

SUSTAINABLE PUBLIC FINANCES THROUGH COVID-19

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D SUSTAINABLE PUBLIC FINANCES THROUGH COVID-19

Governments are adopting innovative, and sizable, policy interventions to support their economies. The majority of these interventions are not captured by traditional economic metrics, such as debt-to-GDP ratios. To address this problem, this report calls for governments to use accounting data and take 'a balance-sheet approach' to effectively manage their finances through the COVID-19 crisis. The report includes 24 recommendations directed to governments and public finance professionals, which will help the public sector navigate the crisis and build back for a greener and more inclusive future.

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Foreword



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I am glad that ACCA produced this timely research study on the 'Sustainable Public Finances through COVID-19'.

Public financial management is at a crossroad amidst the COVID-19 pandemic, specifically to balance between the competing goals of fiscal discipline and control on one hand, and speed and flexibility on the other hand. Nevertheless, the three fundamental objectives of public financial management remain valid: to maintain a sustainable financial position, to allocate resources to ministries and programmes effectively, and to deliver public services with good value for money. Ministers of finance and all the finance professionals who work with them, need a variety of tools in their toolkits to achieve these objectives.

In tackling the COVID-19 crisis, the International Monetary Fund called on governments "to do what it takes but to keep the receipts." This entails ensuring the funds are spent for the purpose intended and accounted for and reported appropriately. Also, governments would need to prevent fraud and meet citizens' expectations on transparency of public spending.

This report demonstrates that a substantial portion of the collective global response is not just health response spending, but governments are living to their sovereign responsibility as the ultimate social insurance scheme to help citizens and businesses to get through the crisis. Governments are able to offer guarantees, provide equity injections and to agree to defer tax payments. These are referred to in this report as below-the-line interventions.

Just as governments must keep receipts for their spending, it is also critical to record and manage the assets and liabilities being created through the below-the-line policy measures. Government spending and borrowing will show up in statistics as deficits and debts. They can be tracked, and countries compared, using measures like the ratio of debt to GDP. However, many of these below-the-line interventions do not show up in the traditional economic measures unless, for example, a guarantee is called in and money flows.

This report makes the case for the public finance toolkits to include a balance sheet approach to managing public finances. This is an important insight to policy makers and public finance professionals. Governments are going to face enormous challenges over the coming months and years, as we work to build back better, and we must ensure that public money is well-managed with a long term perspective to sustain the wellbeing of citizens and future generations. This must include understanding the impact that policies will have on a country's public sector net worth.

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Executive **summary**

COVID-19 has caused a global economic downturn like no other and governments across the world have embarked on fiscal interventions of an unprecedented scale in order to minimise the long-term economic damage.

Governments have responded with conventional revenue and expenditure interventions alongside new policy interventions such as furlough schemes that subsidise firms to keep employees on their payrolls, taxable grants paid to self-employed workers affected by COVID-19, and largescale loan guarantees to support struggling firms. The aim of these measures is to provide a lifeline to firms and households during the period governments require citizens to be economically inactive, with the hope that businesses can continue operating after restrictions are lifted.

There has also been a new focus on 'below-the-line' interventions such as guarantees and equity injections. The International Monetary Fund (IMF) estimates the global total fiscal policy response to be \$9 trillion, with \$4.6 trillion being below-the-line measures.

The below-the-line interventions are not sufficiently captured in many traditional economic indicators, such as the debt-to-GDP ratio or public sector net debt. A loan guarantee, for example, would only affect debt-to-GDP if a loss is realised. These provisions or contingent liabilities can have a substantial impact on public finances if they crystallise. Between 1990 and 2014, the IMF recorded 230 contingent liability realisations with an average fiscal cost of 6.1% of the affected country's GDP. It is important, therefore, that governments adopt a balance-sheet approach to this crisis, paying attention to their public sector net worth.

In adopting a balance-sheet approach, governments will benefit from:

 increased clarity on the true position of the public finances, as well as an understanding of the fiscal room available for further government action

- improved value for money and financially sustainable policies, and
- enhanced public sector resilience and the embedding of key financial metrics to drive performance management.

Within this report we set out the impact of COVID-19related fiscal policy interventions on the public sector balance sheets in 10 countries, covering a diverse range of geographies and levels of development. This analysis shows that just over half of the government interventions by the 10 countries in the sample are in the form of 'below-the-line' activity.

In particular, four of the ten countries (Italy, UK, Japan and Turkey) have announced fiscal policy interventions that are dominated by 'below-the-line' interventions. For each of these countries, debt-to-GDP ratios by themselves would not accurately capture the impact of their fiscal policy responses.

The research also forecasts the net worth of the 10 countries in 2022. By then, the average net worth is forecasted to drop from negative 17% of GDP to negative 30% of GDP. The largest deteriorations in government net worth are expected to occur in the US (down 27 points) and Japan (down 20 points).

After the crisis, governments are likely to want to stabilise their spending first and then begin to rebuild their balance sheets. In the current environment, some combination of public spending cuts and tax increases will be required over time in many countries – but governments can minimise their reliance on these two measures by taking a balance-sheet approach to fostering sustainable public finances. This can be achieved through maximising the return on public assets, focusing on value for money in the use of public resources, and taking a multi-capital approach by expanding the scope of the public sector balance sheet.

