers would then need to consider international experience, which identifies possible outcomes associated with loan schemes. Perhaps the most important risk is that some graduates cannot repay their loans due to, for example, changed family circumstances, deteriorating health, accidents and/or remuneration packages that are significantly lower than those assumed when programs of study were initially chosen. A major policy issue here is should the taxpayer meet the costs of such incapacity to pay? Concerns over such financial matters resonate internationally. It might be said, for example, that there is a ‘LoansMustFall’ campaign in the United States (and elsewhere), elements of which call for expunging all university student debt, and which influenced recent presidential politics (Looney et al., 2020). The research literature addresses these, and a multitude of other, issues (see, for example, Hsu, 2019; Bennett et al., 2021; Webber & Burns, 2021).

## **The costs of higher education qualifications in bricks-and-mortar institutions and under alternatives**

The debate since 2015 over the abolition of fees and associated issues is missing any serious analysis of the relationship between fee levels, the demand for places and the costs of running the existing ‘elite’ model of university qualification delivery in South Africa. The management of this relationship, moreover, is arguably of universal concern although details will differ internationally. In South Africa, there seem to be sacred cows, including the view that the current university system ought—physically, organisationally and pedagogically—to be maintained in essential respects. Serious thinking about the costs of running this system seems to be excluded from the agenda of higher education reform; it is assumed that the taxpayer will willingly supply the funding regardless of the production costs. There is a risk that fundamental issues will thereby be ignored and thus condemn South African universities to student agitation over many more matters than fee levels. Such risks are not, moreover, specific to South Africa. FMF sent a signal to governments and higher education policymakers internationally that existing systems contain a potential for serious, disruptive conflict over financial access to tertiary education (and over other matters such as claims of systemic institutional racism). Addressing the level of costs is arguably a necessary, although not sufficient, condition for avoiding such outcomes. Consideration of some of the cost issues follows.

The levels of cost, student demand and fees are interrelated. If detailed knowledge of these relationships is lacking, designing intelligent cost-saving initiatives to finance fee reductions is well nigh impossible. Public inquiries into the costs of providing tertiary education, including the compliance and operating costs of higher education regulatory processes, could establish whether they can be significantly reduced while maintaining or enhancing the credibility of qualifications. Such inquiries ought also to examine the costs of various alternatives to current arrangements. The writing has been on the wall for some time in the area, for example, of educational technologies. The New Zealand Qualifications Authority (NZQA), for example, conducted research in 1998 into the implications for existing bricks-and-mortar universities of a possible International Internet University and what might constitute appropriate regulatory responses (NZQA, 1998, pp. 9, 10). Some universities do have relationships with global education technology companies by which certain activities, such as the delivery of various postgraduate programs, are outsourced. Historically, nevertheless, the four stages of qualification production—namely, design, delivery, assessment and certification—were vertically integrated within each university, although there are no *a priori* reasons why this should always obtain. There may be more scope for net economies through quite radical outsourcing of some of or all these stages. National cost inquiries, however, need to employ holistic

cost/revenue models such that savings in one area(s) that may come at the expense of cost increases elsewhere in the system can be identified and evaluated. Economic analysis, moreover, suggests that higher education costs may be reduced through productivity increases. A contemporary reassessment of Baumol and Bowen's argument that such potential is extremely limited, and that the prices of services such as higher education would necessarily increase, is timely (Baumol & Bowen, 1966; Nordhaus, 2006).

Developments in education technology are often seen as challenging traditional universities to compete against a possible expansion of 'online courses that are likely to be cheaper for students than paying university fees' (Dodd, 2021). Each of the stages of qualification production, and not just delivery, is arguably a candidate for cost-saving technological innovation. The pace and intensity of technological change in higher education delivery will likely accelerate with advances in, for example, network theories and construction and, later, in quantum computing (Houston-Edwards, 2021). Evidence of technology-driven changes in contemporary markets for higher education qualifications includes the sale by Harvard University and MIT of edX to 2U, an American education technology company, and Coursera's listing on the New York Stock Exchange. Some higher education entrepreneurs predict 'a time when "online education is normalised as, simply, education"' (Korn, 2021; Dodd, 2021; see also Davis, 2017, pp. 9–21, 104–28; Tapscott & Williams, 2011, pp. 139–56). Other structural considerations also come under notice. Subjecting universities to the discipline of capital markets, whereby, for example, they may be taken over by other organisations or form public–private partnerships, could be a device to improve not only cost control but also university governance, management and educational performance.

These changes will require a combination of new and/or revised legislation and regulatory philosophies and procedures in most countries. Public universities may resist such changes with support from regulators and governments. The Council on Higher Education in South Africa, for example, has a record of protecting South African public universities against international competition (Blackmur, 2006). Absent such barriers, regulators might with advantage create rules that will allow students to design their own degrees based, for example, on Massive Open Online Courses (MOOCs) from high-class universities. International pilot studies of the costs and benefits of obtaining a degree under such arrangements are indicated. There are, however, limits: for the foreseeable future, important components of courses in, say, mechanical engineering will be delivered in a bricks-and-mortar environment (this assertion is made with caution).

The appropriateness and efficiency of the conduct of higher education regulators will necessarily need to come under scrutiny and reform in the light of education technological change, changes in student preferences, concerns over the performance of some universities in areas such as freedom of speech, changing

standards, institutional diversification (non-university providers, inhouse provision of qualifications), reservations over the performance of some regulators and a real reduction in taxpayer funding of higher education. A reduction of net regulatory compliance costs is a principal goal of this exercise. This is an extremely wide and deep area of analysis and cannot be addressed in this article. Some brief points are nevertheless raised to stimulate further inquiry. The adoption of new regulatory technologies, for example, will arguably need to be expanded to assist regulators to cope with the increasing volume and complexity of data, the better to 'automate or improve compliance and supervision' (Schizas et al., 2020, p. 18). Although the financial and legal services industries are the current principal sites for the use of regulation technology (RegTech), higher education regulation is a significant candidate for applications, especially where governments may expand the responsibilities of higher education regulators in the interests of cost and fee containment to include supervision of fee levels and determining whether the higher education sector displays any restraint on trade activity (although this last may be assigned to competition and/or consumer protection authorities). Wang has opined that RegTech 'has the potential to revolutionise a regulator's job' (Wang, 2019; see also Productivity Commission, 2020).

Systemic changes may have cost-reduction implications. All universities in some systems offer subjects in, say, economics when relatively cheap access may be had to economics courses offered online by world-class universities (and other providers). The costs of such duplication may not be trivial and can put pressure on fee levels. And, in certain cases, duplication of enrolment processes, moreover, can be more cost-effectively managed by a national, electronic university access system. The costs of producing higher education qualifications may also be influenced by public policies in international student participation. The 2008 Bradley review of Australian higher education, for example, set specific graduation targets, one of which was that, by 2020, 40 per cent of all 25–35-year-olds would hold a bachelor's degree (Southgate & Bennett, 2014, p. 23). Further expansion of the Australian higher education sector was thus mandated. For other countries inclined to adopt such a policy orientation, an alternative, and arguably less expensive, policy would be to eschew thinking in terms of numerical targets in favour of defining scholarly and intellectual goals for higher education (Blackmur, 2010, p. 69). Graduation rates would thus be a residual not an input. This could, moreover, contain undesirable incentives: gaming the system to get the numbers—while not wholly absent from any assessment and certification arrangements—is arguably more likely if graduation rates are publicly announced in advance.



## **FMF challenges to the established values of institutional autonomy, intellectual inquiry and academic freedom**

The power of university councils to set tuition fees has been an important aspect of university autonomy in South Africa. FMF pressure over planned fee increases, however, compromised this autonomy in favour of effectively forcing national government determination of fees. The autonomy of some university councils was also reduced by yielding to FMF's demands that certain outsourced functions be conducted internally. Whatever the social justice qualities of such insourcing, university cost levels and the pressures on university budgets and priorities were arguably inflated (Jansen, 2017, pp. 232–33, 241). Attacks on autonomy went even further (Linden, 2017, pp. 32–33, 40, 124). The South African Students' Congress (SASCO), for example, maintained that '[i]nstitutional autonomy and academic freedom continue to be used and abused as a defence mechanism by reactionary universities that refuse to transform' (SASCO, 2015, p. 4; see also Jansen, 2017, pp. 233–37). The international implication is that students may be exceptionally militant opponents of traditional concepts of university autonomy (Linden, 2017, pp. 32–33, 40, 124).

'Decolonising' and controlling the curriculum were central to the demands of FMF. A perceptive interpretation of these demands has been provided by Jonathan Jansen (2017, ch. 7; see also Liyanage, 2020; Blackmur, 2019, pp. 47–49). He argues that the curriculum politics advocated by FMF contained, among other things, pan-African impulses: '[T]he call for Africanisation in the curriculum is a nationalist imperative that asserts African identity and rejects the imitation of Europe in the quest for African knowledge, culture, and aspirations' (Jansen, 2017, p. 159). Jansen suggests, moreover, that 'at the heart of the protest movement's most popular understanding of decolonisation—namely, the "hard version" of Africanisation—sits a dangerous nativism often expressed in racist terms' and that FMF has disfigured Africanisation 'into some form of racial essentialism' (Jansen, 2017, pp. 167, 168).

Western scientific methods and knowledge had no place in the FMF's curriculum reform program. The most notable case involved claims by an FMF leader that the physical sciences were 'a product of western modernity, and should be scratched out. We would have to restart science from the way we experienced it'. The student argued that there were places 'where people believed that witchcraft could cause lightning to strike someone, and she wanted the science curriculum to explain and teach this' (Jansen, 2017, pp. 155–56; Habib, 2019, p. 107). A conjecture regarding the origins of such thinking is that the student had embraced postmodern theories associated with Paul Feyerabend (Blackmur, 2019, pp. 47–49). Perhaps many students are exposed in some South African universities (and elsewhere) to an uncritical reading

of ‘a turgid mishmash of Heidegger, Derrida and Lacan’ (Gray, 2019)? Scholarship born of genuine debate, valid argumentation, adducing proper evidence and so on was alien to FMF. It dismissed associated principles of academic freedom, for example, by rejecting the teaching of conventional economics, or even a heterodox economics, in favour of Marxian economics exclusively. The demand was for the curriculum to accord with students’ specific ideological and political predispositions (Habib, 2019, pp. 107–8).

All this has stimulated conversation over the future of liberal scholarship, especially in the humanities, in South African universities (Stewart, 2015). Historically, the values that underpin liberal democracy have been contested and resisted from various quarters in South Africa, most recently by FMF. Such debates are, of course, widespread internationally, especially in universities. Canada’s ‘Maple Spring’ is noteworthy. There is, furthermore, a potential contradiction in FMF’s model of the reformed university. Suppose that FMF were to succeed in securing all its curriculum, management, financial and governance goals. The wider society, in South Africa and internationally, would then be dealing with many graduates who arguably were ill-equipped to respond adequately to employer requirements for professional staff (Jansen, 2017, p. 242). Under such circumstances, the future of the South African university would be uncertain. In the shorter term, graduates and university academics who wished to secure international postings may be unwelcome given the reputation of South African higher education had been severely compromised. The violence and destruction that accompanied the FMF protests, moreover, may have soured investors’ willingness to engage further with the South African economy. Such an outcome would disadvantage the poor and the marginalised. FMF’s actions showed that major disruptions to higher education can also have macroeconomic effects. Jansen has written pessimistically on the possibility of ‘the end of the South African university’ in the light of the pressures generated by and around FMF (Jansen, 2017, pp. 249–51). A possibly temporary recent easing of some of these pressures may have only papered over the cracks.

## **The quality of thinking in South African higher education**

A few years before the FMF deluge, Deacon et al. summarised the criticisms of South African universities made by the Centre for Development and Enterprise (CDE) in 2000: the universities ‘are deemed too costly for what they produce; as well as inefficient; duplicated; fragmented; underutilised; insufficiently rationalised and ... “a drag on the economy”’ (Deacon et al., 2010, p. 102). A decade after the CDE’s report, these scholars argued that change in South African higher education ‘has been driven not only from the centre but equally as much by institutions themselves, which have exhibited a wide range of often unexpected responses (ranging from

aggressive self-marketing, to waiting for redress, to flexibly “going with the flow”)’ in the face of various global and market trends (Deacon et al., 2010, p. 102). Taken together, these conclusions did not suggest that strategic thinking was the South African university system’s strong suit in the pre-FMF period.

One of Adam Habib’s assessments of FMF was that there was ‘confusion among student leaders about the purpose of university education ... they have confused the university with the political party school’ (Habib, 2019, p. 108). A university’s strategic approach to its student body, however, arguably ought to include nourishing its education in the history, purposes, values, expectations, ethics and standards of the institution. Habib’s disappointment may be evidence of strategic thinking failures in these respects.

One of the CDE’s concerns in 2000 was with the costs of the higher education system. Fifteen years later, members of the Parliamentary Portfolio Committee on Higher Education, Science and Technology (2015) were still asking for an analysis of the relationship between costs and increases in university fees. The Department of Higher Education and Training’s revised strategic plan for 2015–16 to 2019–20 was, moreover, silent on the matter of cost and fee levels. The cost/fee connection was apparently not especially high on the strategic thinking agenda although it was critical to understanding the FMF protests.

Strategic thinking in South African higher education has nevertheless identified certain important issues. Some senior university managers were aware of various cost drivers such as the pressure for the welfare university in the context of the movement from an elite system of higher education towards much greater participation. Others understood the parlous state of the 10 most impoverished universities in which ‘the black poor are still being fed a microwaved diet of Bantu Education barely distinguishable in quality or impact from what was offered in apartheid’s colleges’ (Jansen, 2017, p. 231). Still others wondered whether various universities might experience ‘white flight’, which could trap ‘working-class and poor students in substandard, low-quality, mass-produced higher education institutions’ (Jansen, 2017, p. 227). All were very aware of the declining real value of taxpayer subsidies. A problematic aspect of all this thinking was, however, that the recommended response to the several problems was that the taxpayer must significantly increase the funding for higher education. Alternatives were rarely analysed. These included: could universities access the bond market, were productivity-enhancing systems feasible in administrative and/or academic spheres, were partnerships with business likely to produce significant third-stream income, could some decentralisation of university functions yield net cost advantages, were there opportunities for the commercialisation of research, could reliance on bricks-and-mortar means of education delivery be reduced to net advantage, have the opportunities for scale and/or scope economies been fully explored, could regulatory compliance costs be renegotiated and were there too many universities and/or students?

The taxpayer funding crisis did not arise overnight. There was presumably some time to examine options, yet at least some universities were apparently taken by surprise by the FMF campaign and made concessions that would not normally have been made (Jansen, 2017, p. 221). A further sign of rushed (or little) strategic thinking was a senior administrator's suggestion that certain universities consider issuing something like a unilateral declaration of independence from the public system and become private institutions that would 'find a way of funding ourselves' (Jansen, 2017, pp. 223–24). Given the realities of South Africa's political economy, this may have been uttered tongue-in-cheek.

Certain further barriers to high-quality strategic thinking may obtain. The performance of several university governing councils arguably left much to be desired. Jansen reported that some council meetings 'are lengthy and heated events where the distinction between governance and management has long dissolved into contestations around every issue ... The last thing demanding attention ... is the academic project' (Jansen, 2017, p. 231). The composition of councils can be extremely problematic: government appointees 'are political activists or union members allied with the ruling party. Seldom are independent experts appointed' (Jansen, 2017, p. 234).

Habib maintains that the FMF enterprise put 'policy and financial options that had not been previously available on the systemic agenda' (Habib, 2019, pp. 195–96). These options were, however, available in the higher education policy experiences of many other countries. None was new and/or unique to South Africa. If the violence, disruption, personal costs, economic damage and community dislocation associated with FMF were, as Habib (2019, p. 197) has argued, necessary to impel a 'systemic opening' that resulted in serious policy thinking, 'this constitutes prima facie evidence of major inadequacies in the strategic thinking conducted at the top levels of South African university governance' (Blackmur, 2019, p. 58).

## Conclusion

The FMF's confrontation with the South African higher education system exposed a wide range of shortcomings and failures by all participants, including students. Certain unpleasant features of South African society were displayed on the world stage. Violence was shown to be an effective instrument to change public policy in a constitutional democracy. If the Zuma model of higher education funding fails in important respects, as it might, further disruption and violence are on the agenda. A dozen or so historically black universities are the most immediately vulnerable.

It is imperative in this context for public policy development to concentrate more on innovative ways of addressing the cost/revenue imbalances in the higher education system, which may, moreover, require radical reform of the system itself. This article

has emphasised cost issues and has suggested some initiatives. This emphasis encourages thinking about the relevance of many assumptions that underpin university finances and structures, not only in South Africa but also internationally. The emphasis is especially apposite in South Africa since the prospects of substantial increases in taxpayer funding are remote. Public finances are severely constrained; the economy is growing relatively slowly, Covid-19 has placed additional burdens on the fiscus and there is evidence that taxpayer willingness to fund universities has diminished in recent years.

There may have been several unintended consequences of the FMF's pressures on South African universities. Adherence to the principles of institutional autonomy, academic freedom and scientific inquiry is not guaranteed; doubt has been cast on the integrity of some degrees obtained in recent years under conditions of great instability; failures in strategic thinking (and planning) have been revealed; and doubts have been expressed about the quality of some international research and other linkages that South African universities have forged since the end of apartheid. Efforts to extend and nurture such links are at risk as parts of the international academy look askance at the events of 2015–17. It would be a cruel irony if a democratic South Africa found its higher education system relatively isolated in international scholarship. Such reputational effects arguably have the potential, for example, to discourage foreign students from contemplating study in South Africa, and to enter the deliberations of credit ratings agencies and domestic and foreign investors. A positive outcome may be to stimulate government reconsideration of the utility of South Africa's current higher education regulatory system.

These considerations can play a part in the international debates over the pace and direction of change in higher education. It would be short-sighted to regard them as particular only to South Africa. Some undoubtedly are—the apartheid legacy is still a force—but the FMF experience revealed various tensions in contemporary higher education that may be of considerable relevance globally.

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# **SYMPOSIUM:**

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Economic Policy During Covid



# Is quantitative easing good policy?

Stephen Anthony<sup>1</sup>

## Abstract

This paper asks whether the suite of unorthodox monetary policies (including quantitative easing, or QE) really make sense in the presence of a global liquidity trap. It finds that QE-type policies are an expedient remedy for short-term crisis management, but their ongoing and expanded use have distorted global markets and will have significant dynamic efficiency costs over the next decade. The alternative is for discretionary fiscal policy to play a bigger role in stabilisation, with monetary policy left to accommodate. Both policies should be operated by a single agency accountable to the electorate.

From the Monetarist view that I am taking, of course, nothing could be more conventional than ‘quantitative easing’.

— Robert E. Lucas, Jr (2014, p. 208)

In fact, it appears that there can be no stable dynamic model of the economy that allows government to use fiscal and monetary policy independently.

— Fisher Black (1987, p. 28)

In my first week at the Commonwealth Treasury in 2000, I attended a monetary policy seminar at which then secretary, the late Ted Evans, asked a simple question: ‘What is money?’<sup>2</sup> This was his strongpoint: making a profound point by asking basic, soft-spoken questions. It stumped everyone in the room. In what may have been prophetic insight, that question is still at the heart of our economic travails today. This is as most advanced Organisation for Economic Co-operation and

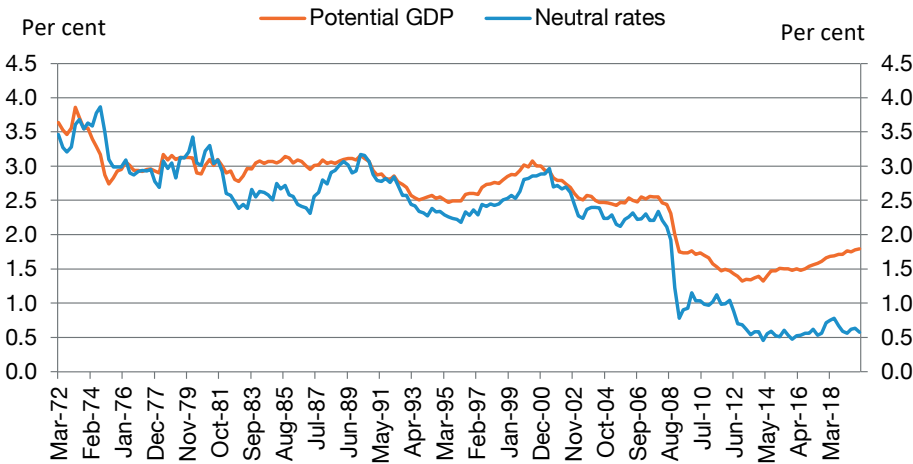
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2 The question is discussed throughout this piece. The answer underpins how you think about monetary policy or the set of strategies intended to stabilise the value of money, prices and output. Financial stability objectives are assumed to be the focus of (macro) prudential regulation (Trott, 2015).

Development (OECD) economies have progressively sunk into a global liquidity trap since the Global Financial Crisis (GFC), with zero or even negative rates—some out beyond 10 years.

The new world of very low rates has seen changes in the operation of stabilisation policy across economies since the GFC. For the first time since the Great Depression, it has been essential in many economies for monetary authorities to implement policy via ‘quantity’ and not ‘price’.<sup>3</sup> Meanwhile, consumer price inflation has remained persistently below target levels.

Many prominent economists overseas (see Summers, 2013) and in Australia (see Garnaut, 2021, p. 133) argue that the ultra low interest rates and trend growth are mainly due to a fall in real interest rates because of underlying savings: investment determinants, driven by deteriorating demographics, technological change and poor policy choices. Their economic argument is that the increase in savings caused mainly by the ageing population led to a fall in the natural rate of interest as the supply of loanable funds rose relative to demand. So, the ‘neutral’ rate of interest fell as the supply of loanable funds increased relative to demand.<sup>4</sup>



**Figure 1. Neutral interest rates and potential GDP growth (select advanced economies)**

Note: Select advanced economies include the United States, members of the euro area, the United Kingdom and Canada. A broadly similar pattern was observed for Australia.

Sources: Holston et al. (2017); and Jones (2021).

<sup>3</sup> This assumes that negative rates are untenable for the health of the banking system.

<sup>4</sup> The neutral rate is the estimated rate of interest that supports full employment while inflation and growth are steady.

The ‘secular stagnation’ story is certainly a contributing factor, but not the main driver of what has occurred over the past decade.<sup>5</sup> More relevant has been the choice of monetary regime defined by the central banks’ policy-setting (reaction function) (Borio et al., 2017). In our view, the sudden drop-off and stubbornly low levels of neutral interest rates in countries like Australia since the onset of the GFC are difficult to reconcile with slow-moving patterns of productivity or demographics. Also curious is the lack of a reflexive business investment rebound given strong corporate profitability (Figure 1).

Nor does secular stagnation properly account for the major reversal in the polarity of finance in advanced economies since the mid-1990s (Howell, 2020). In this reversal, *large* corporations generate more cash from existing operations (through cost-cutting and perhaps economic rents) and hold these funds in financial markets (not banks) (Montier, 2018). Hence, banks now borrow (indirectly via wholesale markets) from *corporations* and lend to households via mortgages. In this new era, the refinancing of existing positions (gross investment) is more important than new CapEx (net investment).

So, balance sheet capacity (that is, liquidity or quantity) matters far more than interest rates (price). Consequently, central banks’ attempts to ‘control’ wholesale markets have seen them, little by little, resort to maintaining larger balance sheets based on the desire to spur more risk-taking by lenders, concurrently increasing their balance sheet size (Montier, 2018).

The key problem with policy today is, therefore, that for 20 years or more the biggest user of money has been the financial sector itself and not the real economy. This fact has scarcely dawned on most of us (Tinkler, 2020). While economics may or may not adequately address issues with the real economy, these accounted for less than 20 per cent of flows in the international payment system in 2021 (Lucas, 2014, p. 209). This leaves a massive unaccounted residual of what we might call *dark matter*, which is driven by transaction flows related to asset purchases, portfolio diversification and speculation. The big gap explains why economic theory provides little guidance in the face of financial market volatility.

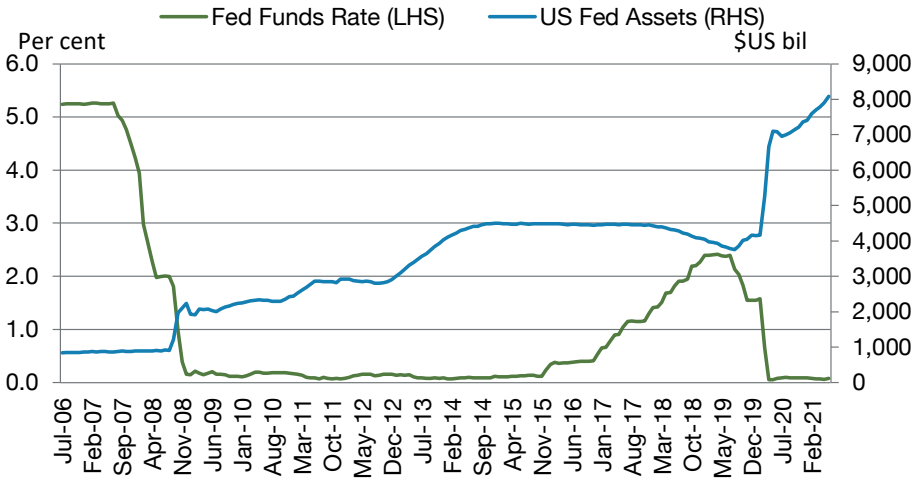
## QE basics

The contemporary form of quantitative policy operation was introduced to most of us courtesy of the US Federal Reserve’s quantitative easing (QE) program from 2009 (Figure 2). QE, in its latest iteration, involves the purchase of ‘safe assets’ (usually

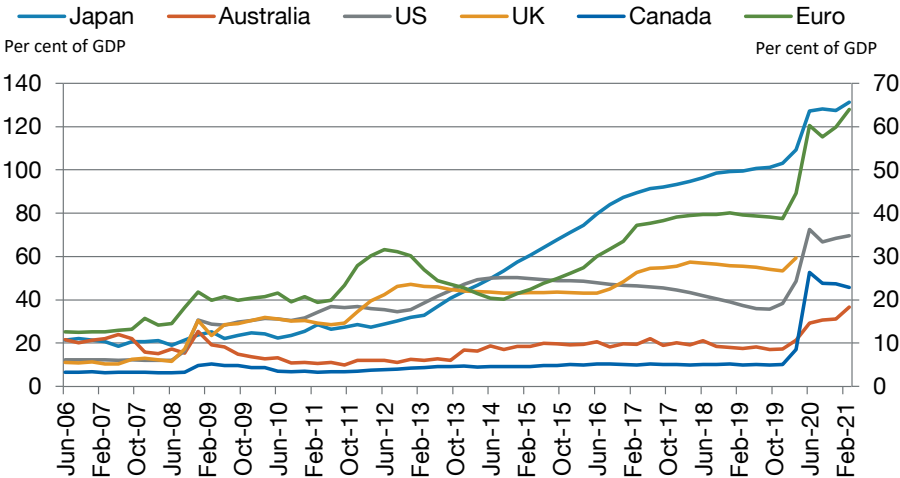
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<sup>5</sup> This assumes lending is carried out by banks to non-financial firms and that independent central banks influence such credit flows via adjustments to an equilibrium or neutral rate (Ryan-Collins, 2015), whereas, since the GFC, banks want to make residential real estate loans to investors, not SME business loans. The reasons are macro-prudential.

public debt) from private financial institutions (banks and primary dealers) with the objective of directly injecting more cash into money markets, ideally to spur aggressive lending by financial institutions. This occurs during periods in which they may be loath to lend.<sup>6</sup>



**Figure 2. The Federal Reserve balance sheet and funds rate since the mid-2000s**  
Source: FRB; Haver.



**Figure 3. Selected central bank balance asset shares since the mid-2000s**  
Sources: BoJ; RBA; FRB; BoE; BoC; ECB; Haver.

<sup>6</sup> QE is a policy mechanism to achieve macroeconomic stabilisation policy via quantity (that is, asset purchases) rather than passive signalling through price settings (official rates/yield curve).

Throughout the 2010s, each so-called advanced economy permitted its central bank to roll out its own domestic QE programs as one after another was buffeted by a wave of common global financial macro-shocks (the GFC, European sovereign debt crisis, taper tantrum, repo crisis, Covid-19 pandemic and so on). One of the last nations to join the club, in September 2020, was Australia (Figure 3).

The balance sheets of major central banks (excluding China's) grew from US\$4 trillion before the GFC to US\$16 trillion by 2018, before surging to US\$26 trillion in the latest reading, in June 2021.

In the United States, in mid-2021, the Fed was still buying US\$120 billion of Treasury bonds (holding 25 per cent of the available stock) and US\$40 billion of securitised mortgages each month, even with housing in short supply.

The fundamental policy goals are to facilitate transactions and maintain liquidity in money and credit markets. This then allows otherwise profitable business entities to operate. But elaborating a little further, the list is quite long:

- Rescuing economies in the economic 'emergency room'.
- Financing government spending at low, zero or negative real interest rates, adjusting for inflation.
- Restoring consumer inflation and output.
- Ensuring the vitality of credit lending channels by propping up the collateral of the financial sector.

The success or otherwise of trillions of dollars of stimulus is dependent on the effectiveness of the transmission mechanisms through which QE is supposed to work. Our view is that there are four identifiable mechanisms in play with QE, but only three (not 'duration') are likely to contribute to raising activity. Each of these channels is listed below.

1. Portfolio risk channel: Expanding public liquidity increases term premiums on government bonds while lowering the term premiums assigned to risk assets:
  - The 'official' line is that QE drives up the demand for bonds and drives down the yield on assets. Perhaps *surprisingly*, this effect is not sustained in the data; in fact, quite the reverse.
  - The *sustained* impact of QE seems to occur as private institutions tilt towards risk assets and away from safe government securities. They do this safe in the knowledge that authorities *have their back* (Howell, 2020). So, portfolio rebalancing (slack demand) raises the risk premiums on safe assets. There is a corresponding lowering of the risk premiums of risky assets as private agents chase capital gains.

- The impact is then magnified by the asset price accelerator (that is, collateral effects) whereby increases in housing prices improve balance sheets and stimulate further mortgage lending.
- 2. Duration channel: The expansion of central bank money leads to tighter supplies of higher-yield and long-duration assets, which might tend to lower yield over time.<sup>7</sup>
- 3. Financing channel: More public liquidity eases funding conditions for credit providers via repos and so on, which thaw frozen markets and aid circulation of capital.<sup>8</sup>
- 4. Exchange rate channel: More public liquidity weakens the currency unit and so raises the competitiveness of traded goods—although these effects will be diluted by cross-country policy movements, especially those of large economies.

Another dimension of QE is to think about the central bankers' policy function. Here, good policy engenders new private spending without significant changes in the central bank balance sheet (Trott, 2015). However, where this trade-off is more costly or even illusory, a central bank could accumulate massive assets without achieving anything other than imposing efficiency costs on current and future generations.

## Intermediation

With the trillions of dollars being spent on QE stimulus over the past decade, is credit smoothly and efficiently passing from central banks to small business and householders, where it is needed to drive stronger economies?

Traditionally, central banks employed their diverse network of savings and loan-type banking institutions to push loans directly to local communities. This type of decentralised banking was built on trust and provided a stable basis for monetary control of an economy through captive deposits.<sup>9</sup> The reality now is there is no community-based branch-banking linkage in modern banking and, if there was anything left in the late 2000s, the GFC and subsequent Basel reforms killed it off.

7 But if private agents simultaneously demand fewer safe assets, the impact only dampens and does not nullify the risk channel, whereas policymakers might argue that they deliberately create a scarcity of duration by buying long-dated bonds—that is, a *subset* of the portfolio channel.

8 Repos (repurchase agreements) are a form of short-term borrowing for dealers in government securities. In the case of a repo, a dealer sells government securities to investors—usually on an overnight basis—and buys them back the following day at a slightly higher price. When market liquidity is tight, dealers charge extreme margins and market freeze quickly.

9 Think of George Bailey, the protagonist in Frank Capra's 1946 film, *It's a Wonderful Life*. He inadvertently inherits his father's management of a failing building and loans bank in the community of Bedford Falls, sacrificing his dreams along the way.



Now our banking systems have become far more impersonal and far more reliant on securitised residential housing loans. Unfortunately, due to the changing polarity of finance from the mid-1990s, banks now rely on wholesale funding markets rather than local branch deposits to secure their funding base. To access wholesale funding markets, banks, too, must offer up collateral underpinned by the loans they write each month. The search for collateral inevitably leads them to residential housing markets and securitised lending. Unfortunately, this collateral base is very procyclical and so further magnifies the QE liquidity cycle, making the housing market prone to more boom-and-bust gyrations.

Now our banking systems are also less competitive and more reliant on systemically important players in each jurisdiction to ensure stability and carry our policy objectives. Since the GFC and successive Basel reforms, if not before, central banks have placed a few privileged private financial institutions in the driver's seat to control financial intermediation via a top-down process. Needless to say, the privileged few can then ration credit to whomever they please, thus undermining competition and locking out a plethora of market-making and prime brokers in the middle of intermediation chains.

Take the United States' case.

If the Federal Reserve injects liquidity into the marketplace, it locates funds on the balance sheets of key banks, investment funds and broker dealers. The Wall Street names include the 15 big private US banks (including JP Morgan Chase, Bank of America, Citigroup and Wells Fargo) and big investment funds such as Blackrock. These institutions are then instructed to loan funds to smaller financial intermediaries and non-financial corporations. Is this what they do? Not directly. There are at least two steps.

Step 1: The gatekeeper institutions—with access to the Fed's borrowing window—first use their preferred position to buy risk-free bonds (Treasury bonds), which they then use as collateral to conduct repos. This generates cash for them to buy junk bonds (BBB, CCC and lower) and other financial products (structured products, derivatives, swaps, private equity assets, tech shares and so on).<sup>10</sup> So, they use their preferred positions as primary participants to generate speculative profits. For evidence, think back to the rapid recoveries made by each of these businesses after the Lehman Brothers collapse.

Step 2: The gatekeeper institutions then use their market dominance to gouge out the eyes of competitors (numerous second and third-tier players). Meanwhile, they extract rents from their customer base while undertaking their policy mandate to

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10 This helps to explain the hypersensitivity of repos to liquidity conditions in cash and credit markets.

write new business loans. This is why the Federal Reserve was creating new programs to provide credit to small and medium-sized enterprises (SMEs) during the worst days of the Covid-19 downturn in 2020.

Each advanced economy has its own version of this strategic participants' game with credit rationing.

## Quantity theory justification

We have considered what QE-type policies aim to achieve and how they might be transmitted and intermediated at the microlevel. Now we think about how QE-type policies work in aggregate at the macroeconomic level in terms of the conduct of stabilisation policy. To conduct policy by quantity means it is apt that we reference one of the oldest identities in economics: the quantity theory of money ( $MV = PQ$ ).

## Theories

The quantity model says that money is effectively a scalar assuming the  $V$  (velocity of money) and  $Q$  (real output) are invariant to the flow of money feeding through to  $P$  (prices).<sup>11</sup> So, money is a neutral scalar—a homogeneous block of cash—that can be expanded or contracted like an accordion to play the sweet music of an economy playing in tune.<sup>12</sup> Quantity theory underpinned what there was of macroeconomics before Keynes.

Historically, the quantity theory was quite robust although, by the early 1980s, time series could no longer bear the invariance of  $V$  or  $Q$ .<sup>13</sup> Therefore, it seems that adding money does not directly feed through to inflation as QE would require. Instead, as Paul Krugman has noted, excess printing of money simply causes the ratio of GDP to money (its circulation velocity) to fall (Figure 4).<sup>14</sup>

How can we use the quantity theory in thinking about QE? Keynes's (1936, 1937) key insight was to ask people to see money not as some giant block of cheese, but as something that is manufactured, first, by central banks and, then, by an infinite number of private intermediaries to eventually 'feed' the liquidity into the economy. To Keynes, velocity was in constant flux, system-specific, time-varying and ever changing with intermediation and regulatory structures.

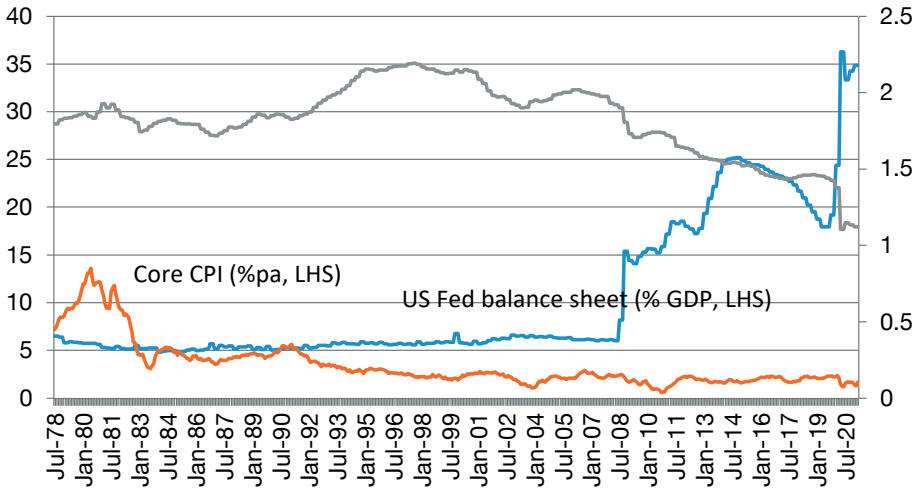
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11 The classical understanding of markets assumes wages are flexible and so markets clear. Thus, the quantity of money has no effect on output but merely determines the price level, which is proportional to nominal money supply.

12 Milton Friedman's 1956 restatement of the quantity depends on a stable demand for money balances or a predictable ratio of saving to spending to hand central banks control over prices.

13 Something changed with the floating of the US dollar and global deregulation of financial markets from the early 1970s onwards.

14 The velocity of money was falling in countries like the United States and Australia during the entire 2010s, if not earlier, from about 1.5 to about 0.8 across economies (Figure 4). When central banks pump out the money, more of it just sits on bank balance sheets.



**Figure 4. US QE, money supply and consumer price index**

Sources: BLS for CPI; BEA for GDP; FRB; Haver for QE and money.

## Keynes's insights

Keynes challenged economists to think of money as a complex vector of extending components, M0, M1, M2, ..., M17, and so on, and a myriad substitutable credit forms with tight bid–ask spreads (Samuelson & Barnett, 2007). Money is not a scalar or singularity. Money is a set of substitutable assets. The closeness of their interweave depends on the structure of intermediation chains and the abundance of supplies of high-grade, low-interest-bearing paper. In the right set of circumstances, it would be possible to leverage supplies of central bank-initiated assets. So, money creation can turn into a torrent or procyclical wave through the private sector—noting that all broader money and credit forms always lead the business cycle. Ironically, the notion of the heterogeneity of money would not be news to strict monetarists either (Brunner, 1983, p. 184).<sup>15</sup>

## Liquidity preference

Keynes used the term ‘liquidity preference’ to describe the idea that investors would not part with their portfolio cash unless they perceived that the relative risk-adjusted returns from an investment would be adequate.<sup>16</sup> Keynes maintained that

<sup>15</sup> Keynesians emphasise the substitution effects of money as an alternative to other financial assets, while monetarists highlight the income or wealth effects (Morgan, 1978, p. 77).

<sup>16</sup> In Chapters 22 and 25 of the *General Theory*, Keynes explains why he criticised the older economists for arguing that interest rates would equate to the flow of saving to investment. What Keynes termed the speculative demand for money was identified by Hawtrey (1925), who argued that when trade is slack, businesses accumulate cash balances.

portfolio managers do not have to put their wealth out to invest. In the face of market conditions like those of the 1930s and 2010s, they could just delay capital formation. Here, portfolio managers and investment committees hide the money ‘under their bed’, buy gold or real estate, or just send the money back to shareholders. In other words, they may park their money somewhere or chase *safer* prospective capital gains.<sup>17</sup>

Keynes argued that it did not make sense to encourage business owners to *skimp on dinner* and/or *close a factory*, thus impacting prices; but it did make sense to encourage them to liquidate their portfolio of claims to future money (bonds, stocks) or to borrow from lenders or the central bank if needed to ride out the tough times.<sup>18</sup>

## Stabilisation

Keynes’s thinking in the context of the Great Depression and a global liquidity trap was a pro-normalisation strategy. The aim was to encourage private business to borrow and spend. This was supposed drive up the supply of financial assets (credit), increase the pressure on yields to rise and gradually restore activity. He retained a break-glass option, too. If the private economy did fail to relaunch, there was always the option of massive public infrastructure spending, provided it also drove longer-term benefits.

## QE justification

The timeless general theory message is that things often work in reverse order to what you expect. So, real incomes and/or the level of hours worked and/or the level of unemployment are what adjust to clear the money market if interest rates can no longer adjust. To see this simply, suppose: the demand for money depends on output times price (QP) and is proportional, K. So,  $M_d = KPQ$ .

- *Either* prices are fully flexible and  $M_d = M$ ,
- *Or* one market is cleared by either Q or via employment effort (Modigliani, 1944).<sup>19</sup>

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17 Keynes’s general theory formulation was predicated on the liquidity trap case—for example, operating over a horizontal range of the money demand curve. So, below some positive nominal  $r^*$ , additional rate cuts have no impact on output. He argued that excess demand for money caused a decline in output and thus the demand for money until demand matched the nominal money supply. With the help of the concept of effective demand, Keynes argued that Say’s Law of Markets has been repudiated. The concept of effective demand established that what was produced is not automatically consumed so income would not always be spent at a rate that kept factors fully employed.

18 Note that the RBA employed a number of these type of facilities from April 2020.

19 Unemployment is the variable that clears the money market (with nominal income and interest rates); excess demand for money causes a decline in output and thus the demand for money until the demand matches a given money supply.

So, the money market can only be cleared via one of two means:

1. reductions in nominal income and employment—QED given rigid prices
2. explicit central bank intervention adding to the supply of money by direct expansion.

This is a longwinded justification for QE based on the quantity theory.

## Proportional stimulus

So, how do you assess the Covid-19 stimulus and broader macro-stabilisation policy in Australia in 2020?

Clearly, it is very hard to judge proportionality in real time; there are *ex ante* and *ex post* problems. Armchair experts love to second guess which is okay. But placing yourself back in March and April 2020 when the Covid-19 pandemic hit and governments around the world were placing their economies into ‘deep freeze’, how would you decide what amount of stimulus was required to tide your economy over? The circumstances were unique and certainly there are no up-to-the-minute contemporaneous economic indicators (the possible exceptions being credit statistics from the Big Four Australian banks and Australian Taxation Office payroll data).

The best policy advice at the disposal of the Australian Government was to try to directly inject into the economy what was being lost by businesses and households<sup>20</sup>—hence, the JobKeeper and JobSeeker approach. Unfortunately, both Treasury and the Reserve Bank of Australia (RBA) put medium-term policy targets to one side. It was as though:

- Keynes was running the Treasury (**12 per cent** of GDP fiscal stimulus in 12 months to April 2020).
- Modigliani was running the RBA, with a total change in balance sheet of \$300 billion (**15 per cent** of GDP monetary stimulus in 12 months to April 2020).

Federal Treasurer Josh Frydenberg oversaw the whole strategy. He signed off on an *ad hoc* policy target of not reversing policy course until unemployment had fallen to a rate with a ‘4 per cent’ in it.<sup>21</sup> But why not a 5 per cent or even 6 per cent?

Too much stimulus and too fast? Probably. The approach limited the 2020 downturn to a relatively shallow output loss of about 3.5 per cent of GDP in the March and June quarters of 2020 and generated a speedy rebound. That was very good.

20 Listen to the address of Kevin Hassett, former chairman of the President’s Council of Economic Advisers, at the 2020 AFR Business Summit in Sydney, 10 March 2020.

21 No doubt, both personally and professionally, this required a deep, personal reset on the part of the Treasurer, knowing that years of future deficits would bear his name.

At the same time, the fiscal price tag was about \$300 billion of additional federal debt and the distortionary impacts of RBA QE. Presumably, this means future governments will have less fiscal space to undertake stabilisation. Nor did the federal government's stimulus achieve any permanent structural reform or infrastructure building. This was a big missed opportunity.

Evidence of the generosity of Treasury's fiscal stimulus came with the March Quarter 2021 National Accounts. For the first time in four recession episodes, the Australian non-financial sector and households exited a *measured* recession with stronger balance sheets than they entered it (Jones, 2021)—at least on average. So perhaps federal macro-stimulus could be accused of being as spendthrift as it surely was in 2008.

It is worth considering whether both fiscal and monetary stimuli should always be assessed against *measured* deterioration in employment conditions and unemployment rates. This has been made more straightforward using real-time data collected by the Australian Bureau of Statistics (ABS) and the Australian Taxation Office (ATO). The presumption should be limited to first-round effects and more modest stimulus. Businesses and households that receive stimulus windfalls should be required to repay them.

## Does QE raise overall welfare?

What has been the impact of global QE rounds in the Australian context?

QE helps shore up output and employment in the short term by supporting financial balance sheets and credit flows in times of crisis. But can it support more medium-term objectives and what does the literature say about this?

## What QE is impacting at the macrolevel

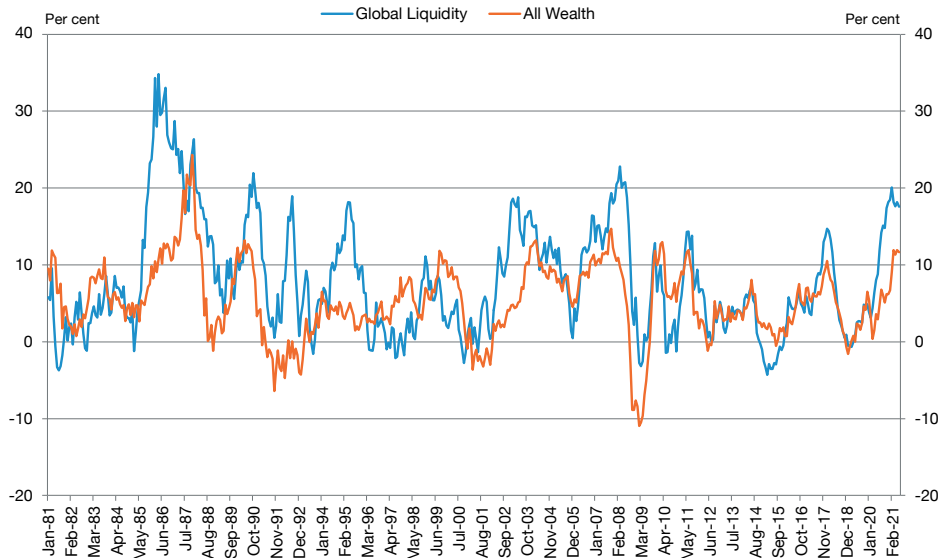
Central bank QE actions do seem to impact private credit provision and output stabilisation in the near term. However, it is not clear whether QE policies have lasting positive impacts in terms of the real economy (Sheedy, 2020). Moreover, one clear takeaway from successive OECD member QE rounds is that programs have two identifiable deleterious impacts.

First, QE rounds lead to 'risk-on' portfolio shifts. Here, money replaces riskier assets (private bonds, stocks, private equity, infrastructure, real estate, bitcoin, art, vintage cars, and so on), leading unambiguously to asset price inflation.

Deutsche Bank (2019) measured asset prices to be at 200-year highs by 2016 across 15 major Western economies, and they have continued to rise since.

CrossBorder Capital has mapped both the correlation and, more importantly, the causation between QE rounds, global liquidity and financial asset spikes (Figure 5).

Valuations placed on the so-called Nasdaq growth stocks in mid-2021 resemble the Dot.com darlings of the late 1990s, which ended in the Tech Wreck of 2000.



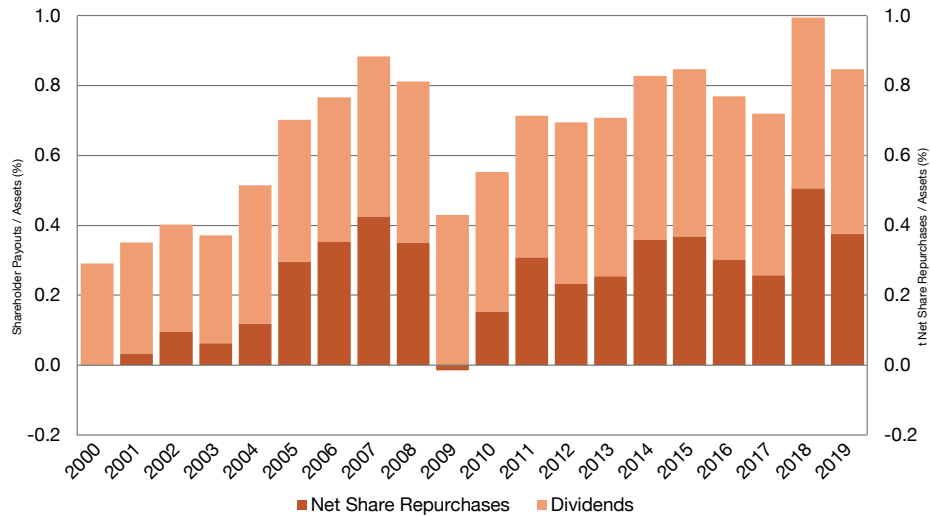
**Figure 5. Growth of financial assets and global liquidity**

Source: Howell (2020, p. 198, updated by author).

Second, QE rounds have probably helped to choke off private business investment in OECD economies by raising equity hurdle rates and/or the relative riskiness of big capital-intensive construction projects (Figure 6):<sup>22</sup>

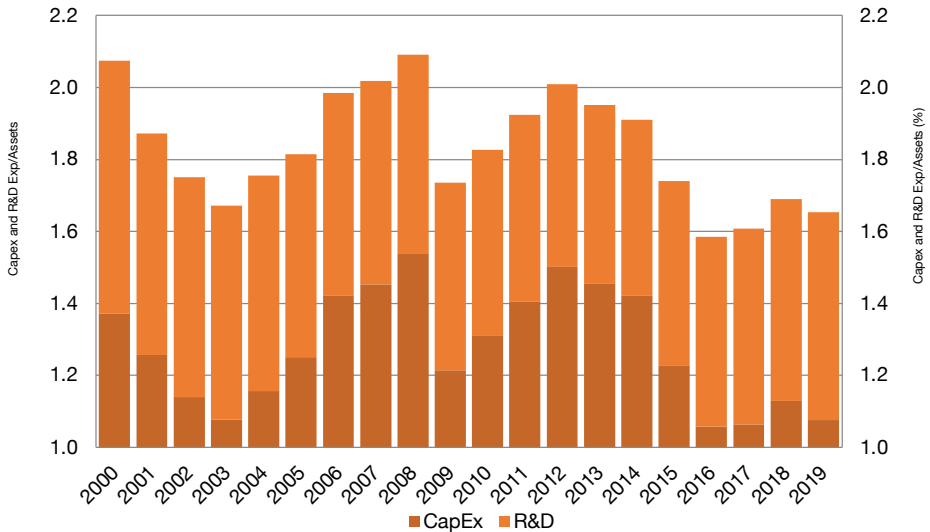
- A decade-long business investment drought across OECD member economies coincided with strong profits. Businesses preferred larger dividends and share buybacks while reducing CapEx levels (Jones, 2021; Farhi & Gourio, 2018; Blundell-Wignall & Roulet, 2013).
- The risk-aversion was piqued for the investment committees of public corporations as central banks failed to achieve stated policy targets and then provided inconsistent messaging about future policy settings (IMF, 2015).

<sup>22</sup> This is counterintuitive but related to the Modigliani–Miller theorem. A company's value is independent of its liability structure. Investors can readily reproduce any leverage structure through personal lending or borrowing to buy a given set of assets. So, even assuming the cost of debt financing falls under QE, shareholders still require company assets to generate a given rate of return. This only increases the required return on equity to achieve a given weighted average cost of capital. Hence, this is perhaps part of the reason we see an investment strike in countries employing QE policies.



**Figure 6. US repurchases and dividends (normalised by firm assets)**

Source: Data from Compustat, 2001–19 (inclusive), as presented in Acharya & Plantin (2019).

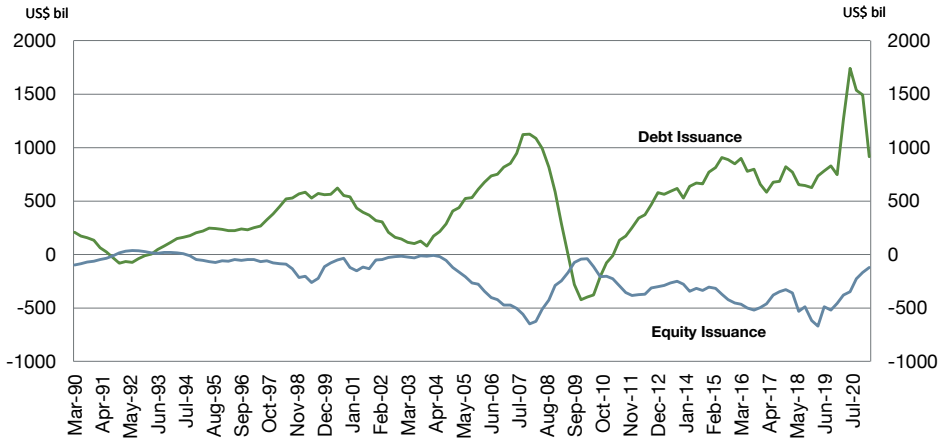


**Figure 7. US CapEx and research and development (normalised by firm assets)**

Source: Data from Compustat, 2001–19 (inclusive), as presented in Acharya & Plantin (2019).

- In the absence of corporate confidence in future growth prospects, low rates facilitated large leveraged payouts by firms, which were detrimental to capital expenditure levels and led to suboptimal investment from a social perspective (Acharya & Plantin, 2019) (Figure 6).





**Figure 8. US private debt and equity issuance**

Source: Montier (2018).

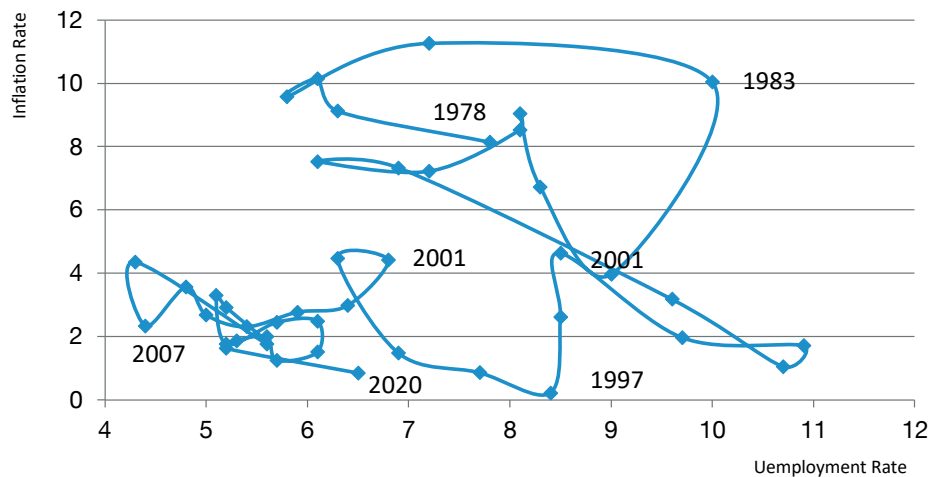
- If QE involves a preference for current income, it could potentially depress business investment by raising the market value of shareholder distributions relative to the expected return on long-lived capital (Spence & Warsh, 2015; Thomas, 2016).

QE is certainly not the sole reason for the secular slowdown of business investment (think China's emergence, demographics, technology trends and so on), but we argue it is the major policy-based reason in the 2010s. It is worth noting that this finding runs counter to James Tobin's Q-theory, in which firms are induced to invest as the market value of investment assets rises relative to replacement value (Kaldor, 1966). Of course, Q-theory does not account for uncertainty.<sup>23</sup>

Of course, the by-product of QE policies' effectiveness in inflating asset prices has been the apparent insensitivity of consumer prices to monetary stimulus. Data on the so-called Phillips curve over the past 60 years for Australia illustrate clearly the impermanent relationship between output and prices.<sup>24</sup> This is consistent with Solow (1998), who considers the whole Phillips curve apparatus, including neutral rate measurement, as *soft as a grape*—presumably, part of the dark arts of central banking. Looking at Figure 8, who could blame him?

<sup>23</sup> Uncertainty reflects perceptions or beliefs, while risk-aversion reflects behaviours.

<sup>24</sup> Another interpretation is that the relationship has fallen through time and is now imperceptible.



**Figure 9. Phillips curve follies, 1**  
Sources: Melbourne Institute & Australian Treasury using ABS data.



**Figure 10. Phillips curve follies, 2**  
Note: Thanks to Professor Guay Lim from the Melbourne Institute and Luke Yearman from the Australian Treasury for their assistance in reproducing these charts.  
Sources: Melbourne Institute & Australian Treasury using ABS data.

Before closing this section, it is worth documenting another deleterious consequence of QE—that is, the enormous widening of inequality across advanced economies. This is because existing owners of assets benefit from price inflation and can use those same assets as collateral for new acquisitions. In a sense, this impact would be relatively neutral if each of us had the same propensity to consume out of each dollar of permanent income. But the problem is that the uber-wealthy have a very

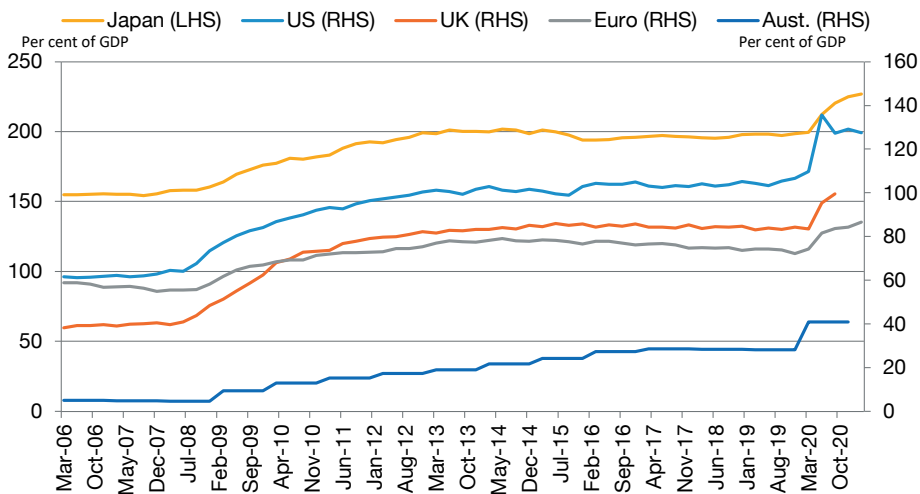
low propensity to consume. So, a significant widening in inequality is antithetical to running effective countercyclical policy and leads to a veritable uprising in social instability, which has been prevalent across economies. Evidence of this is the fact the combined wealth of the billionaires on *Forbes* magazine's annual global list rose a record US\$5 trillion to US\$13 trillion in the year ended April 2021 in the face of the greatest global pandemic since the end of World War I. The reason, of course, was QE (El-Erian, 2021).

## What QE is causing at the microlevel

Apart from most likely driving some adverse macro-impacts that result in 'shallow recoveries' and boom–bust asset pricing, QE is likely driving longer-term portfolio efficiency impacts with big price tags.

## Risk of unstable debt burdens

Certainly, the central government balance sheets (central banks and treasuries) of major economies around the globe, including Australia, are far larger now than they were in 2007 or before the Covid-19 crisis, with total assets at around US\$26 trillion—US\$22 trillion more than at the end of 2006, and far larger in GDP terms.



**Figure 11. Central government net debt since 2006**

Note: Australian data are federal government financial gross debt.

Sources: AOFM; ABS; Eurostat; BoJ; US Treasury; Haver.

The Fed's balance sheet has already reached US\$8 trillion, or 35 per cent of GDP, and would be expected to rise rapidly, with the Congressional Budget Office estimating the US federal budget deficit will be around US\$3 trillion in fiscal year 2021.

The Bank of Japan's balance sheet exceeds 130 per cent of GDP, and sits at around 60 per cent of OECD member country output. Most of these governments are also now running big budget deficits.

Even the RBA is now rolling out a version of QE, has committed to buying more than A\$5 billion each week of federal and state government bonds and is closing on holding one-quarter of all outstanding issuance.

In terms of recent growth, the International Monetary Fund (IMF) has projected that, by year end 2021, the government debt loads in many developed market economies—including the United States, the United Kingdom, Italy, Japan and Australia—will have risen by 10 per cent of GDP since the pandemic began.

## **Risk of market domination**

In addition to the sustainability of net debt issuance by central governments, swelling central bank balance sheets are now dominating the financial systems of certain market economies in a manner that cannot be easily unwound.

In theory, financial markets are supposed to be free of uncompetitive influences, with participants of roughly equal size. Large-scale QE has interfered here, as we saw above with the discussion of intermediation. Further, central banks in the United States and especially Japan and Europe have moved beyond being 'lenders of last resort' to become major players and determiners of market prices. This is because monetary transmission now involves capital asset markets as well as traditional money markets because of the institutional rise of repos, among other things. Moral hazard is now built into investor expectations of many asset prices.

For example:

- The Bank of Japan already holds ¥500 trillion or around half of all Japanese Government Bonds and 10 per cent plus of all Nikkei-indexed exchange-traded funds (ETFs).
- The Fed owns US\$2.2 trillion, or some 33 per cent, of outstanding US mortgage-backed securities.
- The Fed and the European Central Bank have now started buying corporate debt and ETFs as well.

In the past eight months, the RBA has gone from a standing start to owning between one-quarter and one-third of all Australian sovereign debt on issue. Unlike other market participants here, it is not buying bonds as part of a broader diversified portfolio, but for policy reasons—so the economics of its holdings are different.<sup>25</sup> But just because it can, does not mean the RBA should.

Now each time financial markets wobble, central banks exercise the ‘Greenspan put’. They cut interest rates if they can or undertake QE measures. This results in central banks holding bigger and bigger balance sheets.

As central banks have bought more and more varied asset types, including funding SME loans and even paycheque loans, they have implicitly become the largest underwriters of credit risk in their respective economies.

While only time will tell how much government debt the RBA is willing to buy, Governor Philip Lowe is on record as saying the RBA is ‘prepared to transact in whatever quantities are necessary to achieve this objective’—that is, keeping funding costs low.

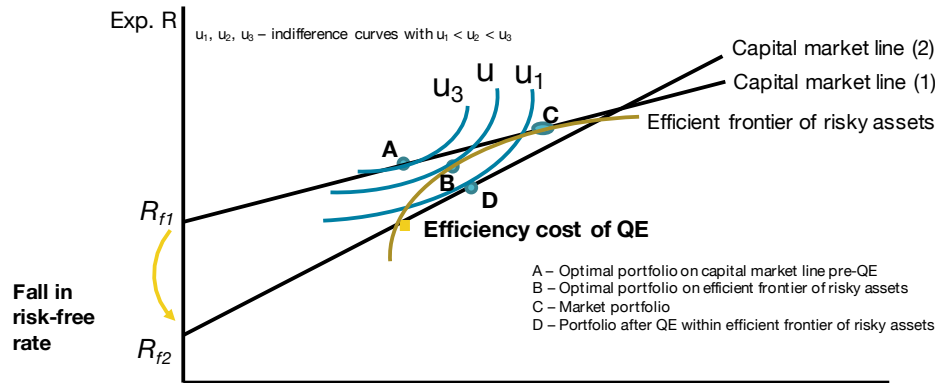
## Risk of central banks distorting portfolio returns

If central banks are inadvertently guiding resources to lower-value activities, that distorts prices and risk. When capital flows towards bad bets and away from safer bets, we all pay for the consequences in terms of the risk-adjusted returns earned by investment portfolios through time. For portfolio managers looking to construct efficient mean–variance portfolios, the actions of central bankers introduce inefficiency by raising uncertainty around risk-free discount rates (zero-beta portfolios) and asset valuations. This efficiency cost is ultimately borne by savers (Figure 12).

The outcome must be reduced dynamic efficiency and productivity, greater instability and greater risk of financial contagion:

- The outcome for portfolios must be lower risk-adjusted returns over the medium term.
- The outcome for the typical householder will be less secure employment and a retirement more reliant on social security.

<sup>25</sup> In comparison, no entity could gain such a large market share in the forex market, where daily turnover is around \$7 trillion as the fifth-most traded currency.

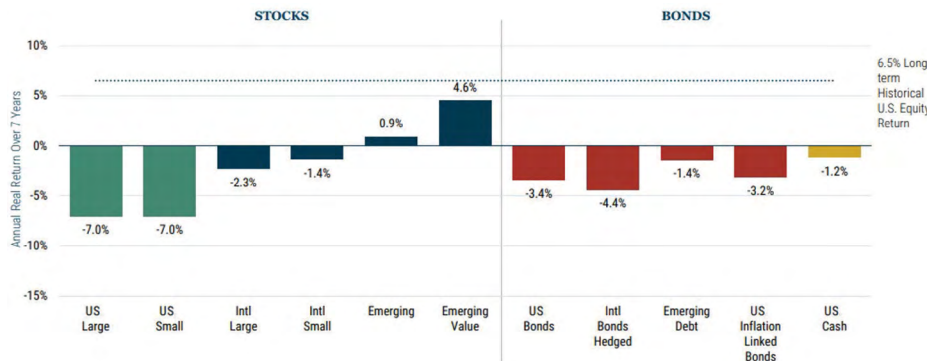


**Figure 12. Distorting the risk–return trade-off for investors**

Source: Author's work.

So, central bankers are inadvertently guiding resources to lower-value activities, distorting prices and risk. What might sound theoretical and far off is not so remote when you look at the latest dynamic allocation portfolio expectations of the big Boston-based value fund GMO (Figure 11). Its medium-term projection for returns over the next decade sees every asset class in the advanced economies in the red based on mean reverting dynamic asset allocations.

When capital flows towards bad bets and away from safer bets, we all suffer the consequences. It all sounds like Friedrich Hayek's worst nightmare. Here, monetary easing effectively subsidises business activities that are not socially desirable (but are privately profitable) at the expense of preferable investments (Hayek, 1931). All this sounds very bad for dynamic efficiency and capital formation through time.



**Figure 13. Seven-year asset-class real return forecasts**

Source: GMO (2021).

## Risk that central banks have lost reversibility

Another fundamental risk with QE policies is reversibility. When the Fed tried to reverse out of QE from 2017 onwards (via cautious limited selling of its asset holdings), this culminated in a liquidity crunch in the repo markets in late 2018, which provided the backdrop to the current Covid-19 monetary easing. During the Covid-19 crisis, central banks went even further than before by making absolute commitments to ‘QE infinity’, which in our view is a certain signal that unwinding will not occur and policy will impact the value of resources. Unstable money does not promote macroeconomic stability. Policymakers caught in this QE vice will find that bigger private debt requires larger and more frequent debt rollovers, which will see central banks running QE to support liquidity flows. Each time financial markets wobble, larger and larger liquidity injections are required to thaw frozen markets and resuscitate economies, as effective intermediation becomes harder and harder to accomplish.

It does seem that QE has become a one-way bet. The more participants expect quantity injections and aggressive posturing by central banks at the first sign of market trouble, the harder it is to roll back the cumulative load of previous episodes.

## Policy messages

Once upon a time, central banks’ settled role was monetary oversight centred on the regulation and pricing of the money supply. These critical levers were its cardinal tools. Origination, while important, was utilised generally only to assist and enhance the objectives pursued via its primary tools.

## Overreach

But today the gamekeeper has turned poacher; the long-lost, conservative inventory manager has now assumed centre-stage as a financial market player whose reach and power far exceed the most aggressive of banks within its supervisory control.

The obvious result is the utter corruption of our financial markets’ key role and responsibility: the intermediation of credit and the making of investments based on the application of the fundamental principle of the risk–reward equation.

The insidious result is the concentration of liquidity among the major financial market players, who regularly pledge allegiance to their central bank (and regulatory agency) overlords in consideration for protection from competition.

Central banks have stumbled into unhealthy co-dependency with markets, risking policy flexibility and the longer-term credibility that is critical to their effectiveness. Assets under management and margin debt are at record levels, as is the indebtedness of central bank balance sheets (El-Erian, 2021).

Central banks are effectively selling call options enabling protected exposure to the upside of financial assets—for a price, which is that market participants must secure liquidity and keep investing. The objective of QE seems to have more to do with the security of financial markets than with the wellbeing of households. With central bankers deciding a new role for themselves of backstopping asset prices, they are engaging in mission creep. Sadly, they are even now grading their own performance (Fabo et al., 2020).

So, while we understand how central banks got into this position, we have argued it is not a good place to be and it would certainly take some *chutzpah* to stay there.<sup>26</sup>

## Finetuning

Perhaps the critical error central bankers have made is their belief that they can turn the supply of financial flows ‘on and off’. Confidence in our ability to finetune stems from our standard macroeconomic models in which money is mainly exogenous and neutral in terms of its impact on output over time. That may have been an accurate depiction of the world before the 1980s and the emergence of huge pools of institutional capital driven by the savings of baby boomers. But bank funding models and balance sheets have changed markedly since most mainstream macroeconomic theory was written in the 1970s and 1980s.

The fundamental role of central banks is to ensure monetisation of ‘liquidity’. This they do via funding and interventions in capital markets to bolster collateral. Liquidity is always endogenous. Money has a major discretionary dimension to it.

In our view, the best thing central banks can do now is maintain liquidity in markets while gently and gradually reversing away from their *quantitative* balance sheet expansions. It seems that a large part of the problem of the past decade has been keeping rates too low. At the same time, authorities have not dealt well with money market imbalances. So, creating some sort of ‘permanent repo’ facility to smooth money market shortfalls would be a positive step. They should enhance countercyclical lending standards in residential property and other credit categories that are fuelling boomtime conditions.

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26 Central bankers are not all-seeing and all-knowing. For example, the RBA has persistently undershot its inflation target in a manner as systematic as Treasury’s budget surplus forecasting performance in the 2010s. The RBA enjoys an elevated position in the policy hierarchy, which allows it to comment with seeming impunity on every aspect of economic policy, including climate change. It is surrounded by an echo chamber of bank economists who never call it out, with one or two exceptions. While we do not question the RBA’s public spiritedness, it must sometimes surely act in its own interests, so we question its capacity to withdraw from the QE honeypot.



In the longer term, we may need a more ‘elastic’ monetary and banking system (Kaldor, 1972). This approach only allows the money to grow in automatic response to an increase in demand for credit where that demand arises from business use and especially the requirements of SMEs and first homebuyers. Surely monetary and tax facilitation of speculation are not a good thing.

## Operational separation

One of the most important considerations for monetary and fiscal monetary policy operations under QE is the dubious case for operational independence of monetary policy from fiscal policy. While central banks have a monopoly on interest rate policies, almost any balance sheet policy is replicable by the broader government (Borio & Disyatat, 2009). Where monetary authorities are effectively backstopping domestic fiscal expansions, both policies are bound together. There is one government, and it has one budget constraint, so monetary and fiscal policy are not independent (Prescott, 1999). Indeed, there are very complex interactions between money supply, government expenditure and debt management in this world of endogenous ‘quantity’ money. Bringing the whole lot together in one institution makes perfect sense, especially if it is all accountable to a minister and voters.

## Guideposts

Another part of the problem of ‘money’ in economics relates to the Keynesian and monetarist divide—both of which are right and wrong at the same time. Monetarists are right to want to restrict the flow of liquidity to some predictable average growth rate. The problem is they cannot find a way to operationalise the rule given the substitutability of credit forms. Meanwhile, Keynesians tend to a more practical understanding of money and endogeneity, but often eschew the use of target rules that might stem fiscal slippage through time.

In present circumstances, the obvious answer to the broader policy predicament is to target a given unemployment rate (say, 5 per cent) and rely mainly on fiscal policy with accommodative monetary policy in support. We say this is the fastest path back to economic normality.

## Defining money

Money is, in our view, any equivalent asset that provides a warehouse of value. It is also a benchmark of the soundness of a government’s institutional macro-policies, which must be time consistent—in other words, anchored by a neutrality objective

or a pledge that, over time, governing authorities will not enact policies that impact the risk–return equation through time. As you can see, we have been thinking about this answer for 20 years so far. Thank you for your service, Ted Evans, rest in peace.

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# From debt to eternity

Sinclair Davidson<sup>1</sup>

## Abstract

This paper documents the increase in Australian public debt since 2007. In that year, gross public debt had a face value of \$55 billion, while net debt was negative. It is not surprising that governments have since resorted to public debt to respond to a series of shocks to the Australian economy. What is surprising is that Australian policymakers have abandoned the ‘old-time fiscal religion’.

Speaking on Budget Night, 11 May 2021, Australian Treasurer Josh Frydenberg made the following statement:

Net debt will increase to \$617.5 billion or 30.0 per cent of GDP this year and peak at \$980.6 billion or 40.9 per cent of GDP in June 2025.

This is low by international standards. (Frydenberg, 2021)

The comparison ‘low by international standards’ is meant to be reassuring. And, superficially, these statements are true. As the economic forecasting stood on that day, net debt was expected to reach a particular level and, by international standards, that level, as a percentage of GDP, was low. Yet the statement is entirely misleading. Australian government debt will not be paid by the international community. How much debt the Australian government incurs is a matter for Australian taxpayers—future taxpayers at that—and international comparisons provide no information as to the burden that debt places on Australian taxpayers.

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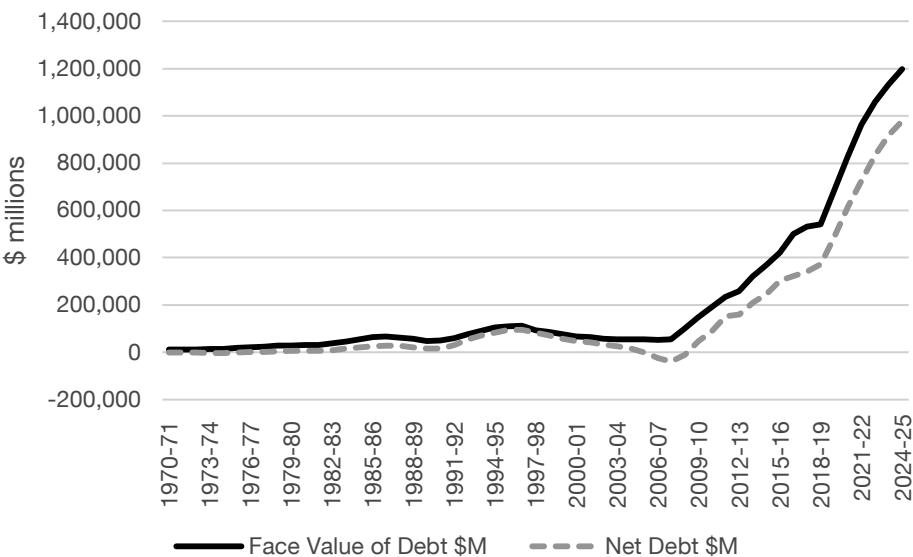
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Australian government debt is high by Australian historical standards. Certainly, it is high over the period since 1970. This paper documents the growth of Australian government debt over the period 1970–2025 (the end of the current budget forecast period). It also addresses the notion that debt is currently ‘cheap’. It is true that interest rates are low and interest payments as a percentage of government spending are low by historical standards. But that is not the burden imposed by public debt.

Following the work of James Buchanan, the argument is made that public debt imposes a burden on future generations and, in particular, future taxpayers. This is particularly problematic as Australia is heavily reliant on direct taxation and the personal income tax is itself highly progressive, with a small number of taxpayers paying the lion’s share of the tax.

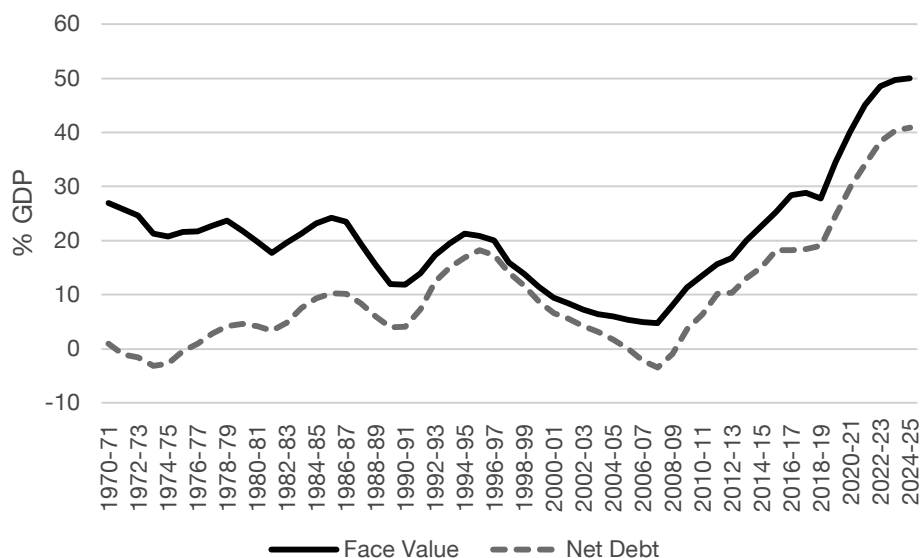
## The magnitude of Australian debt

Figure 1 shows the magnitude of Australian Commonwealth debt since 1970–71. The data are captured from the 2021–22 budget papers and show the face value of the debt. This is the more appropriate value to show (as opposed to the market value of the debt) as it is this amount that must ultimately be repaid. The figure also shows the net debt data.



**Figure 1. Commonwealth debt**

Source: Budget papers (various years).



**Figure 2. Commonwealth debt as a percentage of GDP**

Source: Budget papers (various years).

Commonwealth debt might be ‘low’ by international standards, but it is not low as measured over the 55 years reported in the Budget papers. There is a very clear turning point in the data: before the 2007–08 Global Financial Crisis (GFC), Commonwealth debt was well below \$200 billion. Commonwealth debt has dramatically increased since the GFC and appears to have increased again since the 2018–19 financial year. This pattern is entirely explained by shocks to the economy. After the GFC, the government increased spending to stimulate the economy. Similarly, in the summer of 2019–20, Australia experienced devastating bushfires and was impacted by the Covid-19 pandemic after March 2020. In the 2019–20 budget, the federal government expected net public debt to be \$360 billion in that year. In the 2020–21 budget, however, net public debt for 2019–20 was reported to be \$491 billion (see Table 1).

Some readers may argue that the dollar value of debt is an inappropriate measure; the economy is much larger now than it was in the early 1970s and inflation has eroded the value of money over that 50-year period. Rather, it could be argued that we should examine debt as a percentage of GDP. That exercise is shown in Figure 2.

Again, it is the case that Commonwealth debt is not low by historical standards. The pattern of the data reveals that Australia is even more indebted now than it was in the 1970s and 1980s.

Table 1. Growth of net Commonwealth debt (\$ million)

Budget year	Actual or estimated net debt											
	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20	2020–21	2021–22	2022–23	2023–24	2024–25
2013–14	<b>178,104</b>	191,552	191,172	185,662								
2014–15	197,851	<b>226,388</b>	246,362	261,280	264,200							
2015–16		250,234	<b>285,802</b>	313,356	323,723	325,447						
2016–17			285,684	<b>325,962</b>	346,842	356,373	355,066					
2017–18				325,091	<b>354,931</b>	375,112	374,715	366,169				
2018–19					341,003	<b>349,851</b>	344,036	334,254	319,270			
2019–20						373,473	<b>361,040</b>	349,506	333,248	326,067		
2020–21							491,217	<b>703,245</b>	812,125	899,791	966,168	
2021–22								617,521	<b>729,023</b>	835,015	920,448	980,561

Source: Budget papers (various years).

Table 2. Growth of net interest paid by Commonwealth (\$ million)

Budget year	Actual or estimated net interest paid											
	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20	2020–21	2021–22	2022–23	2023–24	2024–25
2013–14	<b>7,835</b>	8,405	9,752	7,726								
2014–15	10,725	<b>10,517</b>	11,549	12,210	12,923							
2015–16		10,906	<b>11,619</b>	11,927	12,336	13,001						
2016–17			11,980	<b>12,642</b>	13,356	14,224	14,215					
2017–18				12,248	<b>13,355</b>	13,722	13,721	15,506				
2018–19					13,128	<b>14,492</b>	12,226	12,401	12,175			
2019–20						14,079	<b>10,936</b>	10,389	9,359	8,674		
2020–21							13,280	<b>13,097</b>	13,453	13,113	13,647	
2021–22								14,126	<b>14,727</b>	14,922	16,698	17,113

Source: Budget papers (various years).



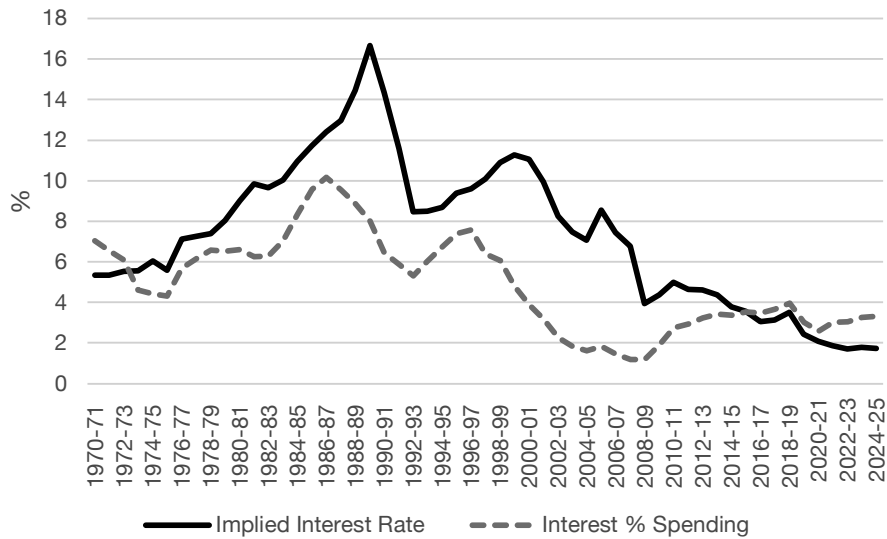
Table 1 shows the evolution of expected net debt compared with the actual net debt reported in any year. The data reported in the rows are taken from the budget papers of that year and the data in the columns are expected net debt for the year being reported. The trailing figure is the realisation of net debt in any given year. For example, the 2020–21 budget papers forecast a net debt of \$703.2 billion for that year; the figure immediately below it, reported in the 2021–22 budget, shows the actual figure to be \$617.5 billion. The 2021–22 budget papers forecast the 2021–22 net debt to be \$729 billion and \$980.6 billion in 2024–25.

Table 2 shows similar data for the evolution of expected net interest payments compared with the actual net interest payments. In 2020–21, the budget papers forecast a net interest payment of \$13.1 billion for the 2020–21 financial year. The 2021–22 budget papers revealed the actual payment to be \$14.1 billion.

The interesting observation is that while the forecast net debt (shown in Table 1) was some \$85.7 billion *less* than initially forecast, the net interest payment was \$1 billion *more* than forecast. The other interesting observation is that net debt has increased by a factor of about 3, while net interest payments have only increased by about 30 to 40 per cent.

That observation may explain the increase in the use of debt—or at least the reluctance to pay off debt after 2013 until 2019; it may be that policymakers believe that debt is ‘cheap’. Chris Richardson of Deloitte Access Economics has made that argument: ‘Never in the 2000 years of recorded history of interest rates has it been cheaper for governments to borrow’ (Cranston, 2020). If debt is cheap then perhaps it is a sensible argument to borrow to continue spending at higher levels rather than either cut spending or increase taxation.

Figure 3 shows that argument in stark terms. The implied interest rate is the (gross) interest paid dividend by the face value of the debt expressed as a percentage. Interest percentage spending is the (gross) interest paid divided by government spending. Interest expenditure as a percentage of overall government spending is low by historical standards at less than 4 per cent. Similarly, the implied interest rate is also low by historical standards.



**Figure 3. Implied interest rate and interest paid as a percentage of spending**

Sources: Budget papers (various years) and author calculations.

# The burden of public debt

Public debt—just like private debt—must ultimately be repaid with interest. This is trivially true. To be sure, lenders do not want borrowers to repay their debts; after all, they earn interest while the debt is outstanding. But they do want borrowers to be able to repay their debts.

Australian governments do not intend to run budget deficits in perpetuity, nor do they intend to not pay down public debt (but see the discussion below). There is little doubt the Australian Government has the capacity to repay its debts. Australian government debt is highly rated by the international ratings agencies (triple-A rated by all three international ratings agencies) and holders of Australian government debt are exposed to little, if any, sovereign risk.

The public debt burden is not the interest payments on the debt. Those payments simply represent the compensation that lenders require to hold the debt. Rather, the burden of public debt is the future deadweight costs of taxation that are imposed to pay debts incurred in the present. This argument was articulated by James Buchanan (1999a): debt is paid by ‘future generations’. Future taxpayers bear the burden of paying for expenditure that has occurred in the past. The consequences of that outcome—further articulated in Buchanan and Wagner (1967, 2000)—are

that current generations will incur greater levels of public spending in the present associated with higher levels of debt and lower levels of current taxation to finance that level of public spending.

There are at least two counterarguments that can be levied against Buchanan's view. First, current generations may deploy debt finance to invest in productivity-enhancing activity that generates economic growth in excess of what otherwise would have been the case, and consequently future generations enjoy an inheritance rather than a cost. This is an empirical claim. Bear in mind, however, that future opportunity costs are subjective and cannot be known in the present (on this point, see Buchanan, 1999b).

The second counterargument relates to Ricardian equivalence. Taxpayers in the present—well aware they face a higher tax burden in the future—save now to offset the public debt (for a modern analysis of Ricardo's original argument, see Barro, 1974). Buchanan (1976) argues that Barro (1974) constructs a special (and unusual) case for his argument and that his analysis is inconsistent with observed behaviour, while Buchanan and Wagner (2000) argue that Ricardian equivalence can only hold in a community of homogeneous decision-makers with perfect knowledge.

## Why does this matter?

To the extent that increased public debt is high and that it imposes a burden on future generations, this is an increased burden on future taxpayers. The fact is the Australian tax base is quite narrow. The Henry Review (Henry, 2010), for example, reported that while Australian governments (federal, state and local) levied some 125 different taxes, 90 per cent of all tax revenue was raised by just 10 taxes. Of those 10 taxes, the personal income tax and the company income tax raised the lion's share of revenue. The Henry Review also provided empirical estimates of the deadweight costs associated with the company income tax to be 40 per cent and the personal income tax to be 24 per cent. Furthermore, Australia has a high reliance on these direct taxes compared with most Organisation for Economic Co-operation and Development (OECD) economies.

This implies that even though the face value of Australian debt might be 'low' compared with other economies, or even that the debt as a percentage of GDP is 'low' compared with other economies, the actual burden of that debt might be high.

The analysis is further confounded by the progressive nature of the Australian personal tax system. Davidson (2009) reports that the top 25 per cent of income earners paid 66 per cent of all net personal income tax in 2006–07. Davidson (2009) sourced his data from the Australian Taxation Office (ATO) Taxation Statistics; using that same data source and investigating the latest available data

(2018–19), that share is now 67 per cent. Similarly, the Australian company tax—while not progressive—is mostly collected from a small number of highly profitable companies. Davidson and Heaney (2012) report that 0.5 per cent of companies liable for the Australian company tax pay 76.26 per cent of net company tax. Those data related to the 2007–08 tax year and, again, were calculated from data provided by the ATO Taxation Statistics. A similar statistic for the 2018–19 tax year is that 0.3 per cent of companies liable for the Australian company tax paid 67 per cent of net company tax.

While Australia has a comprehensive tax system, the effective tax base is somewhat narrow. Australia is highly reliant on direct taxation to raise revenue and, within those direct taxes, operates a highly progressive personal tax. This suggests that the public debt burden is likely to be highly concentrated. In terms of the public choice arguments made by economists such as James Buchanan, this simply increases the incentives for voters to borrow too much in the present.

## **But this time it's different?**

Public debt that finances productivity-enhancing economic activity is likely to contribute to economic prosperity while public debt that does not finance productivity-enhancing economic activity is less likely to contribute to economic prosperity. Then Treasurer and now Prime Minister, Scott Morrison, attempted to make this distinction when he differentiated between ‘good’ debt and ‘bad’ debt in 2016 (Kohler, 2016). This observation would seem to imply that finding a relationship between public debt and economic prosperity should be a simple empirical exercise. This, however, has proven to be difficult (see, for example, the debate sparked by Reinhart & Rogoff, 2010; and Herndon et al., 2014).

It is very likely that the methods empirical economists bring to bear and the coarse data available for analysis are unable to tease out the relationship—if any—between public debt and economic prosperity. Differentiating between ‘good’ and ‘bad’ debt would itself be entirely subjective. In any event, if Buchanan (1999b) is correct in arguing that all opportunity costs are both subjective and unobservable then broad-scale macro-empirical techniques can never accurately measure the relationship between public debt and economic prosperity. Indeed, these techniques may not be able to measure many of the economic relationships for which economists routinely search.

It is possible, however, to conduct some thought experiments. For example, revealed policy preferences suggest that, historically, Australia has been a ‘low-debt’ economy. Political rhetoric—but not always action—suggests Australians prefer low debt to high debt and budget surpluses to budget deficits (or at least budgets that are close to being balanced). This rhetoric is bipartisan. No Australian Treasurer has argued

that deficits persist for long periods or that high levels of debt are anything but temporary. Yet the recently released *2021 Intergenerational Report* indicates that net debt will still be at 34.4 per cent of GDP in 2060–61. Similarly, the *Intergenerational Report* forecasts that the budget will not return to surplus in the next 40 years (The Treasury, 2021).

Like its predecessors, the *2021 Intergenerational Report* is simply an extrapolation of current policy settings combined with some heroic assumptions about what may happen in the future to things such as migration, productivity and the terms of trade. Nonetheless, it paints a bleak picture of the current policy settings. Policy outcomes—that is, sustained long-term deficits and high levels of public debt—are inconsistent with stated policy goals and historical trends.

This suggests that either policy preferences have changed or a future government will attempt to balance the budget and pay down debt.

Stated policy preferences, however, have not changed. In his 2020 budget speech, Josh Frydenberg made this statement: ‘Our economic and fiscal strategy sets out the path to grow the economy, stabilise debt, and then reduce it over time’ (Frydenberg, 2020).

In April 2021, before the budget was brought down, the Australian Bureau of Statistics reported that unemployment was 5.5 per cent. By June 2021—the latest available data at the time this paper was written—unemployment was 4.9 per cent. By the government’s own policy timetable, action towards ‘stabilising gross and net debt as a share of the economy’ should begin.

That argument, however, is predicated on the assumption that the Covid-19 crisis is over. It is true that unemployment has fallen well below 6 per cent, yet—again, at the time of writing—many Australians are in lockdown and the economy is not returning to normal (even as defined by the government).

Far more importantly, however, the post-Covid strategy set out in the 2020 budget assumes that post crisis, the economy will return to business as usual. That assumption underpins the forecasts in the *Intergenerational Report*, yet even those are inconsistent with the stated post-Covid strategy outlined in the 2020 budget.

Allen et al. (2020) argue that the economy is not likely to simply return to a business-as-usual trajectory. Their argument is that an economy cannot simply be switched off and on again like a machine. The economy is not simply a collection of various factors of production (land, labour and capital) that can be temporarily frozen in place and then unfrozen to continue as before as though nothing had happened. This, however, is the strategy that many governments around the world, including in Australia, have attempted. Individuals were ordered into lockdown, resulting in massive disruption to economic activity. This resulted in a massive expansion of

central planning; governments around the world were making decisions as to what were the ‘essential items’ that consumers could buy, which stores would remain open and which would close, which employment categories were essential and whose employees could continue to work and which were not essential and whose workers had to stay at home. Central planning is known to be inefficient relative to a market economy (Mises, 1981; Hayek, 1945).

The counterargument is that this government intervention was a temporary response to a crisis. In wartime, governments have taken temporary control of the economy and economic growth has commenced at the end of the conflict. How, then, is this situation different? Allen et al. (2020) argue that the post-Covid situation is very different to previous economic crises, including war. During a war, the government does not attempt to stop economic activity from occurring; it attempts to redirect economic activity away from producing civilian consumer goods and towards producing military goods. During a ‘conventional’ economic crisis, the economy is already distorted and the government spends billions to rekindle economic activity. Government responses to the Covid-19 pandemic were to spend billions to stall the economy, and then keep it stalled—the expectation being that, after the crisis had passed, the economy would simply return to its previous level of activity.

If Allen et al.’s (2020) analysis is correct, the government’s post-Covid fiscal strategy is doomed to failure. As Allen et al. (2020, p. 136) argue:

The secular mythology is that the economy will awaken blinking into the light, a little stiff and tired and hungover perhaps, carrying some extra debt around its middle to be sure, but otherwise good to go again, so long as we follow the public health plans.

This belief is wrong. That economy is gone. What we will return to is a different economy, with different preferences and uses of technology, new jobs and firms, and different patterns of trade and specialisation. The economic problem we face is not how to stimulate spending to get us back to January levels of GDP. We do not have a spending problem, because this situation was not caused by a loss of spending. What we face, rather, is a recoordination problem—what Friedrich Hayek called a ‘knowledge problem’ in figuring out how to re-create value.

## Conclusion

Since 2007–08, when Australia had low levels of gross debt and negative net debt, the Australian economy has been buffeted by the GFC, bushfires and the Covid-19 pandemic. In response to these events, Australian governments have incurred large amounts of public debt and ramped up government spending. To be fair, this constitutes a ‘mainstream’ economic policy response to adverse economic shocks, yet the policy response to the pandemic was very different to that of previous crises.

The government does not normally spend (borrowed) money to prevent economic activity from occurring. Whether or not that was a wise policy to pursue will be debated in the years to come.

What this paper has done is document the build-up of debt over the past 10 or so years. It has also debunked the notion that public debt is ‘low’; it has especially debunked the notion that the debt burden is low. Debt is not ‘cheap’ simply because interest rates are low.

What remains to be explained is why policymakers appear to have abandoned what Buchanan and Wagner (2000) referred to as being ‘the old-time fiscal religion’. This is the notion that the existence of public debt is a sign of public profligacy and that debt should be quickly paid down lest it impose a burden on future generations. This remains the rhetoric of Australian governments yet following the GFC, neither the Rudd–Gillard government nor the Abbott–Turnbull–Morrison government has shown any urgency in retiring public debt. Indeed, the *Intergenerational Report* shows that public debt will still not be paid down in 40 years.

It is not clear when or why the ‘old-time fiscal religion’ was abandoned. In late 2007, then opposition leader Kevin Rudd was able to campaign at an election with the slogan ‘This sort of reckless spending must stop’. In the years since, there is no evidence that the spending has stopped; to the contrary, spending has increased and so, too, has public debt.

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# The costs and consequences of ‘small business fetishism’

Saul Eslake<sup>1</sup>

## Abstract

It is widely asserted—and believed—across the Australian political spectrum that small business is the ‘engine room’ or ‘backbone’ of the economy. This belief is, however, without any evidentiary foundation whatsoever. In aggregate, Australian small businesses have not created a single job since before the Global Financial Crisis. Small businesses have, on average, been consistently less innovative than medium-sized and large businesses. Small businesses pay lower wages, on average, than medium-sized and large businesses, and they have significantly lower labour productivity. It would be a mistake to perpetuate the preferential treatment of small businesses simply because they are small, and for no other reason, once the pandemic is over. If preferential tax treatment and other forms of assistance are to be afforded to any businesses, it should be to new businesses, rather than small ones.

There are almost 2.4 million small businesses—conventionally defined as those with fewer than 20 employees—in Australia, according to the Australian Bureau of Statistics (ABS, 2021a). Of these, just over 1.5 million have no employees at all and about 815,000 have between one and 19 employees.<sup>2</sup>

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<sup>2</sup> That compares with a little more than 56,000 businesses having between 20 and 199 employees, which the ABS classifies as ‘medium’; and just less than 4,400 with 200 or more employees, which are classified as ‘large’.

## The ‘engine room’ myth

One of the enduring clichés in Australian political discourse is that small business is the ‘engine room’ or the ‘backbone’ of the economy. It is incanted, with almost religious fervour, not only by organisations representing small business (see, for example, COSBOA, 2020), but also by politicians of all persuasions (see, for example, Hockey & Cormann, 2015, pp. 1–9; Frydenberg, 2020; Liberal Party of Australia, 2020; ALP, 2018, pp. 19–20; Australian Greens, 2019).

This belief in turn underpins a broad suite of policies offering preferential tax treatment for small businesses—including longstanding exemptions from payroll tax, less onerous arrangements for remitting the goods and services tax (GST), discounts on personal income tax payable (for unincorporated small businesses), exemptions (in prescribed circumstances) from capital gains tax and, since 2015, upfront tax-deductibility of capital investments, and (for incorporated small businesses) a lower rate of company income tax—as well as a wide range of grants and subsidies, free advice programs and other forms of support.

What is extraordinary about this ‘engine room’ doctrine is that it is upheld by so many, with such devotion, despite the complete absence of any evidence for it.

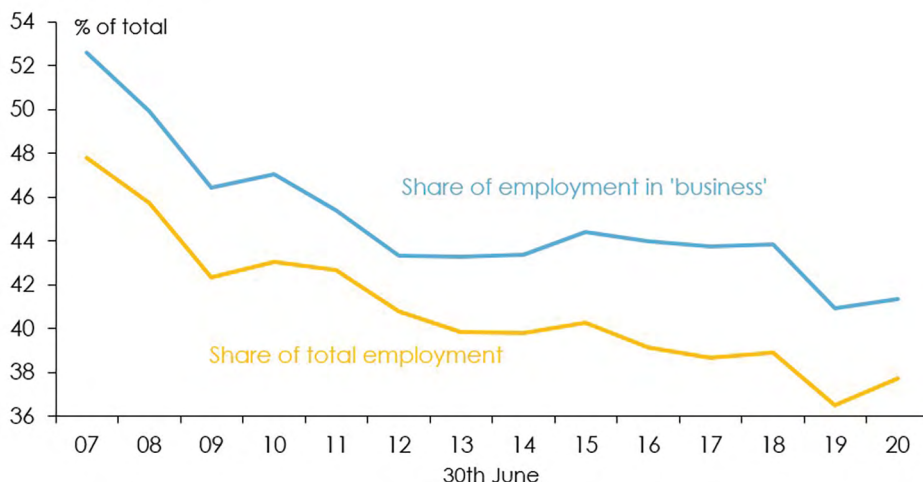
## Employment

Advocates often point to the large number of people who work for small businesses. According to ABS’s most recent count, that is 4.67 million people as at the end of June 2020 (ABS, 2021c). It is equivalent to 37.7 per cent of total employment or 41.3 per cent of employment in businesses of all sizes.

What is far less often pointed out is that this number—4.67 million—is smaller (in absolute terms) than it has been in all but four of the past 13 years (2009, 2012, 2013 and 2014). At no stage in the past 13 years have more Australians been employed in small businesses than in June 2007. While many individual small businesses *have* created jobs during this period, small business *in aggregate* has not created a single job, on net, since before the onset of the Global Financial Crisis (GFC). On the contrary, employment in small businesses has declined by 6.3 per cent since then.

As a proportion of total employment, employment in small businesses has declined from 47.8 per cent in June 2007 to 37.7 per cent in June 2020 (Figure 1).

As a proportion of jobs in ‘Australian industry’—which, in the ABS publication from which these figures are derived, excludes the finance, insurance and superannuation fund sectors—employment in small businesses has fallen from 52.6 per cent to 41.3 per cent over this period.



**Figure 1. Employment in small businesses as a share of total employment**

Note: 'Business' employment is as defined in ABS (2021c)—in particular, it excludes employment in the finance, insurance and superannuation sectors. 'Small businesses' are those with fewer than 20 employees.

Source: ABS (2021c).

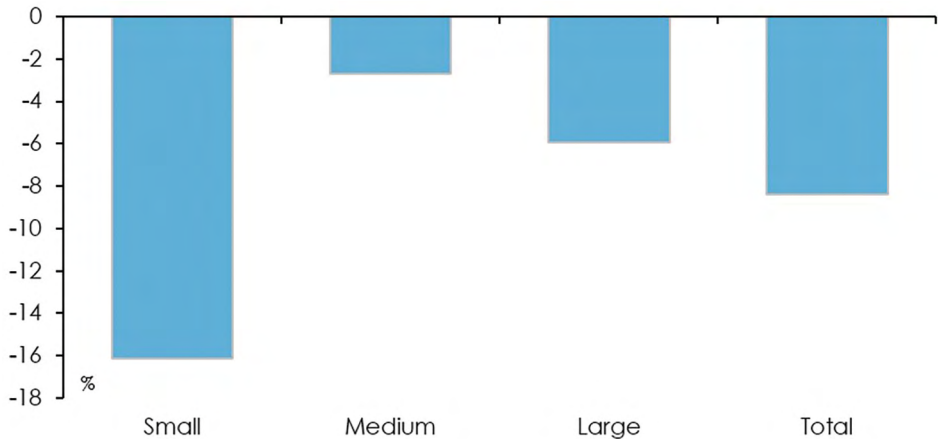
By contrast, employment in medium-sized businesses has increased by 46.4 per cent since June 2007, while employment in large businesses has increased by 48.4 per cent.

This is even though most of these businesses (and certainly all the large ones) would have had to pay payroll tax, and very few would have benefited from the reductions in the rate of company tax since 2015. Indeed, even over the period 2015–20, employment in small businesses has fallen by 1.1 per cent, while employment in medium-sized and large businesses has grown by 10.4 per cent and 13.2 per cent, respectively.

## Investment

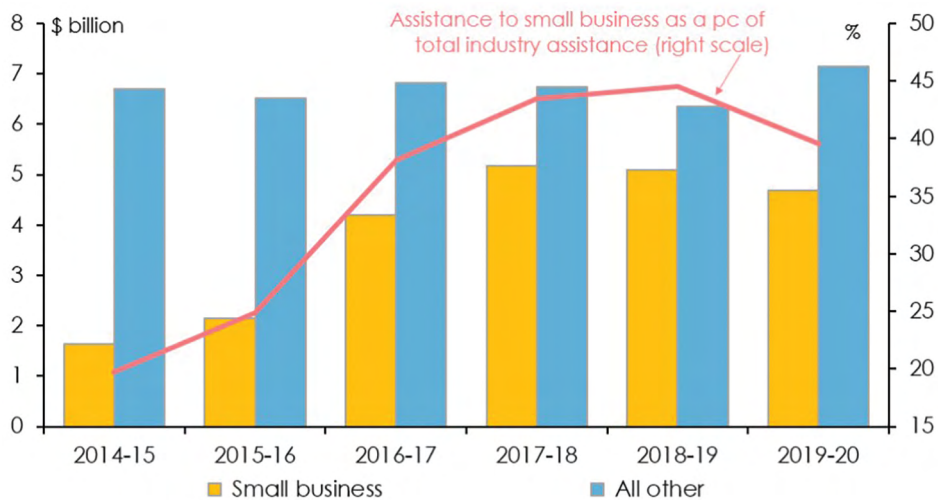
Nor has the preferential tax treatment for business investment accorded to small businesses through the 'instant asset write-off' introduced in the 2015–16 budget done anything to enhance capital expenditure by small businesses. Gross fixed capital expenditure by small businesses fell by 16.1 per cent between 2014–15 (the year before the introduction of the 'instant asset write-off') and 2018–19 (the year before the onset of the Covid-19 pandemic)—a much larger decline than that in capital expenditure by medium-sized businesses (2.7 per cent) and large businesses (6.0 per cent) over the same period (Figure 2).

The decline in the shares of both employment and investment attributable to small business has occurred despite a near-trebling in the value of financial assistance to small businesses (in the form of tax concessions and cash payments) from the Commonwealth Government over the past five years (Figure 3).



**Figure 2. Change in gross fixed capital expenditure by business size, 2014–15 to 2018–19**

Source: ABS (2021c); additional data supplied on request.



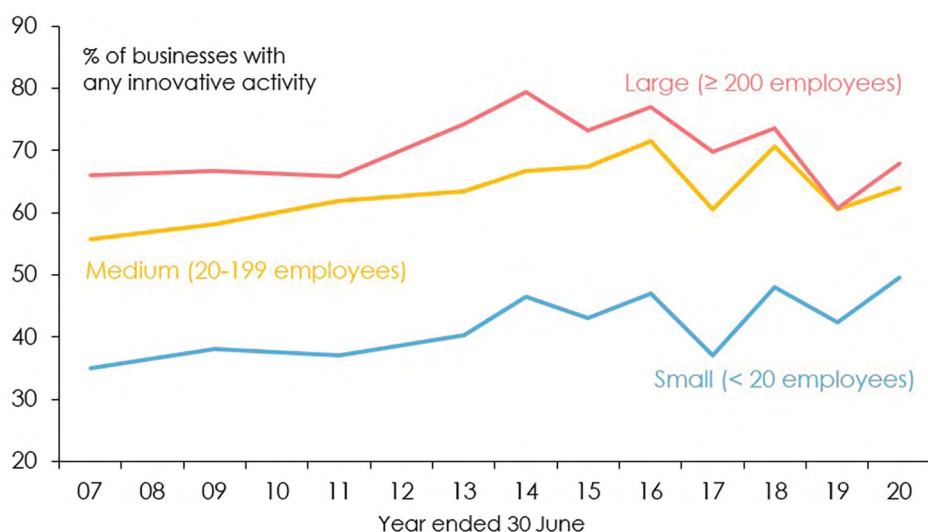
**Figure 3. Commonwealth Government budgetary assistance to small business compared with other forms of industry assistance, 2014–15 to 2019–20**

Sources: Productivity Commission (2021b); and author's calculations.

## Innovation

Another widely entrenched belief is that ‘innovation is in the DNA of small businesses’ (Eggleton, 2020). Most state governments provide financial assistance to small businesses specifically for the purpose of fostering innovation (see, for example, Chief Scientist and Engineer, 2021; Business Victoria, 2021; Kelly, 2020).

The reality, however, is that small businesses are typically much *less* innovative than medium-sized and large businesses. The ABS’s surveys of innovation activity in Australian businesses have consistently found that small businesses are less likely to engage in any form of innovative activity than medium-sized and large businesses (Figure 4).



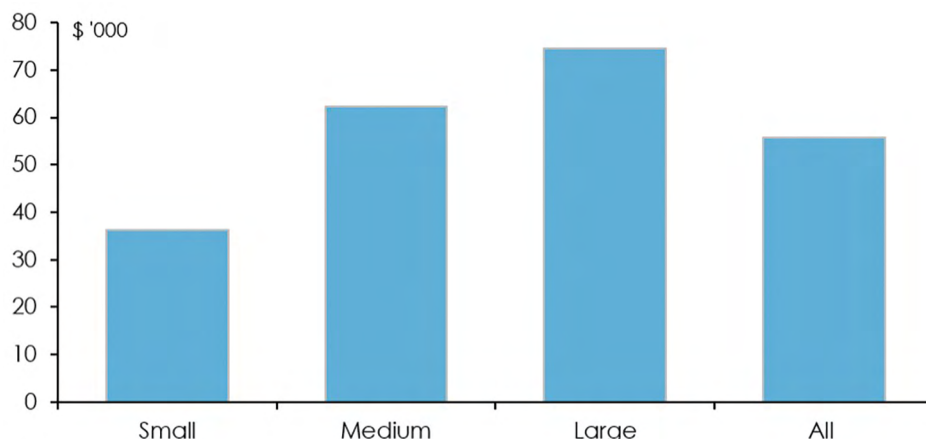
**Figure 4. Innovation activity by business size, 2006–07 to 2019–20**

Note: Surveys were not conducted in 2007–08, 2009–10 and 2011–12.

Sources: ABS (2018a, 2018b, 2021d).

## Wages

In circumstances where the Reserve Bank has been warning for some years that ‘slow wages growth is diminishing our shared sense of prosperity’ (Lowe 2018a) and is ‘one of the reasons why some in our community question whether they are benefiting from our economic success’ (Lowe 2018b), it is also relevant that small businesses typically pay lower wages to their employees than medium-sized and larger ones, as suggested by the data shown in Figure 5.



**Figure 5. Apparent average annual wage or salary by size of business, 2019–20**

Note: ‘Average annual wage or salary’ is obtained by dividing total wages and salaries paid by each category of business in 2019–20 by the average number of employees as at 30 June 2019 and 30 June 2020. In the absence of relevant data, no allowance is made for differences in the proportion of full or part-time employment between businesses of different size.

Sources: ABS (2021c); and author’s calculations.

In 2019–20, small businesses paid their employees an average of almost \$19,500 or 35 per cent less than the annual average wage or salary paid by all businesses, whereas medium-sized businesses paid their employees an average of \$6,500 or 11.75 per cent more than the average for all businesses and large businesses paid their employees almost \$19,000 or 34 per cent more than the average for all businesses.<sup>3</sup>

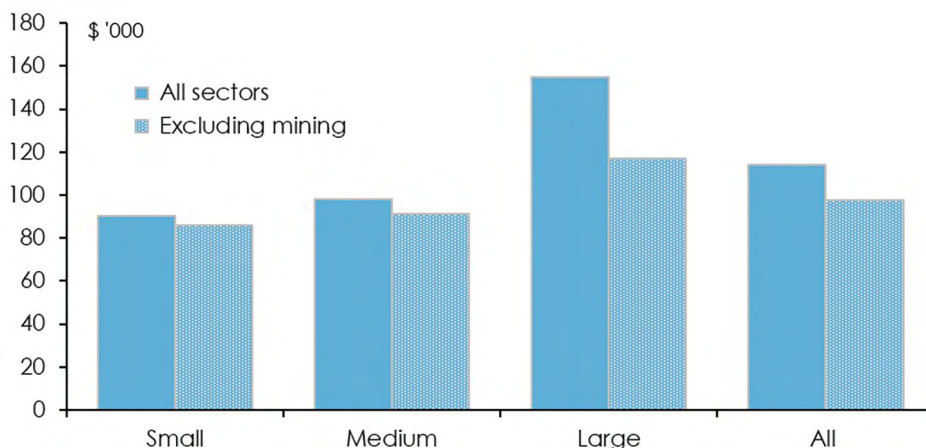
At face value, this would suggest that, had the share of employment in small businesses not fallen as it has over the past five years, wages growth may have been even slower than it was.

## Productivity

Another serious long-term challenge confronting the Australian economy is the slowing in the growth rate of labour productivity over the past decade (Productivity Commission, 2021a, pp. 44–50; The Treasury, 2021b, pp. 45–56).

Labour productivity appears to be lower, on average, in small businesses than in medium-sized and large ones. Estimates compiled by the ABS (2021c) suggest that gross valued added (GVA) per person employed in small business was almost \$24,000 or 21 per cent below the average for all businesses in 2019–20.

<sup>3</sup> These differences may be exaggerated to the extent that there is a greater proportion of employees in small businesses than in medium-sized or large businesses, but to the best of the author’s knowledge there are no data indicating whether that is the case or, if so, the extent to which it is.



**Figure 6. Gross value added per person employed, by size of business, 2019–20**

Note: 'Gross value added per person employed' is obtained by dividing total gross value added by each category of business in 2019–20 by the average number of employees as at 30 June 2019 and 30 June 2020.

Sources: ABS (2021c); and author's calculations.

GVA per person employed in medium-sized businesses was about \$16,000 or 14 per cent below the average for all businesses, and GVA per person employed in large businesses was nearly \$41,000 or 36 per cent above the average for all businesses (Figure 6).

Even if the mining sector (which, being highly capital-intensive, has much higher labour productivity than other sectors of the economy) is excluded, GVA per person employed in small business in 2019–20 was 12 per cent below the average for all non-mining businesses, whereas in medium-sized businesses, it was only 6.5 per cent below the all non-mining business average, and in large businesses it was 20 per cent above that average.

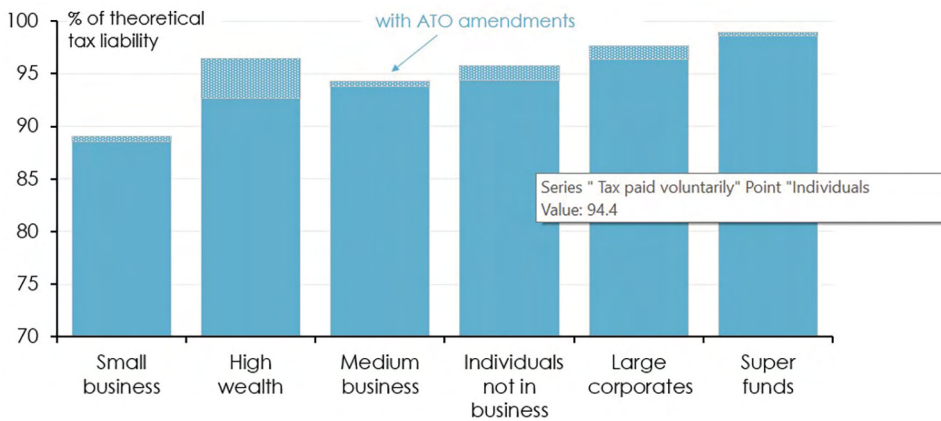
Again, this suggests that had the various measures of assistance to small business succeeded in their presumed objective of arresting the long-term decline in small businesses' overall share of employment and economic activity, the growth rate of labour productivity would have been even slower than it was.

The obvious conclusion from the foregoing is that the widely (if not almost universally) held belief that small business is the 'engine room of the economy' is simply *wrong*—as is the corollary that increased assistance to small businesses (in the form of tax preferences, grants and subsidies) *simply because they are small* and for no other reason is a good way of boosting employment, investment, innovation and economic growth more broadly. That widely held view is, likewise, completely without foundation.

## Tax avoidance and evasion

One thing that small business *is* very good at is not paying its ‘fair share’ of tax.

According to estimates compiled by the Australian Taxation Office’s ‘Tax Gap’ program (ATO, 2020), small businesses (which it defines as those with income of up to \$10 million a year) paid only 88.5 per cent of the personal and company income tax they ‘should’ have paid if they had fully complied with the tax law (as the ATO interprets it) in 2017–18. This is larger than for any of the other groups of taxpayers for which the ATO estimates a ‘tax gap’. In particular, it is less than that for ‘high-wealth’ individuals, who, according to the ATO, paid 92.6 per cent of the tax they would have paid given ‘full compliance’, and less than that for large corporations, who paid 96.3 per cent of the tax the ATO estimates would have represented ‘full compliance’ in 2017–18—the latest year for which these estimates are available (Figure 7).



**Figure 7. Share of theoretical tax liability paid ‘voluntarily’ and after ATO amendments, by category of taxpayer, 2017–18**

Notes: ‘Small’ businesses are those with income of up to \$10 million; medium businesses are those with income of up to \$250 million; and large corporations are those with income of more than \$250 million. ‘High-wealth’ individuals are those who (with associates) control wealth of more than \$50 million.

Source: ATO (2020).

The ATO’s numbers indicate that small businesses accounted for 44 per cent of the aggregate ‘tax gap’ between what it collected from personal and company income tax in 2017–18 and what it estimated it would have collected given full compliance with the tax laws by all taxpayers. By contrast, large corporations and high-wealth individuals (to whom the ATO devotes a lot more compliance attention) accounted for only 15 per cent and 3.5 per cent of the total income ‘tax gap’ in 2017–18.



Again, this is starkly at odds with the popular perception that small businesses are unfairly persecuted by the ATO (Ferguson et al., 2018), and that all Australia's fiscal problems would disappear overnight if only 'the top end of town' paid its 'fair share' of tax.

## Small business policies during Covid-19

However, while the foregoing suggests the 'fetishisation' of small business across a wide range of policy instruments over the past decade has been completely misplaced, it does not necessarily mean that it was wrong for small businesses to have been a major focus of government responses to the Covid-19 pandemic.

Small businesses account for a disproportionately large share of most of the sectors that were hardest hit by the restrictions imposed to suppress Covid-19—in particular, accommodation and food services; transport, postal and warehousing; rental, hiring and real estate services; 'other services'; and construction.

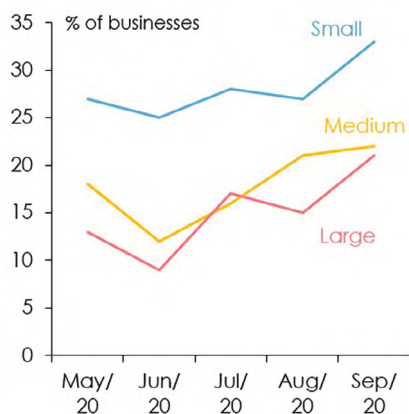
All these sectors experienced larger contractions (in real gross value added) in the June quarter of 2020 than the economy as a whole, and small businesses account for a larger share of employment and sales and service income in these sectors than they do of the economy as a whole (ABS, 2021c).

And although a higher proportion of small businesses than of medium-sized or large ones was able to continue operating 'as normal', at least during the first six months of the pandemic (Figure 8), small businesses were more financially vulnerable than medium-sized or large ones, according to surveys conducted by the ABS (Figure 9), and thus at greater risk of not surviving extended lockdowns.

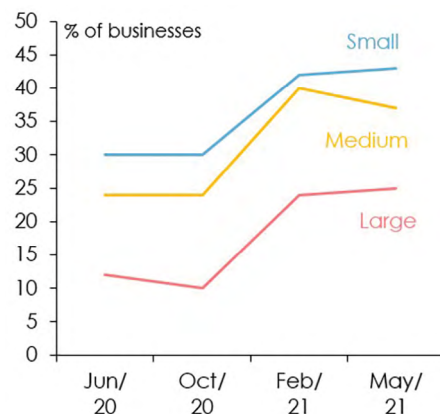
Had governments not provided the extensive support for small businesses that they did, it seems highly probable the economy would have contracted by more and the unemployment rate would have risen by more than they did during the June quarter of 2020—and the ensuing recovery would have been weaker than it turned out to be.

But that support came at a considerable cost. Apart from JobKeeper, the most expensive component of the Commonwealth Government's fiscal policy response to Covid-19 was the 'cash flow boost' scheme, which provided small and medium-sized businesses (and not-for-profits) with annual turnovers of up to \$50 million with credits equal to the amount of PAYG withholding tax instalments deducted from their employees' pay during the March and June quarters of 2020 (from a minimum of \$20,000, even if their employee PAYG withholdings were less than that, up to a maximum of \$100,000).

More than 800,000 small businesses received credits totalling almost \$32 billion under this scheme (Frydenberg & Cormann, 2020, p. 275)—with more than one-third of the payments going to businesses in the professional, scientific and technical services, and the construction sector.



**Figure 8. Businesses operating 'as normal' during Covid-19 (percentage of total)**



**Figure 9. Businesses with cash insufficient to sustain operations for three months**

Sources: ABS (2020b, 2021b, and earlier issues of these publications).

Other Commonwealth Government budgetary assistance to small businesses included:

- wage subsidies for apprentices and trainees employed by small and medium-sized businesses, at a cost of \$2.4 billion in 2019–20
- an increase in the annual turnover threshold used to determine eligibility for a range of small business tax concessions (providing for the deductibility of certain start-up expenses, fringe benefits tax exemptions for carparking and portable electronic devices provided to employees, and a range of other administrative concessions), from \$10 million to \$50 million, at a cost (in terms of revenue forgone) of \$105 million over four years
- \$7 million to support mental health programs directed to small business owners and their financial advisors
- \$7 million over two years to 'provide more support to small and medium businesses impacted by the Covid-19 pandemic' through the business.gov.au Contact Centre
- \$5 million over two years for a 'national campaign to encourage Australians to support their local small businesses' (Frydenberg & Cormann, 2020, pp. 16, 114, 229, 256).

State and territory governments also provided a range of assistance measures to small businesses through their budgets, including payroll tax relief, rebates of licence and other fees, grants and concessional loan schemes (see, for example, Service NSW, 2021; Business Queensland, 2021; Business Tasmania, 2021).

In addition to measures funded by the Commonwealth Government, support for small businesses was also provided through:

- guarantees of 50 per cent of new loans (up to a total of \$40 billion) to small and medium-sized businesses (The Treasury, 2021b)
- the Reserve Bank's Term Funding Facility, which provided three-year fixed-rate funding of \$188 billion to financial institutions, initially at an interest rate of 0.25 per cent and subsequently (from November 2020 through to June 2021) at 0.10 per cent, on terms intended to incentivise additional lending (by them) to small and medium-sized businesses (Alston et al., 2020; RBA, 2021)
- a 'temporary exemption' from responsible lending obligations for lenders providing credit to small business customers, to 'help small business get access to credit quickly and efficiently' (The Treasury, 2021b)
- suspension until the end of 2020 of the liabilities facing company directors under the Corporations Law for trading while insolvent, a temporary increase in the threshold at which creditors can initiate bankruptcy proceedings or issue a statutory demand (for repayment of a debt), and an increase in the time allowed to respond to such demands (these applied to all businesses) (ASIC, 2020)
- loan repayment deferral arrangements provided by banks and other lenders (at the height of which, in May 2020, repayments on almost 18 per cent of all loans to small and medium-sized businesses had been deferred) (APRA, 2021)
- temporary changes to state and territory laws governing commercial leases to prevent business tenants from evictions due to non-payment of rent (for example, Small Business Commissioner, 2021).

As necessary as these forms of assistance to small businesses may have been during the pandemic, it will be important to ensure they do not become entrenched as permanent features of the policy landscape whenever Australia finally emerges from the need to impose severe restrictions on economic activity to manage the health risks posed by Covid-19.

By design, these measures have had the effect of preserving existing small businesses and their employees' jobs.

While that is understandable in the context of the pandemic, it should not remain a policy objective once the pandemic has passed.

As noted earlier, one of the major challenges facing the Australian economy (albeit one not unique to Australia) is the slowing rate of growth in labour (and multifactor) productivity.

A growing body of research supports the hypothesis that a major reason for this slowing in productivity growth is a decline in ‘economic dynamism’—that is, the rate at which factors of production (labour and capital) move from one use to another—for example, by workers changing jobs, firms changing management or ownership and firms exiting and entering product markets (Quinn, 2019; Andrews & Hansell, 2019; Brennan, 2020; Hambur, 2021).

Two of the most important channels through which improvements in productivity ‘happen’ are the migration of labour and capital from lower to higher-productivity firms within the same industry and from lower to higher-productivity industries.

Policies that serve to prolong the existence of small businesses—which, as noted earlier, have lower average levels of labour productivity than medium-sized and large businesses—simply because they are small, and for no other reason (which is the basis of most existing forms of assistance to and preference for small businesses), unavoidably have the effect of slowing the rate at which factors of production move from lower to higher-productivity uses within individual industries, and across the economy as a whole.

That effect is arguably magnified during extended periods of ultra-low interest rates, which seem likely to prevail in the aftermath of Covid-19, providing succour to so-called zombie firms (McGowan et al., 2017; Banerjee & Hoffman 2018).

## The real engine room

Ideally, existing schemes of preferential tax treatment and other forms of assistance to small businesses, simply because they are small and for no other reason, should be scrapped entirely and replaced with preferential tax treatment for *new* businesses.

There are at least five reasons for this:

1. New businesses are more likely to be started in sectors of the economy with more sustainable economic prospects, whereas small businesses are typically in the sector they are in because that is the sector they were in when their founders started them.
2. New businesses are much more likely than small businesses to create jobs; one recent study showed that firms less than two years old created 1.44 million full-time-equivalent jobs in Australia between 2006 and 2011, while firms three years or older shed around 400,000 jobs over the same period (Hendrickson et al., 2015).

3. New businesses are much more likely than small ones to innovate (Huerger & Jaumandreu, 2004); indeed, the desire to introduce a new product or service, or to produce an existing product or service in a new way, is one of the principal motives for starting a new business.
4. Since there is no way a new business can prevent itself from eventually becoming an older one, tax preferences and other forms of assistance for new businesses are not subject to the perverse incentives associated with preferences for and assistance to small businesses to cease growing just short of the point at which they are no longer eligible for those preferences or assistance.
5. Although almost all new businesses are inevitably small, most small businesses are *not* new, so the budgetary cost of measures aimed at assisting new businesses (whether in terms of revenue forgone or cash outlays) will be significantly less than those directed towards small businesses simply because they are small, as a result of which tax preferences or other forms of assistance to new businesses could be much more generous than the existing preferences and assistance to small business (and hence more likely to achieve their intended result).

There would, of course, need to be appropriate provisions to prevent businesses from continuing to access preferences intended for new businesses through 'rebirthing'. But both the ATO (2021) and the Australian Securities and Investments Commission (ASIC, 2021) already have established protocols to monitor and prevent 'phoenixing'<sup>4</sup> that could also be used to deter and prevent tax avoidance and evasion in this area.

## Conclusion

The importance to Australia's near-term economic prospects of lifting wages growth (as repeatedly stressed by the Reserve Bank), and to Australia's medium and longer-term economic prospects of lifting productivity growth (as stressed *inter alia* in the most recent *Intergenerational Report*), suggest that, as Australia emerges from the Covid-19 pandemic, it would be both timely and appropriate to reexamine the shibboleths that have long informed policies towards small business under governments of all political persuasions.

In particular, the fervently and almost universally held belief that small business is the engine room or backbone of the Australian economy—and that, as a consequence, small business operators should pay less tax on any given amount of income than

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<sup>4</sup> The term used to describe a situation where a new company is created to continue the business of an existing company that has been deliberately liquidated to avoid paying outstanding company debts, which can include taxes, trade creditors and employee entitlements.

others who earn the same amount of income in different ways, or should enjoy preferential access to other forms of assistance through the tax system, grants, subsidies or ‘free advice’—is without any empirical foundation.

Australia’s economic prospects would be brighter if government policies in this area were more firmly grounded in reality.

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# The Reserve Bank of Australia's pandemic response and the New Keynesian trap

Stephen Kirchner<sup>1</sup>

## Abstract

The Reserve Bank of Australia (RBA) has been overly wedded to a New Keynesian conception of the monetary policy transmission mechanism, in which the official cash rate is seen as the main instrument for policy implementation and the main measure of the stance of monetary policy. The 'effective lower bound' on the official cash rate became an artificial, self-imposed constraint on the RBA's initial response to the Covid-19 pandemic. By contrast, a monetarist conception of the monetary transmission mechanism would have encouraged more rapid adoption of alternative operating instruments.

Reserve Bank of Australia Governor Phillip Lowe characterised the Covid-19 pandemic as the worst shock to the Australian economy in 100 years. Yet the bank's initial response to the pandemic in March 2020 was limited, seeking to exhaust the possibilities of its pre-pandemic operating instruments. While Australia's fiscal policy response was in line with that of other advanced economies, its monetary response, measured by the expansion in its balance sheet, lagged that of its G10 peers. Only in November 2020 did the RBA resort to alternative operating instruments to play catch-up with other central banks. In the intervening period, Australia's fiscal and monetary policy mix saw the Australian dollar outperform its G10 peers—a classic case of open-economy crowding-out.

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This article will argue that the RBA was overly wedded to a New Keynesian conception of the monetary policy transmission mechanism, in which the official cash rate is seen as the main instrument for policy implementation and the main measure of the stance of monetary policy. The ‘effective lower bound’ on the official cash rate became an artificial, self-imposed constraint on the RBA’s initial pandemic response. In contrast, a monetarist conception of the monetary transmission mechanism would have encouraged more rapid adoption of alternative operating instruments.

Before the pandemic, Governor Lowe signalled his reluctance to embrace alternative operating instruments, questioned their effectiveness and hinted vaguely at unwelcome costs associated with easier monetary policy (Lowe, 2019). Both before and during the pandemic, Lowe called on federal and state governments to do more with fiscal and structural policy, implicitly conceding that macroeconomic policy settings were inadequate, even though the RBA itself had scope to do more. The RBA eventually embraced quantitative easing (QE), from November 2020, with an aggressive program of longer-duration outright Commonwealth and semi-government bond purchases. The RBA conceded that its failure to expand its balance sheet as had other central banks had put upward pressure on the exchange rate.

While the RBA has committed to maintaining what it sees as accommodative policy settings until its inflation and full employment objectives are met, this commitment to the duration of accommodation has been allowed to substitute for the more aggressive policy action that would see the RBA meet its objectives more quickly. Extended periods of low interest rates are indicative not of ‘easy’ monetary policy, but of a monetary policy that is too tight.

This article concludes with suggestions for improving the performance of Australian monetary policy—in particular, a nominal income-level target informed by a monetarist conception of monetary policy transmission.

## **Pre-pandemic monetary policy and the ‘Lowe gap’**

The RBA has failed consistently to meet its inflation target since the end of 2014. While small inflation target misses in any given quarter are unlikely to be consequential, a persistent multiyear miss gives rise to long-run drift in the price level relative to expectations conditioned on the inflation target. The long-run drift in the price level means the expectations for nominal income that inform long-term nominal contracting have been disappointed.

The 'Lowe gap' is defined as the excess of a 'trimmed mean' measure of the (log) CPI over a counterfactual inflation target—consistent path for the period since Lowe became RBA Governor in the third quarter of 2016.<sup>2</sup> Note that because the RBA was undershooting the inflation target before then, this starting point understates the long-run drift in the price level due to the RBA's inflation target misses.

In the first quarter of 2020, the Lowe gap was  $-3.9$  per cent. In the period since, it has widened to  $-4.4$  per cent, as of the second quarter 2021. Note that even if the RBA were to return inflation to the target range—something it has pencilled in from the middle of 2023—the price level will be permanently lower relative to a target-consistent counterfactual growth path. This is the sort of permanent nominal shock that flexible price-level targeting—what the US Federal Reserve calls average inflation targeting—seeks to offset. Targeting a forecast for the level of nominal GDP aims to avoid the long-run drift in nominal outcomes that can occur under the RBA's let-by-gones-be-by-gones approach to inflation targeting (Kirchner, 2021).

At its February 2020 meeting, just before the onset of the pandemic, the RBA Board decided to leave its official cash rate target unchanged at 0.75 per cent. The headline consumer price index inflation rate for the previous quarter was running at 1.8 per cent. Inflation had been below the target on most measures since the end of 2014 and was expected to remain so over the bank's two-year forecast period. The unemployment rate for December 2019 was 5.1 per cent—virtually unchanged from a year earlier and above the RBA's estimate of the full employment rate of around 4.5 per cent, having never recovered the lows around 4 per cent seen before the 2008 Global Financial Crisis. The RBA Governor told a parliamentary committee a few days later 'there is a risk that further cuts in interest rates could encourage further borrowing. If people borrow more, then perhaps down the track we have problems' (Lowe, 2020a). Lowe's remarks were typical of numerous statements he made since becoming governor that explicitly traded-off the inflation target and full employment objectives against apprehended financial stability risks (Kirchner, 2018).

## Monetary policy during the pandemic

Within weeks of Governor Lowe's testimony, the Australian and world economies suffered a massive shock as the Covid-19 virus became a global pandemic. The RBA's initial response to the pandemic shock was to lower the official cash rate target by 50 basis points in two moves over the course of March 2020, to 0.25 per

<sup>2</sup> See Stephen Kirchner (2021). The Widening Lowe Gap. *Institutional Economics*, 29 July, [stephenkirchner.substack.com/p/the-widening-low-gap](https://stephenkirchner.substack.com/p/the-widening-low-gap).

cent—a rate it had previously argued was an effective lower bound (ELB) given the floor of the usual 25-basis-point corridor around the cash rate target would then be 0 per cent (Lowe, 2020b).

The reduction in the target cash rate was accompanied by a commitment (or forward guidance) not to raise the target ‘until progress is being made’ to restoring full employment and returning inflation to the target. This was little different to the RBA’s previous, pre-pandemic guidance, which was already committed to keeping interest rates ‘low’ for an extended period based on the same criteria. The ‘progress being made’ commitment was ambiguous, although stronger than the guidance usually offered by the bank. Any prospective improvement in the economy could be interpreted as ‘progress’ and see markets pricing in a premature increase in the cash rate, even in the absence of a change in the target rate.

The RBA reinforced this commitment by undertaking to intervene in the bond market to keep the three-year bond yield close to 0.25 per cent, compared with a then prevailing market yield of around 0.50 per cent—an approach sometimes dubbed ‘yield curve control’ (YCC) or ‘yield curve targeting’ (YCT). By offering to buy government bonds at an implied target yield, the target effectively became the market yield, although Governor Lowe indicated the intervention was not a strong peg like that normally applied to the cash rate, allowing some flexibility.

The aim of the yield curve target was to hold down the front and middle parts of the yield curve that serve as the risk-free benchmark for most retail and wholesale lending rates in Australia. It was complemented by a Term Funding Facility (TFF) designed to ensure banks could borrow at this rate. If the RBA’s commitment to hold the cash rate at 0.25 per cent ‘for some years’ were fully credible then intervention on the three-year bond would be unnecessary, and that mostly proved to be the case. After some initial outright bond purchases, the RBA did not intervene in the secondary bond market between early May and early August 2020, when three-year yields rose modestly, triggering renewed intervention. Governor Lowe explicitly nominated three years as the likely time frame for keeping the cash rate at 0.25 per cent, reinforcing the loose peg on the three-year bond. Longer-term interest rates were still largely market-determined, although the RBA intervened heavily in the bond market in March 2020 to maintain liquidity amid a global bond market sell-off as investors sought to raise cash.

The RBA’s preference for YCC reflected its aversion to both negative interest rates and major balance sheet expansion via large-scale asset purchases—the two main policy instruments that could have been employed in addition to forward guidance and instead of a yield target. Governor Lowe all but ruled out both options in a speech in November 2019 (Lowe, 2019), saying both options were very unlikely, raising the reputational cost to reversing that position during the pandemic. The RBA views monetary policy transmission largely in terms of the risk-free interest rate structure

(and, by extension, the exchange rate) rather than in terms of quantities such as real money balances, although its own research shows a correlation between broad money aggregates and nominal GDP (Doherty et al., 2018). Having lowered the cash rate to what it viewed as the ELB and committed to keeping short-term rates at this level for an extended period, the RBA considered it had done enough to respond to the pandemic shock, but this dramatically underestimated the possibilities for monetary policy, particularly in lowering the exchange rate, which immediately appreciated under the March 2020 policy framework.

This left Australia's macroeconomic response to the pandemic heavily skewed towards fiscal policy—a shift the RBA actively encouraged by calling on the Commonwealth and states to increase spending over and above an already large fiscal policy response. This was a suboptimal macroeconomic policy mix for a small, open economy, with Australia's relatively high long-term interest rates attracting foreign capital inflows, appreciating the exchange rate and crowding out net exports. While the yield curve target held down the short end of the yield curve, Australia still enjoyed a long-term yield premium of around 100 basis points over other AAA-rated sovereign nations and economies on the euro area periphery. Both short and long yields have a role in exchange rate determination.

As the pandemic downturn deepened and the exchange rate appreciated, the RBA Board publicly canvassed its options for doing more. It adapted its forward guidance in October 2020 to say that the official cash rate would only be increased if actual inflation were in the target range (rather than just being forecast in the range) and the unemployment rate were consistent with inflation remaining within that range, which the RBA had previously identified as a rate of around 4.5 per cent. It also argued that its financial stability concerns had shifted to mitigating the effects on the financial system of the downturn in the economy, in contrast to its pre-pandemic preoccupation with risks arising from increased household leverage. Oddly, this significant change in the RBA's forward guidance was made at the end of a speech to an investment bank conference rather than as a statement after a board meeting (Lowe, 2020c).

At its November 2020 meeting, the RBA Board announced a further lowering in the official cash rate target, to 0.10 per cent. The TFF rate and three-year bond yield target were also lowered to 0.10 per cent, while the rate on exchange settlement account (ESA) balances was lowered to 0 per cent, presumably with a view to encouraging financial institutions to increase lending or purchase other assets with their ESA balances. At the same time, the RBA announced a \$100 billion bond-buying program over the next six months. The program recognised that expansion of the RBA's balance sheet had lagged that of other central banks and this had put upward pressure on the exchange rate. The RBA argued that the reason it had not acted earlier was that pandemic lockdowns would have reduced the traction

of monetary policy over the economy, although this concern had not previously been mentioned by the RBA as a constraint on the effectiveness of monetary policy, making it sound like an *ex post* rationalisation of previous policy inaction.

Together with the October change in forward guidance, the RBA's actions in November 2020 were welcome recognition that its earlier pandemic response had been inadequate. It also demonstrated that 0.25 per cent was not an ELB for the official cash rate or the contribution monetary policy could make to stabilising the economy. The RBA could have employed negative interest rates as either its official cash rate target or for the rate paid on ESA balances.

At its February 2021 meeting, the RBA Board committed to an additional \$100 billion in bond purchases once the then extant bond-buying program was completed in April, of around \$5 billion per week. In evidence before the House of Representatives Standing Committee on Economics that month, Governor Lowe gave little indication that the RBA had given serious consideration to the size of the bond purchase program needed to realise its inflation target or contemplated the implications of the US Federal Reserve's shift to a flexible price-level target because of the Fed's long-term strategy review.

At the bank's July 2021 meeting, this rate of bond purchases was tapered to \$4 billion a week from September, but with no commitment to the overall size of the program and with a further review scheduled for November 2021. At the same time, the board decided not to roll forward its yield curve target from the April to the November 2024 bond, allowing the duration of the yield curve target to fade in line with the RBA's expectation of an eventual increase in the official cash rate sometime in 2024. The TFF also expired at the end of June 2021.

Governor Lowe's press conference following the RBA's recalibration of its policy settings in July 2021 was remarkable for the extent to which he took ownership of inflation and nominal wage outcomes. The RBA had previously noted weakness in the nominal side of the economy, but this was often discussed in a way that was disconnected from policy, as though low inflation was some exogenously imposed condition the RBA was having to contend with rather than a reflection of current and past monetary policy settings. On this occasion, however, Governor Lowe noted that the RBA was responsible for nominal outcomes. He conceded that, even before the pandemic, inflation and wages had been weak for 'too many years', and this was why the RBA was now looking to tighten policy to a schedule somewhat behind some other central banks (Lowe, 2020d).

Governor Lowe noted that the economy was transitioning from recovery to expansion, but monetary policy was still well short of achieving its goals. This only served to underscore how inadequate the bank's initial pandemic response was. The policy settings that were put in place in March 2020 were supposed to address



a downturn far more serious than the one that eventuated. Had the downturn been as severe as the RBA projected in its central case, much less its downside case, monetary policy settings would have been even more inadequate to the task.

The planned taper in bond purchases sent a strong signal the RBA wants and expects to exit QE. Had the run rate been kept at \$5 billion a week without a fixed program size or review date, the program would have been essentially open-ended and could even have been viewed as expansionary by markets. In his remarks following the July board meeting, Governor Lowe emphasised that the effect of QE was via the stock rather than the flow of bond purchases, but a reduction in the flow means a smaller expected stock, all else being equal, so that distinction does not in itself provide excuse to taper.

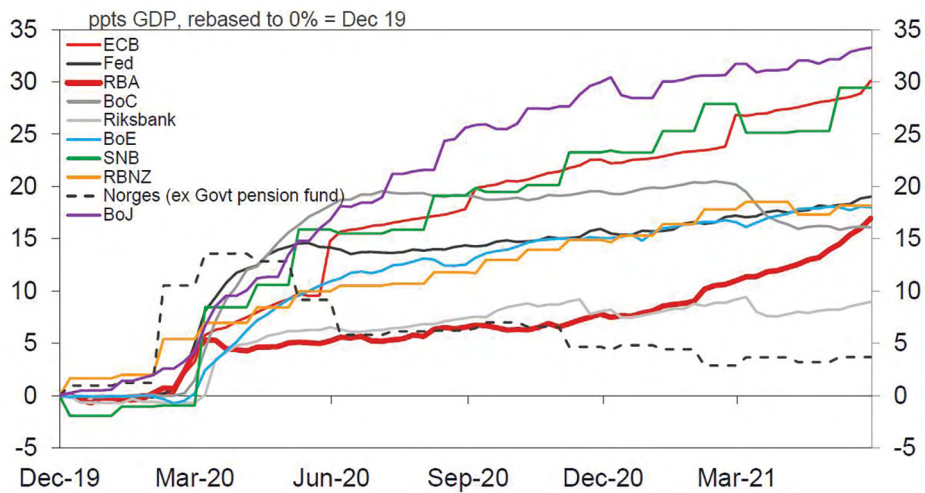
Lowe did emphasise that the outlook for bond purchases was symmetrical in the RBA's view and the program could be expanded in future, but the taper announcement undermined any symmetry in market expectations. The RBA was repeating the Fed's mistake following 2008 in trying to exit QE too early, which ultimately led to new QE episodes.

The RBA's commitment to hold the cash rate steady for three years was always subject to the loophole that both the yield target and QE could be abandoned ahead of any lift in the cash rate. This goes to the point long made by monetarists that the cash rate is a poor indicator of the stance of monetary policy. By the time the cash rate is raised, monetary conditions will have already been substantially tightened, not least through the expectations channel. Governor Lowe says the RBA is maintaining support until its threshold conditions for a lift in the cash rate are met, but the RBA effectively began tightening monetary policy in July 2021, not 2024, even though it remains well short of its targeted inflation and full employment goals.

## The RBA versus its G10 peers

The RBA's policy response can be compared with that of its G10 peers based on the expansion in its balance sheet relative to GDP. While the size of a central bank's balance sheet is not a perfect measure of the stance of monetary policy, it is nonetheless a reasonable proxy, especially when outright asset purchases explicitly designed to have an expansionary effect are the largest source of change in the balance sheet. Figure 1 shows how the RBA's balance sheet expansion lagged that of its peers, particularly in the critical period from March to November 2020, when the RBA mostly relied on its traditional operating framework to ease policy. Much of the initial expansion in the RBA's balance sheet in March 2020 was driven by the bank's liquidity operations to maintain orderly functioning of the bond market rather than a program of outright bond purchases designed to ease policy. There was also limited short-duration bond buying in support of the yield curve target between March

and May 2020. Even after the RBA adopted an aggressive bond-buying program in November 2020, it still struggled to match its peers, with convergence in balance sheet expansion with the likes of the Bank of Canada reflecting the tapering of their own programs as much as RBA balance sheet expansion.



**Figure 1. Change in central bank balance sheet assets (percentage of GDP)**

Sources: Bloomberg; McColough et al. (2021).

## The macroeconomic policy mix

Australia's fiscal policy response was one of the largest among advanced economies. Table 1 shows that Australia's fiscal expansion, as measured by government spending and tax measures, was behind only the United States, New Zealand and the United Kingdom.

**Table 1. Discretionary fiscal response to Covid-19: Advanced economies (percentage of GDP)**

Country	Additional spending and forgone revenue	Equity, loans, and guarantees
Denmark	3.5	15.7
Sweden	4.2	5.3
Finland	4.3	7.5
South Korea	4.5	10.1
Norway	7.4	4.5
Spain	7.6	14.4
Switzerland	7.8	6.2
Belgium	8.2	11.9

Country	Additional spending and forgone revenue	Equity, loans, and guarantees
France	9.6	15.2
Czech Republic	9.6	15.5
The Netherlands	10.3	8.1
Italy	10.9	35.3
Germany	13.64	27.8
Canada	15.9	4.0
United Kingdom	16.2	16.7
Japan	16.5	28.3
Australia	18.4	1.8
Singapore	18.4	4.7
New Zealand	19.3	1.6
United States	25.4	2.4

Source: IMF (2021).

There is an important difference in the exchange rate response to monetary and fiscal stimulus in small, open economies with floating exchange rates. While the exchange rate will amplify relative monetary expansion with a depreciation, it will offset relative fiscal expansion with an appreciation. The RBA's reluctance to embrace QE and its subsequent catch-up, together with a relatively large fiscal policy response, gave Australia a suboptimal macro-policy mix. To be clear, this is an argument for monetary policy to have done more, not necessarily for fiscal policy to have done less. Fiscal policy had a role to play in helping to keep the supply side of the economy intact—in particular, preserving matching capital in the labour market that would otherwise be lost in the absence of widespread wage subsidies.

In pre-pandemic remarks to The Australian National University's Crawford School, Governor Lowe showed he had little conviction in the exchange rate channel for monetary policy transmission in the context of a concerted monetary expansion by other central banks:

If everyone is easing then there is no exchange rate channel. We trade with one another, not with Mars. So if everyone is easing the effect you get from exchange rate depreciation isn't there so you don't get the stimulus you normally get from monetary easing ... It might be possible if you ease a bit more than others—you might get a bit extra growth—but that is a dangerous path to go down. (Cranston, 2021)

Lowe's remarks failed to consider the implications of a monetary expansion that was significantly smaller than that implemented by other countries. As Table 2 shows, the Australian dollar exchange rate experienced a broad-based appreciation from March 2020—indicative of a macroeconomic policy mix that was overly reliant on fiscal relative to monetary expansion. Not all this outperformance can be attributed to the macroeconomic policy mix. The outperformance was less pronounced against

the New Zealand dollar, with New Zealand having a similar experience to Australia in containing the pandemic, at least in 2020, but the Reserve Bank of New Zealand engaged in large-scale asset purchases much earlier and indicated a willingness to employ negative interest rates.

**Table 2. Australian dollar exchange rates versus G10 peers**

<b>AUD Exchange Rates versus G10 Peers: March 2020 = 1</b>								
	<b>AUDCAD</b>	<b>AUDUSD</b>	<b>AUDCHF</b>	<b>AUDEUR</b>	<b>AUDGBP</b>	<b>AUDJPY</b>	<b>AUDNZD</b>	<b>AUDTWI</b>
2020M03	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
2020M04	1.04	1.06	1.08	1.08	1.05	1.05	1.04	1.06
2020M05	1.05	1.08	1.08	1.07	1.08	1.07	1.04	1.07
2020M06	1.07	1.11	1.10	1.09	1.12	1.11	1.04	1.10
2020M07	1.11	1.17	1.10	1.08	1.10	1.13	1.05	1.13
2020M08	1.10	1.19	1.12	1.10	1.10	1.16	1.06	1.14
2020M09	1.09	1.15	1.10	1.08	1.11	1.12	1.05	1.11
2020M10	1.07	1.14	1.09	1.08	1.09	1.10	1.04	1.09
2020M11	1.10	1.20	1.13	1.10	1.11	1.15	1.02	1.12
2020M12	1.12	1.25	1.15	1.12	1.13	1.19	1.04	1.16
2021M01	1.12	1.24	1.15	1.13	1.11	1.20	1.04	1.15
2021M02	1.13	1.27	1.20	1.15	1.12	1.24	1.04	1.18
2021M03	1.09	1.23	1.21	1.16	1.11	1.26	1.06	1.17
2021M04	1.09	1.26	1.19	1.14	1.11	1.27	1.05	1.18
2021M05	1.06	1.25	1.17	1.13	1.09	1.27	1.04	1.16

Sources: Reserve Bank of Australia, Economic and Financial Statistics, Table F11; author's calculations.

## Conclusion

The Reserve Bank left Australia poorly positioned for a major adverse shock in its pre-pandemic conduct of monetary policy, underperforming on its inflation mandate since the end of 2014. As the 'effective lower bound' for the official cash rate loomed, Governor Lowe insisted that it was 'very unlikely' the RBA would need to resort to QE and hinted darkly at adverse effects from the use of alternative policy instruments, although these effects were never fully elaborated and did not reference academic research based on overseas experience. The RBA viewed the implementation and transmission of monetary policy almost exclusively in terms of the cash rate as a proxy for the risk-free interest rate and only belatedly acknowledged a role for quantitative policy instruments and channels for monetary transmission.

The RBA's initial response to the pandemic was limited, while it sought to push responsibility for macroeconomic stabilisation on to fiscal policy, but this left Australia with a suboptimal macroeconomic policy mix that put upward pressure on the exchange rate. Even after the RBA sought to correct its error in November 2020, its aggressive program of bond purchases left it lagging behind other central banks and struggling to meet its goals even as the Australian economy resumed its expansion after the pandemic downturn. If the economy had evolved in line with the RBA's initial base case, much less its downside scenario, the policy response would have been even more inadequate.

This episode highlights the danger of being overly wedded to a New Keynesian conception of monetary policy—in particular, giving too much weight to an overnight interest rate as the main instrument and transmission mechanism for policy and assuming the effective lower bound is a constraint on monetary policy effectiveness. These mistaken beliefs inhibited the RBA's initial policy response as it sought to implement policy within its traditional operating framework, even though that framework was already yielding suboptimal macroeconomic outcomes, even before the onset of the pandemic. In Kirchner (2021), I outline how a monetarist conception of monetary policy could be embedded in a reformed governance, transparency and operating framework for Australian monetary policy. A nominal income-level target would substitute for the inflation target, while a nominal GDP futures market would help inform monetary policymaking. This approach would alleviate both the incentive and the knowledge problems inherent in the current governance and operating framework that explain why the RBA has fallen systematically short of its mandate.

The RBA's systematic underperformance against its mandate has sparked calls for a review of monetary policy (Wright, 2021). The RBA's conduct of monetary policy has not been publicly reviewed during the entire history of inflation targeting since 1993, in sharp contrast to the regular public reviews of other central banks. The Treasurer should appoint a panel of international and local experts to review the RBA's performance and make recommendations for reform.

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# Which public debt should be paid off?

Jonathan Pincus<sup>1</sup>

## Abstract

This paper argues that the best reason for discouraging public debt is that such discouragement acts as a constraint on government spending.

Australian public debt has grown enormously since early 2020 and, unless fiscal settings change, the debt-to-GDP ratio is projected to remain around or above 40 per cent for decades. However, given risibly low interest rates, the burden of debt servicing has risen much more modestly.<sup>2</sup> To what extent should the recent debt be paid off?

Although there are other considerations, what debt should be paid off should depend on the nature of the public spending that gave rise to it. It is useful to bear in mind two polar cases. First, when the debt has financed the creation of an asset capable of generating a string of current surpluses from which to service the debt fully then those surpluses should be used to pay off debt as the asset deteriorates. The second case is when the debt was incurred to finance spending that generated no such productive asset; here, the case for retiring the debt is harder to make and generally fails.

I suggest that the large part of the debt triggered by the Covid-19 pandemic is close to the second pole: having not created a remunerative asset. The issue here is not whether this debt-financed spending was justified in full or in part; the brute facts

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1 University of Adelaide; jppincus@gmail.com. The author thanks Henry Ergas for ideas and comments.

2 'But the future value of national income is now higher, because interest rates have fallen much more than future economic growth has fallen. So if we used the correct measure here—net debt to the current value of future national income—that too wouldn't have budged all that much' (Richardson, 2021).

are that the debt has been incurred and it has not created an asset that could service the debt. The case for repaying it, therefore, is weak; we should regard the debt as though it were incurred in fighting a war; it should be rolled over at or before maturity, while allowing growth in real GDP and modest inflation to reduce it as a ratio to GDP.<sup>3</sup>

However, other non-remunerative public outlays should be funded out of taxation or other recurrent receipts, not debt, under the formerly fashionable rule of achieving recurrent balance over the economic cycle.

Much of the recent debt issue was quickly purchased by the Reserve Bank of Australia (RBA), monetising it. Some commentators have suggested the similar debt held by central banks be ‘written off’, which would severely damage the banks’ balance sheets and, most likely, lead to an offsetting capital injection from governments, negating the ‘write-off’ except in an accounting sense. If, in contrast, the RBA retains these government securities or their rolled-over replacements, and thereby receives interest payments, it is likely that future governments will demand larger ‘dividends’ from the RBA into the Consolidated Revenue Fund and spend them.

In response to the pandemic, the federal and state governments made what can be properly regarded as massive social insurance payouts for events well beyond the remit of private insurance;<sup>4</sup> they were emergency disaster payments, but ones outside the coverage of the preexisting Commonwealth–state agreements on disaster relief and other standing arrangements. The Commonwealth–state agreements cover idiosyncratic risks of disasters afflicting geographically limited regions or specific industries, including droughts, floods and cyclones, with the main purpose to relieve the affected state or territory governments of some of the costs of repairs to public infrastructure; but there are also emergency payments to individuals or businesses—some under preexisting arrangements (like the federal drought policy) or, quite commonly, *ad hoc*.

The novel characteristics of the Covid-19 payments are their scale and spread, reflecting a reasonable judgement that, without them, the damage to economic and social life would have been huge and hugely disruptive, and longer lasting. They were social insurance payments for the consequences of a largely uninsurable,

3 In 1946, Australia had a ratio of debt to GDP of 125 per cent, which by 1952 had fallen to 22 per cent. However, with no additions or redemptions of the 1946 debt, inflation alone would have caused a halving of the ratio and the rise in real GDP itself would have reduced it by more than one-quarter. Author’s calculations using Vamplew (1987, ANA 129, GF 14, PC 20). For the international post–World War I experience, see Dabla-Norris (2019).

4 However, in recent years, catastrophe bonds (or ‘cat bonds’) have been issued by private-sector entities (such as insurance companies), governments (such as Mexico’s) and international organisations (such as the International Monetary Fund and the World Health Organization) against localised catastrophes like earthquakes or hurricanes, and financed by investors seeking assets with returns uncorrelated with fixed interest bonds and equities (see [en.wikipedia.org/wiki/Catastrophe\\_bond](https://en.wikipedia.org/wiki/Catastrophe_bond)). The only issuer of pandemic bonds has been the International Bank for Reconstruction and Development in relation to Ebola (Fernyhough, 2020).



systemic, society-wide event. What are governments for, if they do not fulfil such implicit social insurance contracts, especially in Australia's fiscal circumstances of initially low public debt and very low interest rates?

This is not to imply that the spending was fully and perfectly justified in every aspect, but to assert its general characteristics.<sup>5</sup> What, then, to do about the debt? What should be the fiscal rules from now on?

In a blog entry, extracting from his forthcoming book entitled *Economic Consequences of the Pandemic*, the socialist and democrat John Quiggin wrote:

The bigger question is: in the absence of any apparent constraint on our ability to finance current spending with long-term debt, what policy approach should replace the now-discredited goals of balanced budgets and zero debt. The answer is to consider fiscal policy in terms of the need to match aggregate demand (public and private) with the productive capacity of the economy, taking account of the appropriate balance between consumption and investment.

This way of thinking about things comes naturally to old-school Keynesians.

This suggests a policy of matching the maturity of financing public spending with the effective duration of that spending. Current expenditure, such as transfer payments, should, under normal conditions, be financed by taxation. Long-term investments in physical, human or social capital should be financed by bonds with a maturity similar to that of the investment's lifetime. This approach is broadly consistent with the accrual accounting framework introduced in the 1990s, but left to languish as governments returned to a focus on misleading, but seemingly more comprehensible cash-based measures.

If this approach is adopted consistently, the long-term equilibrium will be one in which the ratio of public debt to GDP will be determined by the stock of public investments in physical and human capital. (Quiggin, 2020)

How would Quiggin's 'Keynesian maturity matching' have guided the government during 2020 and 2021? The massive spending was mostly not a Keynesian demand stimulus; the main economic impacts of the virus itself and of government regulatory responses and spontaneous private reactions were on the supply side, via huge cuts in 'non-essential' supply and prohibitions on catering to demand in accustomed face-to-face ways. Much of the governmental pandemic outlay was on support of the unemployed and underemployed workers and some owners of private enterprise. These were, as argued earlier, largely emergency welfare payments sparked by a systemic disaster, although some were 'investment' in reducing the

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<sup>5</sup> To a large extent, the spending was triggered by the public health policies of the states but would not have occurred without the pandemic.

hysteresis effect of periods of unemployment and in the longer-term viability of some private enterprises.<sup>6</sup> (The payments to the retired could be thought of as an attempt at demand stimulus, however, they seem to have been saved, at least temporarily.)

The emergency payments are also an investment in maintaining the trust of Australians in our democratic political system.

Therefore, Quiggin's rule for 'normal circumstances' would seem to require an instant and massive rise in tax receipts, which would be inconsistent with the teaching of 'old-school Keynesianism'.

Thus, it seems that Quiggin's rule applies to the budget minus the carryover of Covid-induced debt. The increase in debt did not finance an equivalent quantum of investment, as has just been argued. How to service it and how or whether to pay it off? Quiggin made no suggestion, but there is a hint in his mention of the achievement of 'a long-term equilibrium' where the quantum of debt is no more than the value of remunerative assets, which implies that the Covid debt will somehow disappear.

As for 'external' debt, there may be two precautionary arguments for paying some off, due first to a concern that the market rate of interest will rise, especially if inflation is sparked by the pervasive loose monetary policy; and, second, to provide a reservoir of overseas borrowing capacity for times when Australia's interests would be best served by a temporary deterioration in the balance of international trade. For the 'domestic' debt, account should also be taken of the extent to which it displaces private debt in private portfolios and, therefore, lessens the Australian supply of funds for real investment. For both kinds of debt, however, there is a public choice-like claim that paying it off sends a signal of disapproval of debt that is not matched by remunerative investment. None of these considerations offers a strong case for substantial or complete repayment.

I turn now to other-than-Covid debt. In suggesting restricting bond financing to 'long-term investments', to not push up the ratio of public debt to GDP, Quiggin presumably had in mind the first polar case outlined earlier—of investments that boost the fiscal capacity sufficiently to service their associated debt, rather than merely being spending that generates some benefits or revenues into the future.<sup>7</sup>

When interviewed for the Legislative Council's oral history project, Michael Egan volunteered that, during his decade as NSW Treasurer (April 1995 to January 2005):

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6 However, the payments to firms reduced the extent of 'normal' bankruptcies of so-called zombie firms.

7 Arithmetic says the ratio of debt to GDP does not rise if the growth rate of debt is no more than the growth rate of GDP. Even then, however, as Quiggin is clearly aware, the burden on GDP would rise if the relevant interest rates rose.

[The] most significant achievement was fiscal consolidation. We paid off the general government net debt, which I think left us in very good stead in the last decade ... One of the things we agreed to immediately on coming to government and then implemented was all the national competition reforms ... We corporatised all of our government businesses and we entered the national energy market. (Legislative Council, 2016)

Egan's aim—largely met—was to borrow only for 'remunerative' investments and otherwise balance the budget 'over the cycle'. I think, by remunerative, Egan meant investments that, without rises in tax rates or charges, generated a flow of additional public revenue sufficient to service the debt.

This constraint—restricting the issuance of new debt to 'remunerative' investments—Egan partly justified on the grounds that it accorded with the principle of competitive neutrality within the National Competition Policy, which required corporatised government businesses to generate operational profits sufficient to provide a 'competitive' return to equity, after servicing their debt (*principal as well as interest*)<sup>8</sup> and paying the equivalent of company and other taxes. With these conditions met, the operations placed no net fiscal burden on the public sector and caused no increase in uncovered debt; and the ordinary commercial accounts of the businesses provided the Treasurer with most of the necessary information.<sup>9</sup> All other spending was to be financed from general revenue—mostly state taxes and charges and federal grants.

Egan's fiscal framework differed interestingly from that proposed in 1924 by the NSW Valuer-General in justifying railway deficits at a time when railway finances dominated the state's public accounts:

The Income Tax Commissioner, the Land Tax Collector, the Excise Officer, each has his receipts swelled through railway facilities ... No department is entitled to look only at its parochial aspects—sprats must be cast to catch mackerel ... In the long run it is perfectly immaterial whether the Lands Department made a profit, or the Valuer General's Department made a profit, so long as the State as a whole is able to balance its accounts ... I have always thought the State ought to view their various operations as one big company rather than a segregation of companies. (Cited in Butlin et al., 1982, p. 264)

Note first that the valuer-general's budget test was to be applied at an aggregate level, whereas Egan's concerned the disaggregated or 'segregated' level. However, once we consider how to employ the valuer-general's 'whole-of-government' framework as a prospective guide to public spending, it would seem to require projections at the 'segregated' level. Say the draft budget showed an overall deficit: where should

8 Debt could be rolled over at maturity only if the 'asset' or activity continued to generate the required cash surpluses. Otherwise, a sinking fund would be required. This, presumably, is what Quiggin had in mind in his discussion of matching the maturity of the debt with that of the asset.

9 The operation of the system of horizontal fiscal equalisation was a complication.

spending be cut? It would increase the deficit were spending to be reduced in areas that ‘made a profit’. That is, for its implementation, the valuer-general’s test required an accurate allocation of credit for revenues to the various components of public spending—or, more strictly, their separate net fiscal effects (as does Egan’s).<sup>10</sup>

The second and real difference was that the valuer-general was cognisant of the possibility of positive fiscal spillovers, not only from state-owned enterprises, but also from the activities of general government.

So, to expand on the second difference between Egan’s conservative fiscal framework and the valuer-general’s more liberal one: if we classify as ‘investment’ any spending that generates benefits beyond the budget year, there are many groups, including public employees of the relevant department or section, who are keen to argue that all manner of public spending has at least an element of investment. However, this is not a sufficient condition for an improvement in economic efficiency or welfare. Rather, what is needed is evidence that an additional specific expenditure would generate net benefits when account is taken of spillovers as well as direct costs and benefits.

When fiscal spillovers are grafted on to Egan’s ‘segregation of companies’, the budget criterion would be something like the following: *items of debt-financed spending were justified if they boosted the state’s revenue capacity sufficiently to allow the government to continue to service the higher debt without requiring an increase in tax rates or a broadening of the base of existing taxes and charges or creation of new ones.* If this criterion were applied at the disaggregated level, the valuer-general’s test would be satisfied at the aggregate, whole-of-government level.

But government is not a company, so there is an argument that it should not be bound by the rules of fiscal sustainability at unchanged rates of taxes and charges; when implemented in its usual forms, a criterion that focuses solely on the fiscal outcome does not provide a direct test of the effects of a public policy on economic efficiency or community welfare.<sup>11</sup> Therefore, the usual cost–benefit analyses of public spending do not impose the constraint, advocated by Quiggin, that there be no induced rise in the ratio of public debt to GDP.

(As an indicator of economic efficiency, the earliest best-practice cost–benefit analyses used GDP supplemented by imputed values for non-marketed goods and services, positive or negative. Interestingly, when computable general equilibrium

10 Before the advent of sophisticated quantitative models, the fiscal test was applied to items of spending, if at all, mostly using rules of thumb. For an extension or upgrade of transport infrastructure, for example, a crude version was applied of what later became known in the economics literature as the ‘Henry George theorem’: the projected additional traffic was used as a proxy for the endogenous increase in local land values, which was taken as an indicator of the boost to public revenue from public land sales or leases (see Ergas & Pincus, 2015, p. 233).

11 There are, however, circumstances in which, given no change in the tax system, a rise in tax revenue is a measure of the rise in economic output (see Kaplow, 2008, Part I).

models are employed to generate estimates of net benefits, they commonly assume that any incipient endogenous public deficit is offset by the imposition of a 'lump-sum' tax, which has no detrimental effects on economic activity. Given the high estimated marginal excess burdens of most taxes, this leads to an overestimate of the net benefit.)

This raises a question: to the extent that education or other spending creates or preserves human capital, why does it matter whether it is financed by public debt or by private debt of the student (here, regarding HECS–HELP liabilities as private debt)? Clearly, distributional consequences can flow from this choice, but what other first-order effects are in play?

Rent-seekers who push for more spending of specific kinds tend to present their favoured spending as 'investment', and can find economic consultants, or even the Productivity Commission, to back them up—see the report into the proposed National Disability Insurance Scheme (NDIS) (Productivity Commission, 2011). In this report, the proposed spending was mostly justified on a utilitarian basis—specifically, redistribution from the abled to the (generally lower-income) disabled, generating 'efficiency' gains. As this would have been far from 'remunerative' in Egan's sense, the commission sought to find labour market responses that produced the fiscal effect of the NDIS 'paying for itself'. But, in a benevolent dictatorship world, there is no justification for requiring Egan's test to be met; utilitarianism does not require it.

My own view is that the best reason for discouraging public debt is that it acts as a constraint on public spending, which is why James Buchanan advocated for a constitutional balanced-budget amendment:

The most elementary prediction from public choice theory is that in the absence of moral or constitutional constraints democracies will finance some share of current public consumption from debt issue rather than from taxation and that, in consequence, spending rates will be higher than would accrue under budget balance. (Buchanan, quoted in Tempelman, 2007, p. 435)

A fuller normative case against public debt turns on the incentive effects of debt financing, and on the incidence of the burden of debt, which in turn depends on the strength of the Ricardo–Barro effect whereby prospective taxpayers suffer a subjective diminution of wealth due to their capitalising future tax obligations arising from debt servicing (Tempelman, 2007). Resources used up today are lost to tomorrow, unless they have generated productive assets, so it seems strange and unfair to burden tomorrow's taxpayers not only with covering the interest payments (rather than issuing new debt for that purpose), but also with the burden of retiring the Covid-19 debt.

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# Public infrastructure investment in the time of Covid

Marion Terrill<sup>1</sup>

## Abstract

Transport infrastructure investment has been used as a crude tool in response to the economic downturn resulting from the Covid-19 pandemic. More engineering construction work has been loaded into an already crowded market, with larger projects in greater numbers than ever. Even before transport infrastructure was deployed for this task, governments were failing to deal with the most pressing problems in infrastructure delivery: overly politicised project selection, a failure to learn from history and the continual reach for megaprojects as a first resort.

No one gets much traction arguing against public infrastructure. Public infrastructure is supposed to support economic growth, facilitate human connection and generate jobs.

In pandemic times, our desire is strengthened for economic recovery, human connection and job creation, so it is no surprise that our desire for public infrastructure is strengthened, too. Since early 2020, public infrastructure has been front and centre of governments' response to the Covid-19 pandemic and associated economic downturn.

But public infrastructure is complex. This article argues that infrastructure policy in Australia took a turn for the worse in response to the pandemic. In no small part, this can be attributed to preexisting weaknesses in how governments select and appraise infrastructure projects.

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## **An off-the-shelf response to a bespoke crisis**

Before the pandemic, public infrastructure was booming in Australia. In March 2020, the value of road and rail projects being built across the country exceeded \$120 billion for the first time.<sup>2</sup>

Not only was the amount of work at an all-time high, so was the size of projects being built. It is no longer true that only a couple of very large projects are being built at any one time; now, most of the work being done is on ‘megaprojects’—projects costing \$1 billion or more. In fact, we have entered an era of *mega*-megaprojects, with most work being done on projects with an expected cost of more than \$5 billion.

That was before the pandemic. Now, there are calls for even more public infrastructure. The Governor of the Reserve Bank of Australia has called for Australian governments to increase public investment to create jobs through infrastructure (Lowe, 2020, p. 5). The Prime Minister has called for the states to spend more on ‘good projects’ (Coorey & Cranston, 2020). The transport and infrastructure ministers of all jurisdictions say they are ‘clearing the way for an infrastructure-led recovery’ (TIC, 2020, p. 1).

Given that Australia was already in new territory before the pandemic, there is a big question mark over the wisdom of this path. Even the minority of projects that have been through a reasonable assessment process before the decision to build may turn out to have not been worth building at all.

## **Cost overruns are more likely and larger when projects are bigger**

Larger projects are more likely to have cost blowouts. Not only that, but when it happens, the blowout is likely to be larger, both in dollar terms and as a proportion of the project’s cost. More than one-third of transport overruns since 2001 came from just seven of the largest projects. And there are more and more large projects: 10 years ago, the work in hand included four projects valued at \$2 billion or more in today’s dollars; by the start of 2020, this number had increased to 14 (Terrill et al., 2020, p. 6).

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2 Includes all projects costing more than \$20 million.



Even before the pandemic, there was disquiet about the scale of the public infrastructure being built. In 2019, Infrastructure Australia warned that ‘while large-scale projects are becoming commonplace, they are also stretching the capacity of industry and government’ (Infrastructure Australia, 2019, p. 208).<sup>3</sup>

It is not hard to see cause for the disquiet. The average size of completed transport projects had been relatively steady over recent years—until 2019. The average value of projects completed in 2019 was twice that of projects completed over the previous five years (Terrill et al., 2020, p. 5). And some of these very large projects ended up in high-profile disputes between the contractor and the government—notably, Sydney’s CBD and South East Light Rail and Melbourne’s West Gate Tunnel.

## The infrastructure surge is risky

Despite this, one of the many responses to the pandemic has been the call for more infrastructure as stimulus (Kehoe, 2020; Wright & Crowe, 2020; Albanese, 2020), and the federal government has responded to these calls. In its 2020 and 2021 budgets, it stepped up funding for transport to about 0.6 per cent of GDP (Frydenberg & Cormann, 2020a, pp. 6–37). This is about 1.5 times the usual level of funding from the Commonwealth. The budget included \$750 million for Queensland’s Coomera Connector Stage 1 and about \$600 million each for upgrades to the New England and Newell highways in New South Wales (Frydenberg & Cormann, 2020b, pp. 131–32).

Will this uptick in funding be an effective form of stimulus? There are three reasons for scepticism.

First, it is not a foregone conclusion that a public infrastructure project will be effective as stimulus. As leading fiscal policy expert Valerie Ramey puts it, ‘details really matter’ (Smith, 2020). In a comprehensive review of fiscal responses since the Global Financial Crisis (GFC), she concludes that government infrastructure projects are not the best form of stimulus because they take a long time to get going (Ramey, 2019).

A second reason for scepticism is the capacity of the construction industry. Even before the pandemic, governments were worried about the industry’s capacity to take on more work on top of the record quantity of work in general and megaprojects that were under construction.

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3 The Prime Minister and Treasurer also raised concerns during 2019 about capacity constraints (Coorey, 2019; Caisley, 2019). The Prime Minister said: ‘We are really starting to hit our head on the ceiling in terms of how much infrastructure work you can get under way at any one time. And that’s actually putting some cost pressures into the system’ (Coorey, 2019). The Treasurer noted there were ‘capacity constraints ... related to skills, to materials, whether that be bitumen, cement, diesel, our boring equipment, and the like’ (Caisley, 2019). In March 2020, the Council of Australian Governments decided it needed to start monitoring infrastructure market conditions and capacity (COAG, 2020).

The number of people working in engineering construction surged by 50 per cent in the three years before the pandemic. The image people may have of construction work as unskilled is out of date; as leading urban economist Ed Glaeser puts it, 'big infrastructure requires fancy equipment and skilled engineers, who aren't likely to be unemployed' (Glaeser, 2016). During the mining boom, skilled labour and machinery were imported, but with national borders closed, this option is not available now or for the foreseeable future. And during the pandemic, hours worked declined less in construction than in other industries (Productivity Commission, 2021, p. 48).

A third reason for scepticism about transport infrastructure as stimulus is that even before the pandemic, governments were already struggling to spend their budget allocations. Commonwealth allocations to the states for transport infrastructure were underspent by \$1.7 billion in 2019–20 (Frydenberg & Cormann, 2019, p. 7). The federal government attributed this underspend to Covid-19 and the Black Summer bushfires, yet it also underspent on transport infrastructure by about \$2 billion over the preceding two years (Frydenberg & Cormann, 2018, p. 80; Morrison & Cormann, 2017, p. 80).

## **Projects conceived pre-pandemic are likely to suffer benefit underruns**

A benefit underrun is just as serious as a cost overrun. Either shortcoming can render a project not worth building.

Information about the benefits of a project is harder to come by than information about the costs. Business cases often contain very little information about the expected traffic volumes underlying the benefits counted in a road project. Expected traffic volumes for toll roads have occasionally come to light after the road is completed, often as part of a court hearing that has arisen through patronage being much lower than expected (Black, 2014).<sup>4</sup>

For rail projects, it can be even harder to assess the benefits. Tasked with assessing benefits from the Regional Rail Link Project, the Victorian Auditor-General's Office noted: 'Poor benefit management practices by DOT [the Department of Transport] made it very challenging, if not impossible, to measure today whether the project has delivered all its expected benefits, and thus the level of value for money achieved' (VAGO, 2018).

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<sup>4</sup> This article relies on newspaper reports for data on expected and actual traffic volumes of road projects, because no relevant official publications have been made public.

The data on benefits are scanty, but benefits should still be borne in mind when considering the merits of infrastructure proposals. The problem with projects conceived before the pandemic is that they are likely to underachieve their benefits, for two reasons.

## **Population growth has fallen off a cliff**

Population growth underpins the business cases of most if not all the transport infrastructure projects to which governments have committed. But the Covid crisis has caused population growth to fall off a cliff. Net overseas migration fell from 239,600 in 2018–19 to –97,000 in 2020–21 (ABS, 2020; Frydenberg & Birmingham, 2021a, p. 45). We should not assume a return to the high-immigration policies Australia had for many years before Covid.

Natural increase is well down, too. Australia's fertility rate, of 1.69 babies per woman (Frydenberg & Cormann, 2020a, pp. 2–34), is expected to fall to 1.62 by early next decade (McDonald, 2020, pp. 2–4). The federal government expects the rate of population growth to be permanently lower than the rates assumed before Covid-19 (Frydenberg & Cormann, 2020a, pp. 2–34).

Of course, infrastructure is a long-term investment and Infrastructure Australia is continuing to take a 30-year view of projects, even amid Covid-19. But we do not yet know whether Australia will resume its old path in a couple of years.

## **Work and travel patterns are likely to be different post pandemic**

Before the pandemic, few Australians worked from home. In Sydney, Melbourne and Brisbane, about 5 per cent did, and in Perth and Adelaide it was about 4 per cent (Terrill et al., 2018, Ch. 4). The numbers were small, but the trend was up: the rate of working from home increased by about 0.5 percentage point between 2011 and 2016 in each of Australia's five largest cities (Terrill et al., 2018, Ch. 4).

That changed, of course, with the pandemic. People who could work from home did so; an estimated 40 per cent of jobs can be done from home in Australia (Ulubasoglu & Onder, 2020). Some people love the flexibility and comfort of working at home and enjoy making use of the time that used to be swallowed up with commuting. Others miss the social side of work and find it difficult to work while their children are at home. Some businesses look forward to saving on office rental costs; others are concerned about doing new business in a world where people don't often meet face to face. Future work patterns and preferences are unclear.<sup>5</sup>

<sup>5</sup> Beck et al. (2020) found that 71 per cent of people who had worked from home during the pandemic said they would like to work from home more often in the future; but how frequently people will work from home after the pandemic remains uncertain.

Likewise, future demand for public transport is unclear. No one knows how effective the Covid-19 vaccines may be against future variants of the virus, nor what kinds of social distancing may be required in the long term. If social distancing is sustained, public transport projects—premised on the idea of carrying large numbers of people in close proximity—will need to be rethought.

In a time of high uncertainty, the best strategy is to keep options open. Major commitments to new transport infrastructure conceived for very different times make little sense right now. The mantra of stimulus does not mean every project is a good one.

In all, infrastructure—particularly large infrastructure—is simply not well suited to leading recovery from the downturn induced by the emergence of Covid-19 in Australia.

## **Public infrastructure is rife with preexisting problems**

Governments across the country have expressed a willingness and desire to improve infrastructure decision-making, with infrastructure advisory bodies now established in all states and at the Commonwealth level.<sup>6</sup> All have different functions and varying degrees of independence, but most focus on project assessment and long-term strategy. The creation of these bodies, between 2011 and 2019, is a positive step, but a modest one. Three key shortcomings are politicised project selection, a failure to learn from history and the continual reach for megaprojects.

### **Politicised project selection**

Project selection is not straightforwardly technical; ministers are empowered and expected to determine priorities for infrastructure investment, but they are expected to do so prudently, with care and regard for public resources and the needs of the whole community.

Yet governments and oppositions tend to go into elections promising infrastructure projects without knowing whether they are the best solution to a problem, let alone whether the scope, cost and timing they are promising are realistic. At the 2018 Victorian election, only 17 per cent of the Australian Labor Party's promised infrastructure investment was for projects with an assessed business case and benefits in excess of costs; the Coalition was little better at 23 per cent, and the Greens, zero (Terrill & Ha, 2018). At the 2019 NSW election, the story was similar: only

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6 Examples include Infrastructure NSW and Infrastructure Victoria.

19 per cent of the Coalition's promised spend was on projects with a business case assessed by an independent infrastructure body; for Labor, it was 23 per cent (Terrill & Ha, 2019).

In theory, it is possible for a government to reassess the projects it has announced and abandon those that, on closer scrutiny, are not worth building. But this rarely happens; more than 80 per cent of transport projects with an initial cost estimate of at least \$20 million announced since 2001 were seen through to completion (Terrill et al., 2020, p. 19).

The problem is not limited to announcements made in the lead-up to elections. Of 32 projects larger than \$500 million committed to since 2016, only eight had a business case either published or assessed by a relevant infrastructure body at the time of commitment (Terrill et al., 2020, pp. 29–31).

And governance has been no better for those projects that have received Commonwealth Government support. Of 22 large projects to which the Commonwealth committed a contribution since 2016, only six had a business case published or assessed by Infrastructure Australia. A further 14 were listed as 'initiatives' on Infrastructure Australia's priority list, indicating that they 'have the potential to address a nationally significant problem or opportunity' but their assessment had not been completed. The remaining two had not appeared on any Infrastructure Australia priority list at the time a state government committed to them (Terrill et al., 2020, pp. 29–31).

When a project is announced early, before it is adequately understood, this usually means its cost estimate is a preliminary one and does not incorporate a detailed engineering design or feasibility assessment. Premature announcements are not the norm; they occur about one-third of the time.<sup>7</sup> However, they have been responsible for more than three-quarters of the value of cost overruns accrued on public road and rail projects over the past two decades (Terrill et al., 2020, p. 19).

Unrealistic cost estimates distort investment planning in three ways. First, if governments systematically underestimate costs, the benefit–cost ratios will be systematically overstated; this leads governments to overinvest in transport infrastructure. Second, if governments misunderstand the uncertainty in a project's cost at the time they commit, their decision to invest in that project is made on an incorrect basis. This distorts the decision to invest and the selection of projects. Third, because unrealistic cost estimates are more prevalent for large projects—as evidenced by the greater prevalence of cost overruns on larger projects—governments are more likely to overinvest in these projects.

<sup>7</sup> An announcement is defined as premature when a government or opposition announces it will build a project for a particular cost, but the project does not yet have the regulatory and/or financial approvals that constitute a technical commitment, and which are needed before it can proceed.

As well as distorting investment decisions, unrealistic cost estimates mislead the public. We are led to believe that a particular project is available to us for less than it really is.

## Failure to learn from history

There is an element of chance in any individual project finishing on budget. It would therefore be fair to argue that imperfect cost estimates simply reflect the difficulty of the cost estimation task—if it were also true that cost underruns were anywhere near as common or as large as cost overruns.

But overruns are much more common and much larger than underruns (Terrill et al., 2020, p. 14). The reasons are not a mystery: large projects are more prone to overruns and to larger overruns, and prematurely announced projects are more prone to overruns, which are often larger, too. Even after contracts are signed, it is common for governments to spend more than they claimed they would (Terrill et al., 2021, pp. 8–9).

Governments do not collect the data that would permit better cost estimation. Despite calls from road experts from all jurisdictions, the Department of Infrastructure, Regional Development and Cities, the Productivity Commission and even the Transport and Infrastructure Council of the Council of Australian Governments, there is very little progress towards collating the data from past projects to form a benchmarking series (Terrill et al., 2020, pp. 37–38).

One clear manifestation of the scarcity of data is that cost estimates of current projects continue to make insufficient provision for ‘worst-case’ outcomes.

Business cases typically include an estimate of the median cost, or ‘P50’, and the worst case, or ‘P90’.<sup>8</sup> In business cases produced in recent years, the difference between P50 and P90 cost estimates is generally about 7 per cent. But the experience of the past two decades has shown that the real difference between the P50 and P90 costs is 49 per cent, on average, as detailed in Table 1.

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<sup>8</sup> ‘P50’ refers to the amount the actual project cost will exceed the estimate in 50 per cent of cases. ‘P90’ refers to the amount the actual project cost will exceed the estimate in the worst 10 per cent of cases.

**Table 1. The difference between median and ‘worst-case’ cost forecasts is much lower, on average, than experienced**

Project	State	Cost forecast (nominal, \$m)		Difference between median and ‘worst-case’ cost forecasts (%)
		Median	‘Worst case’	
Inland Rail	National	9,889	10,657	7.8
Metro Tunnel	Vic.	10,154	10,837	6.7
West Gate Tunnel	Vic.	5,226	5,548	6.2
Canberra Light Rail	ACT	759	806	6.2
Bruce Highway—Cairns Southern Access Corridor (Stage 3)	Qld	470	500	6.4
Bruce Highway—Cairns Southern Access Corridor (Stage 4)	Qld	97	104	7.2
M1 Pacific Motorway—Eight Mile Plains to Daisy Hill	Qld	713	747	4.8
M1 Pacific Motorway—Varsity Lakes to Tugun	Qld	960	1,017	5.9
Townsville Eastern Access Rail Corridor	Qld	369	392	6.2
		<b>Benefit/cost ratio</b>		
		<b>Median</b>	<b>‘Worst case’</b>	<b>Difference (%)</b>
Beerburrum to Nambour Rail Upgrade	Qld	1.48	1.35	9.6
Bruce Highway—Deception Bay Road Interchange	Qld	3.23	3.03	6.6
Bruce Highway—Maroochydore Interchange	Qld	3.4	3.2	6.0
Bruce Highway—Bribie Island to Steve Irwin Way	Qld	2.02	1.91	5.8
Centenary Bridge Upgrade	Qld	0.85	0.75	13
Smithfield Transport Corridor Upgrade	Qld	2.9	2.6	11
Average difference of above estimates				7.3%
Average of the actual difference from the median cost forecast, all projects completed between 2001 and 2020				49%

For details and sources, see Terrill et al. (2020, p. 40).

This comparison of cost estimation practice and actual experience shows that either median cost estimates are generally too high or—more likely—‘worst-case’ cost estimates are generally too low.<sup>9</sup> Cost estimators are making insufficient provision for fairly unlikely events that cause large overruns.

For example, the P90 forecast for Melbourne’s West Gate Tunnel project in the 2015 business case was \$5.548 billion—6.2 per cent higher than the P50 forecast. Were this P90 forecast valid, it would indicate there is only a 10 per cent probability that the eventual project cost will exceed \$5.548 billion. However, the current cost estimate is already \$6.7 billion, and there are reports that costs could further blow out (Jacks & Towell, 2020). Given this situation, it seems unlikely that the P90 forecast of \$5.548 billion took sufficient account of adverse contingencies.

## Overreliance on megaprojects

Projects worth \$1 billion were a rarity two decades ago. In 2001, there were just two such projects under construction; by 2020, there were 18.

Megaprojects have become more prevalent at the same time as there has been a push to greater national integration and more active Commonwealth involvement in transport infrastructure. Bodies such as the Australian Rail Track Corporation, the National Transport Commission and Infrastructure Australia have been created to deal with this greater focus on national planning and coordination.

The Commonwealth has not restricted itself to planning and coordination, however. Every federal budget and every federal election include announcements of big, iconic, ‘nation-building’ infrastructure.

Megaprojects have become normal. They have often been justified on the grounds of strong population growth. What is less often stated but just as important are exceptionally low real interest rates since the GFC, which have resulted in very strong land price increases. Land acquisition has become more important because planning authorities no longer assume large cities will keep expanding outwards, and tunnelling has become common.

Governments have choices about how to respond to these pressures.

The first resort should be efficient usage of the infrastructure we already have. Where there is excessive road congestion in peak periods, the most efficient remedy is congestion pricing. Public transport fares should be higher during peak periods.

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<sup>9</sup> In fact, relying on median cost estimates will systematically understate the cost of the portfolio of projects. This is because the distribution of cost estimates is right-skewed and therefore the mean, or expected value, is greater than the median cost estimate.



Efficient use of existing infrastructure requires dealing with the mounting maintenance backlog. A historical underspend on preventative maintenance, a lack of data and inadequate reporting requirements have contributed to a maintenance backlog across all infrastructure sectors. This will erode the quality and reliability of many assets and cause higher costs for future asset maintenance and renewal (Infrastructure Australia, 2019, p. 50).

There is also scope to modestly upgrade existing infrastructure, such as widening or upgrading key arterial roads, improving surfaces, upgrading railway stations and improving key road intersections. For instance, if dilapidated wooden bridges were replaced with steel bridges, they would be able to handle B-double semitrailers, which must currently take circuitous routes instead.

Smaller projects generally have higher benefit–cost ratios (Infrastructure Australia, 2019, p. 298). They are more robust to a range of future scenarios, such as the fall in population growth caused by the pandemic response. Keeping options open, particularly in a time of high uncertainty, is a smart strategy.

It is a long way from these infrastructure projects to the \$1 billion-plus megaprojects, let alone the \$5 billion-plus mega-megaprojects. Rather than reaching for the heroic and iconic megaproject, governments should focus on upgrading and improving existing infrastructure.

## Conclusion

Transport infrastructure is undoubtedly popular electorally, and political parties select their transport projects to express their ethos and their geographic priorities. Present expenditure on transport infrastructure is high by historical standards (BITRE, 2020, pp. 52, 68), at the same time as federal and state budgets are seriously dented by the response to the Covid-19 pandemic.

The opportunity is clear: toning down the overly political project selection, investing in learning the lessons of past projects and reaching for smaller, higher-benefit projects are the key ingredients to boost the productive capacity of the transport system.

If governments choose this path, a pandemic-constrained budget could have a genuine silver lining.

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# Structural reform of the Reserve Bank of Australia

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## Abstract

The Reserve Bank of Australia (RBA) recently placed higher priority on stabilising household debt than on its conventional goals of unemployment and inflation. This was bad economics, bad process and resulted in substantial unnecessary hardship. However, it was not unusual. The RBA has a record of poor decisions. That partly reflects poor process and a lack of expertise. More fundamentally, the RBA has a culture that places a low priority on getting the answers right. To address these problems, more monetary policy experts should be appointed to the RBA Board, and board members should be individually accountable for their votes. The RBA should be required to be more transparent—in particular, it needs to provide detailed explanations for its decisions and it needs to show alternative projections for interest rates. Decisions should be explained and defended at regular press conferences.

## Problems

### The need for a review

A major review of monetary policy has been called for by leading economists, newspaper editorials, the Australian Labor Party and many others (Wright, 2021b; SMH, 2021; The Age, 2021). This note discusses the main issues I think a review should cover.

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The case for a review is simple. The RBA has been failing to meet its statutory objectives.

Underlying inflation has fallen below the target of 2–3 per cent and unemployment has substantially exceeded estimates of its sustainable rate of about 4.5 per cent. These misses persisted for more than five years.

The failures were expected, not accidental. They preceded the Covid-19 pandemic. In November 2019, the RBA forecast inflation would remain below its target range and unemployment would remain well above the non-accelerating inflation rate of unemployment (NAIRU) throughout the forecast horizon. Despite this obviously unsatisfactory outlook, the bank left interest rates unchanged at its November meeting and at subsequent meetings. This followed several years of reluctance to cut rates. As a result, when the pandemic hit, Australian unemployment was already too high, so the hardship caused by the recession was much worse than it would have been had the starting point been better.

These failures create a presumption that reform is needed. This is especially so given that the agreement with the government on the Conduct of Monetary Policy (RBA, 2016) specifies that the inflation target is ‘a clearly identifiable performance benchmark’.

Bruce Preston (2020), Stephen Kirchner (2018, 2021), Ross Garnaut (2021, pp. 68–78) and Zac Gross (2019) have written strong critiques of the RBA and called for fundamental reforms. Andrew Leigh has made similar arguments in parliamentary hearings (Lowe, 2019, 2020). As Shane Wright (2021a) reports, these views are widespread among monetary policy experts. My arguments are similar, differing mainly in emphasis and detail. Nevertheless, a restatement and extension seem useful. I discuss flaws in RBA decision-making and communication, and suggest remedies.

The mistakes discussed in the first part of the paper provide sufficient grounds for the reforms discussed in the second part, but they are not necessary. Most major central banks around the world conduct regular external reviews. Many have implemented the reforms I suggest. Even if one agrees with recent RBA decisions, there is still a strong case for review and reform.

## **The debt mistake**

I argue that the RBA regularly makes bad decisions. These are not just differences in judgement or disagreements about economics, but serious analytical errors. This paper is not the place to substantiate all of these in detail. Instead, this section explains the issue of indebtedness, as it has been the most important controversy facing the bank.



The main reason the RBA knowingly missed its inflation and unemployment targets was the belief that cutting interest rates would increase financial instability.

The most common version of this argument centres on bank failures and the need to avoid a repetition of the Global Financial Crisis (GFC). However, a large body of research surveyed by the International Monetary Fund (IMF, 2015), Saunders and Tulip (2019) and Svensson (2017) finds that this argument is flawed.

The RBA's position is different, focusing on household debt. Before the pandemic, the bank often summarised its policy position along the following lines: 'For some time, the Board has been seeking to balance the benefits of stimulatory monetary policy with the medium-term risks associated with high and rising levels of household debt' (Lowe, 2017b).

What are these risks? The fullest explanation of which I am aware is Lowe (2017a):

[T]he issue we have focused on is the possibility of future sharp cuts in household spending because of stretched balance sheets. Given the high levels of debt and housing prices, relative to incomes, it is likely that some households respond to a future shock to income or housing prices by deciding that they have borrowed too much. This could prompt a sharp contraction in their spending, as they try to get their balance sheets back into better shape. An otherwise manageable downturn could be turned into something more serious.

There are many flaws in this argument, any one of which would be fatal.

First, monetary policy has negligible effects on the debt–income ratio. Many (possibly most) empirical estimates find that the short-run effect is in the opposite direction to that claimed by the RBA. According to the IMF (2015, p. 15), the Bank of Canada (2016, Box 7) and others, low interest rates boost the denominator (income) by more than the numerator (debt). That is, monetary policy has bigger effects on the ability to service debt than it does on the debt itself. In the longer run, macroeconomic models assume that monetary policy does not affect real variables, such as the debt–income ratio.

Second, the number of instruments should equal the number of targets. Given that indebtedness is a structural problem (the debt–income ratio has trended up since the 1950s), it should be addressed with a structural instrument, like prudential controls or tax, not a cyclical instrument like monetary policy.

Third, in models in which debt increases consumption volatility (for example, Debelles, 2004), it does so by reducing after-interest disposable income or net wealth. Lower interest rates may boost nominal debt, but they raise after-interest disposable income (as households are net borrowers at variable rates) and net wealth (as asset values increase more than debt). So, lower interest rates reduce volatility.

Fourth, even if policy could affect indebtedness (though not net wealth or disposable income), indebtedness has very little effect on aggregate spending volatility. There is microeconomic evidence that variations in indebtedness explain variations in spending between households. However, it does not appear to be important in explaining aggregate variations over time—the dimension that monetary policy affects. Although the ratio of debt to income has more than quintupled (!) over the past few decades, the responsiveness of consumption to wealth has not significantly changed (see, for example, May et al., 2019, Graphs 4, 5, 7). Rather than showing signs of increasing ‘fragility’, the overall volatility of consumption has fallen substantially (until the pandemic, at least). Aggregate consumption forecasting equations do not include interactions with debt.

The most directly relevant research on this question is probably Kearns et al. (2020, Section 3.2.6). They consider a 40 per cent fall in real house prices, which might be considered a ‘worst-case’ or ‘once-in-a-lifetime’ scenario. With low debt, consumption falls 10.8 per cent. With high debt, consumption falls 11.5 per cent. That is a difference of only 0.7 per cent for an extreme shock, despite a huge 30-percentage-point increase in the debt–income ratio—an increase that is orders of magnitude larger than anything that monetary policy might cause. And this greatly overstates the total effect because it assumes no offsetting monetary policy. In practice, lower interest rates would neutralise the shock, as in Ballantyne et al. (2019, Figure 16).

This tiny difference, which might occur once in a lifetime, cannot justify maintaining unemployment a percentage point above the NAIRU, as the RBA has done. Maintaining high interest rates to avoid an increase in indebtedness would not pass any reasonable cost–benefit comparison.

The RBA’s mistake on debt will hopefully not recur. However, it raises deeper issues about how the bank is governed. First, the RBA has no process by which this mistake could be identified or corrected, which is discussed further below. Second, the argument was never explained or defended in public, which is discussed further below.

## Other policy mistakes

The RBA’s mistake on financial stability was not a one-off that might be rectified by reversing a decision or moving particular individuals. It was just the most important in a string of poor decisions, suggesting the problems are more fundamental. Arguing the merits of each of these mistakes is beyond the scope of this paper and is not the point. But some examples establish a *prima facie* case.

A second argument for not cutting interest rates more aggressively was that the bank should ‘keep its powder dry’ or ‘keep some ammunition in reserve’. As Bruce Preston (2017, p. 91) discusses, this argument is perverse and is inconsistent with a wide range of macroeconomic models. Ben Bernanke (2010) notes the ‘strong consensus among researchers that [at low rates] policymakers should lower rates preemptively’. According to John Williams (2009, p. 6), ‘[k]eeping your powder dry is precisely the worst thing to do’.

A third factor behind recent failures is what Paul Keating (2020) has described as the RBA’s culture of indolence or what Gordon de Brouwer and James Gilbert (2005) call the RBA’s ‘deep stasis’. Keating argues the bank was ‘too slow lifting interest rates in the face of the commercial bank credit bubble of the late 1980s and too slow in getting rates down in the early 1990s’. The same tardiness was repeated in 2006 and 2007, when the bank allowed inflation to rise to 5 per cent, to be fortuitously saved by the GFC. And, again, in 2016–19, when interest rates were frozen at 1.5 per cent for 34 months, despite forecasts of inflation below the target range and unemployment well above the NAIRU.

Over its history, the RBA has targeted a series of variables—the gold price, the money supply, the current account deficit, a ‘checklist’, the debt–income ratio—which economists would now consider to be poor choices. Typically, the RBA adhered to the old target well after economists realised it was no longer sensible. Warwick McKibbin was pushed out of the RBA for objecting to the targeting of the current account (Martin, 2006).

In 2003 and 2015, the RBA set interest rates higher than macroeconomic conditions warranted to reduce the growth in house prices.<sup>2</sup> But recently Governor Philip Lowe (2021) said this ‘would be the wrong thing to do and I don’t think it would work’.

I touch on further mistakes, like the bank’s aversion to negative interest rates, below. Stephen Kirchner (in this volume) criticises policy during the pandemic.

Of course, everyone makes mistakes, and best practice in monetary policy is constantly evolving. The examples above simply illustrate that the RBA is no different. The problem is the RBA has no mechanism for identifying—let alone correcting—poor decisions. As discussed below, neither the board nor parliamentary oversight committees nor the public has enough information and expertise to properly evaluate policy. If anything, the RBA has a structure—centring on one fallible individual, accountable to non-economists, with secretive decisions—that

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2 As discussed, the RBA’s direct communication was unclear. In particular, the bank did not give public reasons for its decisions (though it did background journalists, off the record). Ian Macfarlane, 17 years after the event, explains that ‘house prices stopped rising ... certainly that’s what we were trying to achieve’ (Walker, 2020, at 1:14). After the April 2015 meeting, several newspapers ran stories with headlines like ‘RBA puts fear of rising house prices before jobs’.

makes mistakes more likely and more persistent. So, even if one agreed with past RBA decisions, there is no reason for confidence in the decisions made by future personnel.

It is arguable that the RBA makes too many mistakes. The structural flaws noted above would predict that. Moreover, most of the examples above involve the RBA taking positions that differ from modern mainstream macroeconomics. Without debating the economics of each example, it is noteworthy that justifications of the bank's positions are hard to find. For example, there may be economists who think household indebtedness is a good reason for keeping unemployment high and inflation low. If so, they have not elaborated on that in public.

In defence of the RBA, it is often argued that Australian macroeconomic outcomes have been good—relative to history, other countries and other benchmarks. To some extent, this reflects luck: the GFC fortuitously occurred when the economy had been allowed to seriously overheat; and the trend increase in export prices represents a succession of unexpected favourable supply shocks. But delving into historical counterfactuals is rarely convincing. The more important point is that one can always do better.

## Poor communication

Unsatisfactory outcomes and decisions have been accompanied by unsatisfactory communication—a point emphasised by Preston (2020).

For example, the bank's unusual position on debt has never been fully explained or defended. There are brief, vague assertions in speeches, rarely exceeding a few sentences. There is no attempt at quantification of the relevant effects. There are few references to evidence or research in support (and the few references that are provided seem of doubtful relevance). Counterarguments are not addressed or even mentioned. Whereas foreign central banks will typically invite, or even commission, external experts to critique the official position, the RBA has avoided external engagement on this issue.

As another example, the bank has repeatedly said that negative interest rates were 'extraordinarily unlikely'. However, a large and growing body of research—surveyed by a BIS Working Group (Potter & Smets, 2019), Miguel Boucinha and Lorenzo Burlon (2020) of the European Central Bank, Jeffrey Campbell, Thomas B. King, Anna Orlik and Rebecca Zarutskie (2020) of the US Federal Reserve, Luis Brandao-Marques and Gaston Gelos (2021) of the IMF and Silvana Tenreyro (2021) of the Bank of England—finds that negative interest rates are helpful in lowering unemployment and raising inflation. In my view, it would be open and honest for the RBA to acknowledge that its policy runs counter to the available research

and to explain why it thinks this research is mistaken. But that is not the bank's style. (Though, to be fair, a year after announcing its position, the bank answered questions on it at parliamentary hearings.)

Regular monetary policy statements provide scant reasons for decisions. As noted in footnote 2, the bank has targeted house prices, radically broadening its mandate, without saying so explicitly. More importantly, minutes and statements following board decisions rarely discuss the pros and cons of alternative choices. They do not explain why alternative paths for interest rates were not chosen. This failure, more than most, distinguishes RBA statements from Qvigstad's (2019) criteria for 'good' decisions. It makes it very difficult for outsiders to engage.

The bank is much more transparent now than in the past. Stevens (2007) documents large advances through 2007; progress since then has been more impressive. Recent policy statements have been explicit about the bank's objectives. The Bank now publishes much more detail about its forecasts. The governor has started giving press conferences. This is all great. But more should be done.

## Poor process

The bank's poor decisions and communication are of concern on their own; however, they also reflect deeper problems.

The lack of external discussion seems to reflect a lack of internal deliberation. The published board minutes rarely convey serious discussion of these issues. It might be objected that the minutes are intended to be a brief summary, however, Lowe (2019, p. 23) describes them as 'very comprehensive'.

Governor Lowe (2020, p. 12) has noted dissension within the staff: 'Each month [I] listen to many of my staff telling me I've got it fundamentally wrong. They tell me, "You've got this all screwed up".' The RBA minutes do not record these disputes being presented to the board and certainly do not record the board adjudicating these disputes. So, presumably, Governor Lowe adjudicates them himself. The pitfalls in that process are obvious.

RBA publications do not address, or even mention, prominent counterarguments to bank policy, nor are they mentioned in freedom-of-information disclosures. There is little public evidence that counterarguments are given serious consideration.

The lack of internal and external discussion arguably reflects poor values. An organisation intent on getting the answers right will invite criticism and external scrutiny. An organisation that is more interested in public relations will avoid mentioning doubts or contrary opinions.

## Remedies

### Change the board's composition<sup>3</sup>

Many of the RBA's problems—policy mistakes, lack of communication, lack of deliberation—can be attributed to a lack of expertise on the board. Most members lack formal training in macroeconomics and are unfamiliar with monetary policy. Consequently, they are unable to challenge the governor. They are capable of asking a good question, but they cannot argue for an alternative policy. The natural consequence is that mistakes are not identified, let alone corrected.

The lack of expertise makes some specific mistakes more likely. A board that lacks confidence in its grasp of the issues will tend to wait until the need for action is obvious—hence, Keating's observation of tardiness. Similarly, the board is unduly swayed by public opinion. Vocal pressure groups, like interest-dependent retirees, are given more weight than marginalised groups like the unemployed.<sup>4</sup>

One would expect a lack of expertise to make board deliberations superficial, and this can be seen in the minutes. Most board members are not able to discuss research or technical questions. Before parliamentary committees, RBA representatives have repeatedly evaded questions about whether board members understand central concepts in monetary policy (Lowe, 2019, p. 24). Whereas foreign central banks frame their discussions of monetary policy in terms of optimal control and stochastic simulations, a discussion of the Taylor Rule would be too sophisticated for our board (it doesn't show up in a Google search).

This aversion to expertise seeps down throughout the bank. At other central banks, policymakers request briefings on academic issues and will commission research that might help resolve policy uncertainties. A staff that services non-economists will not be required to think about these questions. Moreover, if technicalities and research issues cannot be raised in the bank's central policy documents, they will tend not be discussed. A comparison of publications shows the RBA is less interested than other central banks in modelling, research frontiers and alternative policies. It has a culture in which the formatting of charts is given more attention than the policy framework.

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3    Kirchner (2021) makes similar arguments.

4    The November 2019 minutes gave, as a leading reason for not cutting interest rates, 'the negative effects of lower interest rates on savers and confidence'—not mentioning that positive effects on borrowers are larger (and by most economic criteria, more important) than those on savers. (And, as an aside, the claimed effect on confidence is another assertion refuted by the available research—for example, Kirchner, 2020.)

The current composition of the RBA Board reflects outdated practices and rules, which were enacted in 1959 (with tweaks in 2007). In contrast, there has been a strong trend to increased expertise at foreign central banks. For example, whereas one of the 12 voting members of the Federal Open Market Committee (FOMC) had graduate training in economics (including a Master's) in 1949, that proportion had risen to eight of 12 by 2014 (Fox, 2014).

There would be a good case for reform of the RBA Board even if the bank had a strong record. Too much power is currently placed in the hands of one fallible individual; there need to be more checks on his discretion.

Kevin Warsh (2014, p. 24), in his review of the Bank of England, argues that '[t]here is a large and growing literature on optimal design of monetary policy committees ... And there is an emerging consensus that well-designed committees tend to make better-quality decisions than individuals'.

The state of the art in central bank design is to have a small committee of experts. Reforms at the Bank of England are a good example; at the Reserve Bank of New Zealand, a bit less so. So far, the RBA has been lucky to have talented individuals in charge, but it has weak safeguards should a zealot or incompetent be appointed.<sup>5</sup>

Calling for more expertise does not mean the board should be composed entirely of monetary policy experts. The research surveyed by Warsh and, more recently, David Archer and Andrew Levin (2018) finds that diversity in membership helps committees reach better decisions. It encourages assumptions to be challenged and conclusions to be questioned.

The most desirable dimension of diversity is of opinion. As John Stuart Mill wrote in *On Liberty*, 'it is only by the collision of adverse opinions that the remainder of the truth has any chance of being supplied'. So, one wants a mix of hawks and doves, of interventionists and free-marketeers, of researchers who emphasise data and those who emphasise theory. Diversity in background and demographic mix helps with this.

Instead, we currently have a diversity of competence. A few members of the board have the knowledge and technical ability to challenge the governor; most do not. That kind of diversity does little to reduce groupthink or insularity.

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<sup>5</sup> This is a real possibility. US President Donald Trump nominated Judith Shelton to the FOMC. Former RBA Governor Bernie Fraser (1991) said: 'I won't go just to appease some dickhead minister who wants to put Attila the Hun in charge of monetary policy.'

## Individual accountability

Having board members capable of challenging the governor is not enough. They also need an incentive. This means individual accountability and identified votes. Individual policymakers should publicly explain their views on policy and where they agree and disagree.

It is not in the bank's private interest to air disagreements and objections; it would be bad publicity and raise doubts. It is often described as 'a bad look'—because disagreement is interpreted as a cacophony, a sign of confusion or indecisiveness or that decisions have not been thought through. But an open contest of ideas is in the public interest. This is how understanding advances. Getting the decisions right is more important than appearances. It is true that airing disagreements makes the public uncertain, but where there is disagreement, there should be uncertainty! So, public votes and explanations should be required at the board level.

'Consensus' is undoubtedly comfortable for the governor, who has his decisions rubber-stamped, but consensus necessarily stifles innovation. It promotes groupthink, insularity and status quo bias, leading sources of error.

The RBA prevents its researchers from discussing their work in academic forums if the subject is 'sensitive' (that is, relevant to policy). An indirect benefit of airing disagreements at the board level would be that staff could more freely engage with external experts, to mutual benefit.

Apart from improving decision-making, this is democratic. The public has a right to know how appointed decision-makers act and why.

Former RBA Board member Richard Warburton opposed individual accountability because it would expose external board members to 'undue criticism and pressure from the sectorial groups they nominally represent' (quoted in Kirchner, 2008). Stevens (2007) discusses similar arguments. As Kirchner points out, this argument highlights the conflict of interest that is inherent in appointing part-time business executives. And it is counterintuitive. Normally, conflicts of interest are restrained by transparency, not secrecy.

## Transparency

The bank would make fewer and less persistent mistakes if it was required to explain its decisions in public. We already require that administrative and judicial decisions be explained in a way that facilitates review and appeal. We should have higher standards for monetary policy, given that it affects millions of households and that the RBA has a large staff to do the drafting. Checks on bureaucratic discretion should be tighter for central banks than for other institutions.



Good decision-making processes recognise that mistakes sometimes happen and decision-makers do not wish to expose their errors, so formal processes of review are required.

The lack of transparency is a problem for many reasons (Stevens, 2007). First, explaining decisions is necessary for accountability and democracy. The public needs to have confidence that decisions are well-based, reflect society's values and do not unduly benefit favoured groups.

Second, clear understanding aids the goals and transmission of monetary policy. Uncertainty will be lower. Financial prices will react quicker and more accurately to genuine news and less to noise. Expectations of inflation will be more firmly anchored. This is especially important while relying on forward guidance.

Third, the alternative of backgrounding friendly journalists in return for favourable coverage is corrupt.

Fourth, the lack of external scrutiny leads to bad decisions. Mistakes are not identified and the range of issues considered is narrow. All the country's wisdom on monetary policy does not reside in Martin Place.

Of course, the staff of the RBA is well-placed to offer scrutiny and constructive criticism. But their promotion prospects depend on the goodwill of the governor, so without external pressure, there are disincentives for frank discussion (something freedom-of-information legislation exacerbates, but that is a separate topic).

For transparency measures to be meaningful, the bank's explanations need to be challenged and defended. International experience has shown press conferences following meetings to be effective in this. Sceptics should watch them on YouTube—they will be surprised. The RBA has been almost unique among major central banks in not having regular press conferences after meetings. As this paper was being drafted, Governor Lowe has held several press conferences. Hopefully, these will become regular.

In contrast, parliamentary oversight is less successful, either in Australia or in other countries. Politicians do not have the time, incentives or resources for effective scrutiny.

There is a large literature on how central banks should communicate. My favourites include Blinder et al. (2008), Yellen (2012), Svensson (2013) and Qvigstad and Schei (2018), but there are many others. There are many things the RBA could do better, with the following being at the top of my list.

First, show projections of the cash rate, as discussed by Glenn Rudebusch (2008). This is a clear and simple way of doing forward guidance; it provides a basis for discussing alternative policy and it is simple information that is useful to the public

and, in particular, to financial markets. Confidence intervals can be constructed from past yield curve errors. The main objection is that the current board lacks the capacity to do it, but that needs to change anyway.

Second, show alternative paths for the cash rate and their implications for inflation and unemployment; Svensson (2013) and Yellen (2012) provide examples. This is perhaps the single most important reform. How can one have a meaningful discussion of policy choices without an understanding of their consequences?

Third, estimates of the NAIRU should be regularly updated and published. The statutory objective of full employment is usually and sensibly interpreted as keeping unemployment near the NAIRU.

Fourth, we need more accountability for past errors. For example, when the RBA misses its targets, as it has done for the past several years, it needs to explain why. Otherwise, it is difficult to learn and to avoid future misses. We know that some recent misses were deliberate and some were due to forecasting errors, but we do not know how much.

Among the forecasting errors we do not know how much was model error and how much was judgement. Was the bank's persistent overoptimism the result of wishful thinking or bad luck? The model error can be decomposed. For example, was too much/too little weight put on estimates of the NAIRU or the exchange rate or some other influence?<sup>6</sup> The individuals and institutions involved in creating forecasts have a clear incentive not to draw attention to mistakes. However, it is hard to see how forecasting can improve without quantitative post-mortems. Again, they should be required.

## **The Reserve Bank's mandate**

The specification of central bank objectives is a large topic beyond the scope of this paper. Moreover, it is of secondary importance to questions of governance. There is little point in revising the RBA's objectives if the bank is going to ignore them. That said, some aspects of the mandate overlap with the rest of the discussion.

### **Financial stability should not be an objective of monetary policy<sup>7</sup>**

Many of the current problems arose because monetary policy was misdirected from its conventional objectives towards the stabilisation of household balance sheets.

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6 Cassidy et al. (2019) find that the bank's models of inflation explain historical variations well. Similar decompositions should be done for forecast errors.

7 Kirchner (2018; 2021, pp. 10–13) provides a good discussion.

This debate has progressed since it was between ‘poppers versus moppers’ or ‘lean versus clean’. In the wake of the GFC, no one argues that cleaning up after a financial crisis is adequate. Central banks clearly need to take preemptive action to prevent bank failures. Rather, the issue is whether interest rates are a better instrument for this than prudential controls. The overwhelming thrust of expert opinion, outside the RBA, is ‘no’. See, for example, the surveys by Saunders and Tulip (2019) or the IMF (2015). The research finds that interest rates are about as likely to create instability as to reduce it; either way, the effect is minimal. High interest rates cause substantial collateral damage. In contrast, other instruments such as capital requirements are efficient, effective and low-cost.

The Agreement between the Government and the RBA needs to be reworded. A variation on the Agreement of September 2010 would clarify that financial stability is subordinate to inflation and full employment: ‘*Without compromising the price stability or full employment objectives*, the Reserve Bank seeks to use its powers where appropriate to promote the stability of the Australian financial system’ (emphasis added).

It could usefully be added that prudential controls are a more cost-effective instrument. And the changes made in the September 2016 Agreement, which explicitly mentioned financial stability as an objective, should be reversed. Kirchner (2018) discusses the evolution of the wording of this Agreement.

### Full employment should be an explicit objective

The ‘About Monetary Policy’ webpage linked to on the RBA website’s home page says:

The principal medium-term objective of monetary policy is to control inflation, so an inflation target is thus the centrepiece of the monetary policy framework. The Governor and the Treasurer have agreed that the appropriate target for monetary policy is to achieve an inflation rate of 2–3 per cent, on average, over time.

In statements like these, full employment is secondary. For example, the agreement between the government and the RBA merely says that the RBA ‘takes account’ of employment.

In practice, the RBA is not an inflation nutter; it pursues a dual mandate. That is consistent with recent bank statements, modern research, the bank’s legislation and the practice (though not the rhetoric) of most other central banks. The bank should be honest and explicit about this in its central documents. For example, the agreement with the government should say: ‘The goals of the RBA are maximum sustainable employment and inflation of 2–3 per cent’—perhaps with further detail noting the RBA’s current estimate of maximum sustainable employment, recognising that this will evolve over time. The central banks of New Zealand and the United States have recently adopted wording like this.

This change is partly symbolic, helping to bring language into line with practice. It also has practical implications, one of which is preventing a reversion to earlier neglect.

Another practical objective relevant to recent experience is to reduce confusion about the horizon over which the bank should achieve its targets. As noted above, the agreement says ‘over time’. The vagueness of this understandably annoys many observers, such as Preston (2020). However, in my view, the remedy is not to be more specific about timing; it is to be specific about the reason for lags—namely, trade-offs. Faced with a supply shock, it is sensible to approach targets gradually; trying to hit one target quickly would mean a big deviation in the other. However, faced with a demand shock, when there is no trade-off between objectives, policy should move aggressively to achieve both targets very quickly.<sup>8</sup> This confusion is one reason for the tardiness of which Keating has complained.

Another practical implication is when a shock delivers a large temporary shock to inflation and a persistent shock to activity of the opposite sign, as the United Kingdom encountered in 2009. Then the Bank of England (correctly) reduced interest rates even though inflation was temporarily high. Public communication was impeded by the ostensible inflation target, with widespread complaints that the bank was ignoring its statutory obligations.

## Conclusion

Ultimately, the RBA Board should be accountable for failures of the institution, but sacking the board and replacing them with similar people would be pointless. Another group of part-time business leaders would be expected to make similar mistakes. We need to change the kind of people on the board and their incentives.

The RBA possesses many of the most talented, dedicated economists in the country. However, the incentives and constraints they operate under make mistakes likely and persistent. In particular, we need to subject decisions to expert scrutiny, both inside and outside the bank.

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8 To be precise, the appropriate policy is to minimise a loss function with unemployment and inflation as arguments. In my view, quadratic loss and equal weights are consistent with the relative social costs of unemployment and inflation, but that is a matter of judgement.

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# Long-run consequences of the pandemic debt

Gene Tunny<sup>1</sup>

## Abstract

Future Australian federal governments will face difficult choices when they need to address the massive increase in public debt due to the Covid-19 pandemic and the 2008–09 Global Financial Crisis (GFC). Future governments will need to either increase taxes or make difficult spending cuts to improve budget balances and get the debt-to-GDP ratio under control. The huge challenge facing future governments is illustrated using an Australian government Budget Debt Projections Model and Monte Carlo simulations.

The Covid-19 pandemic has seen hitherto unexpectedly large Australian government deficits and gross federal debt being placed on a trajectory to exceed \$1 trillion, but there is a large degree of insouciance regarding the long-run fiscal challenge. The government appears relaxed and credit rating agencies seem undisturbed, although that could change, particularly as the economic and fiscal costs from the new Delta variant mount.

One reading of the *2021 Intergenerational Report (IGR)* by the Treasury (2021) is that the debt can be easily managed over the next 40 years, as net debt will only be 34 per cent of GDP by 2060–61, after peaking at 41 per cent in 2024–25 and falling to 28 per cent in 2044–45.<sup>2</sup> That is likely highly optimistic, as demonstrated in this article. The future is highly uncertain, as the wildly varying projections of

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<sup>2</sup> For instance, see Kirchner (2021).

future budget balances and debt measures in different vintages of the *IGR* reveal. Credit to the Treasury for being candid about the deficiencies of such mechanical projection modelling, which ends up being dependent on contentious assumptions.

Rather than accepting one future time path for budgets and debt, it would seem prudent to consider a range of scenarios based on plausible developments in the global and domestic economies. In this paper, we use a slimmed-down, fit-for-purpose version of the Australian Government's *IGR* model to explore these various scenarios and to assess their implications for future Australian government budget policies. The Treasury should consider undertaking similar scenario or simulation analysis in future iterations of the *IGR*, so it presents not just 'point estimates' but also ranges of possible outcomes.

Such scenarios include the so-called Great Demographic Reversal (GDR) that is expected to result in much higher real (and hence nominal) interest rates. Also, we should consider the potential for Pandemic 2.0 or Global Financial Crisis 2.0 within the next 40 years, either of which would lead to another massive step-up in debt.

The *IGR* has emphasised the importance of governments having 'fiscal room' or 'fiscal space' to respond to crises, which is an implicit recognition that crises bring about huge increases in debt—something that is not included in mechanical spreadsheet projection models such as that underpinning the *IGR*. It is important to do so, given how rapidly we have seen debt take off during previous crises.

For example, in the five years up to 2007–08, Australian government gross borrowings were in the range of \$50–55 billion, but five years later, in 2012–13, borrowings were \$257 billion—an increase from around 5 per cent to 17 per cent of GDP. Regarding the debt impact of the pandemic, consider that borrowings are projected to increase from \$542 billion in 2018–19 to \$1.134 trillion in 2023–24—an increase from around 28 per cent to 50 per cent of GDP. It would be realistic and prudent to consider it likely that Australia will experience another economic crisis over the next four decades (the time frame of the *IGR*), and the possibility of this should be reflected in long-run projections models such as that used in the *IGR*.

As the late Rudiger Dornbusch (1986, p. 182) observed: '[T]ransitory deficits, if they are large and persistent, do have a significant long-run impact on the required noninterest surpluses that must ultimately be generated to sustain the government's solvency.' Hence, it is important to consider scenarios in which the current long-run trajectory of the debt is shocked by new transitory deficits.

## What has happened to the debt?

Historically, Australia has seen several periods of debt accumulation followed by periods of fiscal consolidation. Net debt is a well-known indicator of a government's financial strength. It differs from gross debt as it is equal to gross debt less financial assets such as cash investments and debt securities the government owns.

By 1980, net debt in Australia had reduced by approximately 10 per cent of GDP, with the remainder of the 1980s seeing increased fiscal consolidation. However, in the early 1990s recession, the budget returned to sizeable deficits. 'The ratio of general government net debt to GDP in Australia rose to around 20 percent in the mid 1980s and 25 percent in the mid 1990s' (Gruen & Sayegh, 2005). In 1995–96, net debt in Australia reached a peak of 18.5 per cent of GDP.

The recovery from the recession began in the September quarter of 1991. Under the Howard Government and Treasurer Peter Costello, the 1996 budget committed to reducing the underlying deficit of 3.5 per cent of GDP to 0.5 per cent over three years, reducing public sector lending, the pressure of the current account deficit and returning the budget to a structural surplus (Bongiorno, 2019). Consequently, Australia's financial position improved from the mid-1990s and gross debt steadily declined as a share of GDP (Di Marco et al., 2019). Net debt as a proportion of GDP declined to –3.8 per cent in 2007–08 because of budget surpluses and asset sales (Gruen & Sayegh, 2005).

The Commonwealth Government ran surpluses from 2003 until 2008. In 2008, the GFC hit and Australia's net debt position reduced from –3.8 per cent of GDP to a high of 6.0 per cent in 2012–13. In 2008–09, government support for the economy was \$52 billion, or 4 per cent of GDP. It took 10 years to return to a budget balance and the government planned to pay that back in 2020–21.

**Table 1. Australian government debt metrics**

Selected years	Debt (\$m)	Debt (% of GDP)	Net debt (\$m)	Net debt (% of GDP)
2024–25	1,199,000	50.0	980,561	40.9
2019–20	684,298	34.5	491,217	24.7
2014–15	368,738	22.7	245,817	15.1
2009–10	147,133	11.3	47,874	3.7
2004–05	55,151	6.0	15,604	1.7
1999–2000	75,536	11.4	57,661	8.7
1994–95	105,466	21.3	83,492	16.9
1989–90	48,399	12.0	16,915	4.1
1984–85	54,420	23.2	21,896	9.3

Source: The Treasury (2021, pp. 365–66).

As a result of Covid-19, Australia entered its first recession since 1991, according to the definition of two consecutive negative quarters. By June 2020, Australia's GDP contracted by a record 7 per cent following a decline by 0.3 per cent in the March quarter. Federal Treasurer Josh Frydenberg provided a large stimulus, with the 2020–21 budget anticipating the cash deficit would reach 11 per cent of GDP. After the 2021–22 budget, Australia's net debt is expected to increase to \$617.5 billion, or 30 per cent of GDP. It is projected to continue growing, to \$980.6 billion or 40.9 per cent of GDP by mid-2025 (Guay et al., 2021). However, this remains low by international standards. According to the Treasurer, the Covid-19 recession will see Australia's deficit reach \$161 billion in 2020–21, improving to \$106.6 billion in 2021–22, before improving further to \$56 billion in 2024–25.

Australia's large debt has increased interest payments, which are forecast to reach \$21 billion by 2024–25. However, in Australia, S&P Global found a 3-percentage-point lift in interest rates would barely increase the federal government's interest bill over the next two years (Wright, 2021). This is because so much debt has been borrowed at low interest rates that are locked in for several years. The 2021–22 Australian budget reported:

In the period between 20 March 2020 and 3 May 2021, the Australian Office of Financial Management (AOFM) has issued \$281.6 billion in Treasury Bonds, with a weighted average tenor of 9.4 years and a weighted average issuance yield of only 0.88 per cent. (Frydenberg & Birmingham, 2021, p. 91)

Partly because of this, there is a large amount of complacency around Australian government debt. Illustrative of such complacency, the Grattan Institute has noted there has never been a cheaper time to borrow for necessary economic stimulus, urging Australians '[d]on't worry about the debt' (Wood & Crowley, 2020).

## What did the *IGR* say would happen to the debt?

According to Treasury's 2021 *Intergenerational Report*, while Australia's economic recovery is well advanced, some effects from the Covid-19 economic downturn will persist for years. As stated in the report, net debt is projected to peak at 40.9 per cent of GDP in 2024–25, before falling to 28.2 per cent of GDP in 2044–45 and then increasing to 34.4 per cent of GDP by 2060–61 (The Treasury, 2021, p. xi).

The *IGR* has faced criticism as forecasts assume they will not be interrupted by ever-changing realities and events into the future. According to business commentator Terry McCrann (2021), 'if you read any of the *IGR* you will see assumptions page after page'. He outlines that Treasury modelling in the *IGR* assumes net migration of 235,000 people every year without interruption and productivity output per

worker to remain at 1.5 per cent until 2060 because it is favourable for the Treasury. It is outlined in the report that ‘all projections are inherently uncertain and are unlikely to unfold as outlined in this report’. The *2021 IGR* states that the budget is projected to stay in deficit for each of the 40 years until 2060–61, with the stated cause of those deficits being excessive growth in government spending.

It is reported that pressures of demographic change from an ageing population are likely to impose on future government spending. Spending on individuals is predicted to almost double, with an increase of 73 per cent. Total payments are projected to grow at a slower rate than previous years, of 2.5 per cent over the next 40 years, with total payments of 3.4 per cent. This is possibly attributed to lower projected population growth in the future. As outlined in the *IGR*, Australia’s population has grown at an annual average rate of 1.4 per cent over the past 40 years. However, Covid-19 is expected to reduce population growth to a low of 0.1 per cent in 2020–21. It can be estimated that population growth over the next 40 years will be 1.0 per cent per annum (The Treasury, 2021, p. 13).

According to the *Sydney Morning Herald’s* economics editor Ross Gittins (2021), only part of this increase is due to the ageing population; also in play is the higher cost of better-quality health care and aged care. Projections assume that Australia will be getting new tax cuts in each of the 15 years up to 2061, so the tax-to-GDP ratio does not exceed 23.9 per cent, and interest payments are expected to account for three-quarters of the budget deficit in 2060–61.

## **The 2021–22 budget and *IGR* are already out of date due to lockdowns**

It only took until July 2021, when this article was written, for the 2021–22 budget, handed down in May, and for the *IGR*, published in late June 2021, to be significantly out-of-date, with larger and longer Covid-related restrictions implemented in some capital cities.

In June 2021, after Melbourne’s most recent lockdown was extended, the federal government brought in \$500 payments that were to be consistently applied in future Covid-19 hotspots. In mid-July, the Morrison Government announced increased weekly payments for households and boosted business cashflow to get them through extended lockdowns. Treasury officials have estimated that the recent Sydney lockdowns have cost \$700 million a week (Tingle & Elton, 2021).

Recently, the federal Treasurer announced that from week four of a lockdown due to a Commonwealth declaration of a hotspot, a Covid-19 disaster payment will increase from \$500 to \$600 each week if a person has lost 20 hours or more of work a week or \$325 to \$375 each week if a person has lost between eight and 20 hours of

work (Frydenberg, 2021b). The Commonwealth will also fund 50 per cent of a new small and medium-sized business support payment to be implemented by Service NSW. Between \$1,500 and \$10,000 will be provided each week for businesses with a turnover of less than \$50 million.

This additional Covid-19 disaster payment is on top of the Commonwealth Government's previous JobKeeper and JobSeeker support. Primary sectors affected by the current restrictions include hospitality, retail and construction. Nearly half a million workers have qualified for Covid-19 disaster payments. Services Australia has stated that 518,000 claims for the Covid-19 disaster payment from people in New South Wales have been granted (Davies & Visontay, 2021).

The government originally estimated payments would cost around \$500 million a week, which was before Victoria and South Australia went into lockdown. In New South Wales, 386,000 people have applied for the \$600-a-week payment and more than 83,500 have been granted the smaller payments. At present, the total amount paid out by the Commonwealth Government to NSW workers since 1 July is \$219 million and is expected to rise sharply.

In total, this would amount to approximately \$4 billion in payments over the six weeks. Now, at the end of July, Brisbane has replaced Melbourne as the capital city in lockdown along with Sydney. It is unknown what the ultimate additional debt from post-2021–22 budget lockdowns will be, but it will be in the order of billions, possibly \$10–20 billion.

## **What economics tells us about public debt**

Much of the public debt discussion is around how long it will take us to pay it back, but in a sense, as Musgrave and Musgrave (1989, p. 550) observed, 'whether we can "repay" the debt is a misdirected question'. That is because of the dirty secret of public finance—that governments can repay their existing debts as they mature by borrowing new money. That is, the debt is refunded or refinanced.

In extreme cases, lenders or bond markets may be unwilling to lend to governments, but for the levels of debt we have seen historically in Australia this has not been the case, and we do not realistically expect it to be the case in the future. The Australian Government has never defaulted on its obligations.

The burden of the debt is measured by the interest payments on that debt, and those expected interest payments should be the focus of analysis. The interest payments on debt need to be met first by governments when developing budgets, and rising interest payments can force governments to make difficult decisions, either cutting spending or increasing taxes, lest budget policy settings result in an exploding debt-

to-GDP ratio. This is possible, depending on the key parameters of the interest rate, economic growth rate, primary budget balance to GDP and current debt-to-GDP ratio. The primary balance is the actual budget balance excluding the interest payments.

The debt path is determined by the path of overall fiscal balances, or primary balances and interest bill (Escolano, 2010). A necessary condition for stabilising the ratio of public debt to GDP is (Makin & Pearce, 2014):

$$pb = \mu \left[ \frac{i - g}{1 + g} \right] \quad (1)$$

where  $pb$  is the primary balance to income/GDP ratio,  $m$  is the debt–income ratio of the previous period,  $i$  is the interest rate on government debt and  $g$  is the growth in nominal GDP. Intuitively, if we assumed a primary budget balance, and non-interest expenses were equal to revenues, having interest rates higher than the rate of economic growth would mean the debt would grow faster than the economy. These so-called debt dynamics are what we capture in the numerical model used in this article.

Under certain conditions, debt-to-GDP can increase in an explosive fashion, but that is unlikely to occur in Australia. Nonetheless, we should remain concerned about the ongoing interest expense associated with the debt because government deficits could crowd out private investment, affecting future economic growth. Future generations could be burdened by inheriting a small capital stock as a result. Rudiger Dornbusch once observed:

Prospective growth of debt, even under high-deficit assumptions, does not readily assume explosive proportions. The danger inherent in continuing high deficits lies not so much in their effect on the magnitude of debt as in their current impact on the fiscal–monetary mix and thereby on the economy’s rate of saving and hence, growth. (Dornbusch 1986, p. 20)

A full analysis of the burden of debt would consider the extent to which higher interest payments imply higher taxation and the associated deadweight loss, and the implications of higher interest payments to bondholders. One substantial concern for Australia is that a large proportion of public debt is owned by foreign bondholders—hence the argument, made by Musgrave and Musgrave (1989, p. 550) in the 1980s US context, that we largely owe it to ourselves (and the interest payment is only a transfer domestically) does not hold. Over the past decade, the proportion of Australian government securities held by non-residents peaked at around 75 per cent, in 2012, and has since fallen to around 60 per cent (AOFM, 2020).

Finally, it should be noted that inflation helps erode the real value of debt—that is, the inflation tax. Hence, any budget projection model needs to distinguish between nominal and real interest rates. Note that nominal interest rates are determined by real interest rates and inflationary expectations. The Fisher equation states:

$$i = r + \text{expected inflation} \quad (2)$$

Increases in nominal interest rates associated with increases in real interest rates are costly for governments. In contrast, if the government's borrowing rate increases because of expected inflation pushing up the nominal interest rate, any inflation that occurs will provide a benefit to the government by eroding the real value of its existing debt. The nominal level of activity and the government's tax revenues expand with inflation, making it easier to service an existing stock of debt denominated in nominal terms. Consider that the bulk of Australian government debt is so denominated and inflation-indexed bonds are a relatively small component of total Australian government debt.

## Why future interest rates may be much higher than today

Among the reasons for the large amount of complacency around public debt in many Organisation for Economic Co-operation and Development (OECD) economies are the historically low interest rates, both nominal and real, which have been experienced, particularly since the GFC. Historically during the twentieth century, 4 per cent was considered a real rate of return on a diversified portfolio and 1–2 per cent for fixed-interest securities such as government bonds (Fraser, 1991). Taking a wider historical perspective, Piketty (2014, p. 53) observed:

[T]he average rate of return on land in rural societies is typically on the order of 4–5 percent. In the novels of Jane Austen and Honore de Balzac, the fact that land (like government bonds) yields roughly 5 percent of the amount of capital invested ... is so taken for granted that it often goes unmentioned.

Real interest rates, as measured by estimates of real interest rates (for bonds), have been much higher than even 5 per cent during some historical periods. According to Reserve Bank of Australia (RBA) estimates, real interest rates in Australia ranged from 7 per cent to 10 per cent for several years in the 1980s.

But, over the past three decades, the rise of China and demographic trends have profoundly influenced inflation and interest rates. The GDR is the concept that the demographic 'sweet spot' of the past 35 or so years is set for a dramatic reversal (Goodhart & Pradhan, 2020, p. 1). Over the past 30 years, deflationary forces were



so strong they caused inflation to remain at or below central bank targets from 1990 onwards. Additionally, interest rates have trended downwards, with real interest rates also falling.

The GDR suggests the future will not be like the past, when baby boomers dominated the labour force and the integration of China into global manufacturing more than doubled the available labour supply. It is expected that the sweet spot of the past 35 years will turn sour due to China's shrinking workforce, reductions in the global working population, low fertility rates and increasing life expectancy. Goodhart and Pradhan (2020, p. 1) observe: 'The danger facing the global economy is that economies that have dominated global growth are facing the biggest demographic challenges.'

The decline in real interest rates over recent decades illustrates that *ex ante* savings have exceeded *ex ante* investment, however, this is likely to reverse. The GDR concludes that short-term interest rates will continue to run at low real levels and be held below the increase in inflation largely due to current political contexts. However, in the longer term (that is, 10 years), interest rates will start rising and are expected to rise above the current rate of inflation. Goodhart and Pradhan (2020, p. 99) observe: 'One of our conclusions is that the yield curve, which is currently flattened to an unusual degree, will probably steepen sharply.'

The GDR states that the renewal of upwards pressure on inflation stems from a combination of a changing dependency ratio, the Phillips curve and the shifting balance between savings and investment in the private sector:

Central banks will soon enough have to revert to their normal behaviour [and] the re-birth of inflation is our highest conviction view among the effects of demographics and it is one that financial markets and policy-makers are dismissing at their own peril. (Goodhart & Pradhan, 2020, p. 69)

So, there are good reasons to assume that both real and nominal interest rates could be much higher in future decades. Incidentally, the *IGR* assumes that the long-run growth rate of the economy and the interest rate on government debt are the same, at 5 per cent (The Treasury, 2021, p. 80). Possibly one of the most optimistic assumptions in the *IGR* is that 'the 10-year bond yield gradually converges to around 5 percent by 2039–40, consistent with long-term nominal GDP growth' (The Treasury, 2021, p. 70). But this could be far too conservative an assumption, particularly considering GDP and the large growth in money stocks seen during the pandemic, both in countries that have previously experimented with quantitative easing (QE) such as the United States and in Australia, which adopted QE for the first time during the pandemic.

## What the pandemic debt means for future budgets and debt

This article relies on the Australian Budget Debt Projections Model (ABDPM) we have constructed to model the budget and debt over the next 40 years—the same projections period as in the *IGR*. It relies on some assumptions and projections in the *IGR* and some we have modified to reflect an arguably more plausible scenario given economic developments in recent years. To capture the large amount of uncertainty around economic and budget parameters over the projection period, ranges are specified for key assumptions, and Monte Carlo simulations are conducted. The Monte Carlo simulations, based on 10,000 replications, are implemented using the @RISK package in Microsoft Excel. The assumed probability distribution for each parameter is the Beta-PERT distribution, which requires only the specification of a most likely value and upper and lower bounds, as is done here. That is, a variance does not need to be specified, as would be the case with the normal distribution. The Beta-PERT distribution is very popular for Monte Carlo simulations because it has a highly flexible functional form.

The assumptions of the ABDPM are set out in Table 2. Regarding the treatment of interest expenses, for simplicity, the interest expense is based on the amount of debt in the previous year. Strictly speaking, the interest expense needs to be calculated using an iterative method as it is a federal budget formulation, given that interest will be paid on new borrowings over the year, and this interest will increase the deficit, requiring some additional borrowings. But, as is presumably the case in the *IGR* model, this complication is ignored, as is standard practice in this type of long-run budget projection model.

The model takes the *IGR*'s primary budget balance estimates as a baseline, as they appear reasonable and reflect the government running, on average, a small deficit of 0.2 per cent on the primary balance (that is, even before accounting for net interest expenses) over the projection period.

The model accounts for the fact that over the next decade, very low borrowing costs are locked in for the Australian Government due to the amount it has already borrowed at low interest rates. The model keeps track of maturing debt and new debt, and refinanced debt is subject to the prevailing interest rates. In our view, given the macroeconomic developments and trends discussed above, the *IGR* is too conservative regarding the future path of interest rates (that is, a gradual transition of the 10-year bond yield to 5 per cent from the end of 2024–25 to the late 2030s). In our model, we assume a new period of higher interest rates begins in 2030, for simplicity.

**Table 2. Core ABDPM assumptions**

Parameter	Value	Justification
Average interest rate (existing debt)	1.5	Estimated based on budget data and model calibration
Average interest rate (future debt)	5.0	<i>IGR</i> assumption for long-run nominal interest rate
Low interest rate period ends	2030	Chosen to reflect a plausible year when rates normalise—one that is earlier than the <i>IGR</i> 's
Real interest rate	2.6	Implied in <i>IGR</i>
Expected inflation	2.3	Implied in <i>IGR</i>
Nominal interest rate	5.0	<i>IGR</i>
Years before old debt matures (from 2020–21)	20	To approximate the maturity structure of existing debt in a way convenient for modelling
Additional debt at end of forward estimates (\$ billion)	20	Best guess based on current and possible future measures
Extra spending as of GDP in late 2030s	2	Arbitrary assumption chosen to acknowledge that another crisis requiring fiscal stimulus response of at least this magnitude will probably occur in the next several decades

For a subset of the parameters listed in Table 2, plausible lower and upper bounds are provided for the Monte Carlo simulations (Table 3). These are based on our consideration of potential future economic developments, including the GDR and higher inflation associated with recent strong growth in money supply associated with QE.

**Table 3. Lower and upper bounds for the Monte Carlo simulations**

Parameter	Lower bound	Upper bound
Real GDP growth	2.0	3.0
Inflation	2.0	5.0
Real interest rate	2.0	5.0
Variation from <i>IGR</i> primary balance	0.0	0.5
Crisis spending	1.0	5.0
Real GDP growth	2.0	3.0
Additional debt (\$ billion) at end of forward estimates due to lockdowns since 2020–21	10	50

Using the ABDPM and the assumptions in Tables 2 and 3, the following Monte Carlo simulation results were obtained (Tables 4 and 5). Depending on the parameters of the model, future debt levels can vary in a large range. Critical metrics such as net debt-to-GDP or interest expenses as a percentage of total expenses could increase in future decades to much higher levels than currently expected.

**Table 4. ABDPM Monte Carlo simulation results (\$)**

Metric	Year	Min.	Mean	Max.	P5	P95
Gross debt (\$b)	2031–32	1,504	1,592	1,669	1,554	1,625
	2041–42	1,955	2,464	3,376	2,203	2,771
	2051–52	2,602	4,029	7,393	3,220	5,081
Net debt (\$b)	2031–32	1,044	1,133	1,192	1,095	1,164
	2041–42	1,380	1,886	2,675	1,652	2,147
	2051–52	1,836	3,277	6,375	2,534	4,232

Note: P5 is fifth percentile, and P95 is 95th percentile.

**Table 5. ABDPM Monte Carlo simulation results (percentages)**

Metric	Year	Min.	Mean	Max.	P5	P95
Gross debt/GDP	2031–32	40.1	46.2	50.3	43.5	48.4
	2041–42	32.0	42.4	53.6	37.3	47.7
	2051–52	25.8	41.0	63.3	33.0	50.7
Net debt/GDP	2031–32	26.8	32.9	37.0	30.2	35.1
	2041–42	22.1	32.5	43.7	27.4	37.8
	2051–52	18.2	33.4	55.7	25.4	43.1
Interest/GDP	2031–32	1.2	1.5	2.0	1.3	1.7
	2041–42	1.4	2.1	3.6	1.7	2.7
	2051–52	1.2	2.2	4.5	1.6	3.1
Interest/total payments	2031–32	4.4	5.5	7.3	4.8	6.3
	2041–42	5.3	7.8	12.5	6.3	9.8
	2051–52	4.5	8.0	14.9	5.9	10.9
Deficit/GDP	2031–32	–2.2	–1.6	–1.1	–1.9	–1.4
	2041–42	–3.2	–1.7	–0.7	–2.3	–1.2
	2051–52	–4.4	–2.2	–0.9	–3.1	–1.5

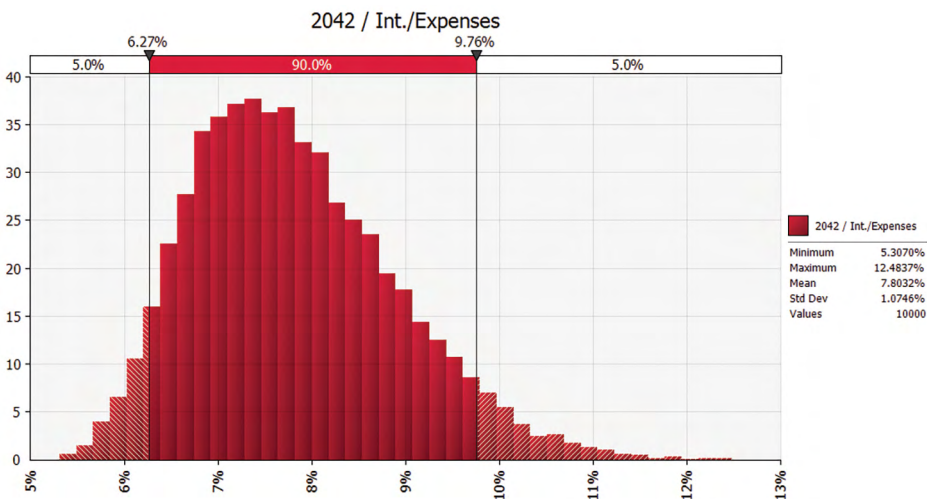
## Discussion

Debt defaults are a common result of financial crises and there comes a point when debt becomes troublesome, causing a nation to default (Reinhart & Rogoff, 2009). If a government needs to refinance at higher interest rates in the future, it is a time bomb for future governments and generations, particularly if the GDR analysis is correct.

That said, there appears to be little chance Australia would ever default, but that is not to say we do not have to address underlying problems and focus on fixing structural problems in the federal budget. This need will become apparent, probably in the next decade. At least for the current decade, as previously noted, the Australian Office of Financial Management has locked in some low borrowing rates.

Australians can be thankful for the fiscal consolidations that previous governments—particularly the Howard–Costello Government (1996–2007) and, to a lesser extent, the Hawke–Keating Government (1983–96)—undertook in previous decades because they have so far provided the Australian Government with a large amount of ‘fiscal space’ to respond to crises. But there are only so many crises that can allow debt to blowout before debt management becomes a large problem. Based on the analysis in this paper, we expect that will become the case in the 2030s.

Hidden in the *IGR* is the implication that interest expenses will become a larger share of the Australian budget. They will amount to around 7 per cent of total expenses, and likely more under realistic expectations around future shocks to the economy. The model presented in this paper suggests that, in the base case, which is not much worse than the *IGR*’s, interest expenses could end up at an expected 5.5 per cent of total expenses in 2032 and 7.8 per cent by 2042. But the upper bounds are at around 7 per cent and 12 per cent (Table 5 and Figure 1). Consider that, before the fiscal consolidation of the late 1980s by the Hawke–Keating Government, interest expenses reached 10.8 per cent of payments and, in 1995–96, before the Howard Government’s fiscal consolidation, interest expenses reached 7.6 per cent.<sup>3</sup> Expected future interest expenses will no doubt force future governments—or should force responsible future governments—to address structural problems in the federal budget.



**Figure 1. Probability distribution of interest expenses as percentage of total Australian government payments, 2041–42**

Source: Author’s calculations.

3 Estimated from ‘Statement 11: Historical Australian government data’ in Frydenberg and Birmingham (2021).

As discussed above, the *IGR* revealed that, even after we return to normal after the pandemic, the Australian Government will have, on average, a deficit in its primary budget balance. Even before the consideration of interest expenses, it appears obvious that some budget repair will be desirable. The long-run fiscal challenges facing the Australian Government are well known, particularly rising health and disability care costs, the aged pension and superannuation tax concessions. The National Disability Insurance Scheme (NDIS) is a notable risk and budget papers reveal it will surpass Medicare in dollar cost by 2024–25. Changes to all these big costs to the budget would be politically challenging, but a consideration of possible future budget outcomes suggests the government in the next two decades will need to make some hard choices to repair the budget.

So far, Australia has managed to maintain the highest credit rating despite the large debt blowout, but it could be at risk if the economy does not recover as expected and debt blows out even further.

During the Covid-19 crisis, S&P Global's revision of Australia's AAA credit rating went from stable to negative, in April 2020. At the time, ratings agencies such as S&P Global and Fitch stated that future outlooks remained uncertain and they had Australia's ratings on a negative outlook. During 2021, however, both agencies put Australia back on a stable outlook, averting the prospects of a ratings downgrade for the time being (see Frydenberg, 2021a).

In a worst-case scenario, if Australia does not get its public debt under control and experiences a substantially downgraded credit rating in future years, and Australian-dollar-denominated bonds are seen as riskier investments, the Treasury (or, more precisely, the Australian Office of Financial Management) may need to sell bonds in foreign markets to minimise its borrowing costs. While this would be an extreme scenario and Australia is a long way from it in the foreseeable future, a reliance on foreign currency borrowing increases the risk of a future public debt crisis and potential default, as Reinhart & Rogoff (2009) warn.

Finally, the limitations of this study should be acknowledged. It is an analysis of the potential future path of interest payments and debt, with speculation regarding what this will mean for future budget policy. We presume the necessary adjustment will need to occur through tax increases or spending reductions, given the Australian Government has already sold off its most saleable assets and its Telstra shares are locked up in the Future Fund. This has not been a welfare analysis, attempting to demonstrate which path might maximise social welfare.

## Conclusions

Projections of budgets and debt levels suggest that future Australian governments will reach levels of interest expenses that will make budget management difficult, at ratios to total expenses that have prompted fiscal consolidations in the past—for example, the Howard–Costello fiscal consolidation from 1996–97. Future governments will face difficult choices in addressing the expected structural budget deficit. They may need to address politically sensitive budget items such as the age pension, superannuation tax concessions and the NDIS, among others.

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*Agenda* is published by ANU Press  
The Australian National University  
Acton ACT 2601, Australia  
Email: [anupress@anu.edu.au](mailto:anupress@anu.edu.au)  
This title is available online at [press.anu.edu.au](http://press.anu.edu.au)

ISSN 1322-1833 (print)  
ISSN 1447-4735 (online)

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Cover design by Echidna Graphics  
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Print Post Approved PP 229219/00091



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