The central recommendation of this report is that governments must take a balance-sheet approach to managing their finances through this crisis. Balance sheet information can improve decision making, should act as the benchmark for new fiscal targets, and will support governments in using sufficient fiscal firepower to rebuild the economy for a more inclusive and greener future.

The balance-sheet approach is founded on accrual accounting but even governments operating on a cash basis can apply the mindset of balance-sheet management to their decision making. All public sector organisations maintain some form of accounting data and can consider this information when deciding whether a change represents value for money and what its implications are for net worth – even where reliable accrual information does not exist.

To be credible, public sector balance sheets must be properly prepared, audited and disclosed. Public finance professionals clearly have an important role to play in preparing the balance sheets. They can also contribute to transparency and accountability by providing clear, understandable narratives to help non-experts make decisions at a time when many countries will need to navigate a series of difficult policy choices.

Public finance professionals around the world must provide critical input to achieving sustainable public finances, applying a balance-sheet approach to the management of government decision making. It is time for balance sheet information to take primacy in informing policymakers on how to achieve an inclusive and sustainable recovery.

PUBLIC FINANCE PROFESSIONALS CLEARLY HAVE AN IMPORTANT ROLE TO PLAY IN PREPARING THE BALANCE SHEETS.

Summary of report recommendations

The following recommendations were included in the report and are highlighted here for ease of access.

Key recommendation

 Governments must turn their attention to public sector balance sheets to manage their finances properly through this crisis. Balance sheet information can improve decision making, should act as the benchmark for new fiscal targets, and will support governments in using sufficient fiscal firepower to rebuild their economies for a more inclusive and greener future.

In response to the COVID-19 crisis, governments should take the following steps

- Reference or implement full-accrual IPSAS, the only globally accepted accounting standards for the public sector, in the production of their general-purpose financial reports.
- **3.** Consider producing a consistent, multipurpose Chart of Accounts that supports the preparation of full accrual financial statements, as well as providing information for other reporting purposes.
- 4. Minimise reliance on either tax increases or austerity by taking a balance-sheet approach to fostering sustainable public finances. This can be achieved through maximising the return on public assets, focusing on value for money in the use of public resources, and by expanding the scope of the PSBS to include a broader range of capitals.
- 5. Consider creating an Asset and Liability Committee to provide expert advice on how best to weigh risk and return objectives to unlock the value of the PSBS.
- 6. Consider the privatisation of certain public assets and services, where this will provide value for money and improve the government's financial sustainability.
 - a) Equally, governments should avoid poor-value privatisations, which provide immediate cash but reduce public sector net worth.
 - b) Governments not operating on a full accrual basis should be particularly careful in pursuing a policy of privatisation to fund the recovery or support the public finances, as the lack of good data increases the risk of poor value for money for citizens.
- Consider expanding their balance sheet analysis to take a multi-capital approach, which could include natural, human, social, and physical / financial capitals.
- 8. Consider publishing a vision or overall objective that will help guide the finance function during the crisis.

For example, in New Zealand, the Treasury's vision is to raise the living standards of New Zealanders.

- Reset current economic frameworks, in light of the COVID-19 crisis, and consider what fiscal rules will guide their decision making during the recovery phase.
 - a) New frameworks should include fiscal rules that move beyond debt to GDP ratios and instead rely on public sector net worth, providing a comprehensive view of public finances that includes public assets and non-debt liabilities.
 - b) As part of resetting fiscal limits, governments should develop medium-term plans for capital spending that support a green recovery and inclusive growth – while also considering the possible economic multipliers arising from any public investment decision.
 - c) Revised fiscal frameworks should also provide a planned path to recovery, setting out how sustainable public finances will be achieved over the medium- to long-term.
- **10.** Consider adopting the non-authoritative guidance issued by the IPSAS Board on reporting long-term financial sustainability (RPG 1), as well as the Board's guidance on financial statement discussion and analysis (RPG 2).
- **11.** Direct independent fiscal policy institutions either to begin fiscal sustainability reporting or to increase its frequency. Central finance departments should be required to respond publicly to these reports in a timely manner.
- **12.** Require that public sector balance sheets be properly audited and disclosed. Independent audit increases the reliability and credibility of financial statements and, for qualified opinions, sets out areas of improvement.
- **13.** Provide Supreme Audit Institutions with the independence and necessary resources to conduct performance audits, or value for money audits, which may identify cases where public money was not used effectively, efficiently or economically in combating the COVID-19 crisis.
- 14. Finally, jurisdictions operating on a cash basis should also apply the mindset of balance-sheet management to their decision making. All public sector organisations maintain some form of accounting data, for example the purchase price of an asset from a previous financial year, and should consider this information when deciding whether a policy option represents value for money.

Public finance professionals should take the following steps

- **15.** Take a commercial approach to the management of public assets creating new revenue and reducing the need to rely on tax increases or austerity to balance the books.
- **16.** Produce clear narrative and appropriate notes to accompany public sector balance sheets in order to support users and non-expert decision makers.
- 17. Consider the classification and recognition of transactions during the crisis, eg recognising that monies transferred to a struggling business, where the expectation of repayment is likely to be suspended, are grants rather than loans.
- **18.** Apply their judgement in reporting assets or liabilities that are hard to measure reliably. For example, heritage assets may be given a nominal value to record them on a PSBS without affecting the networth position.
- **19.** Consider how any redirection of resource to combat COVID-19 affects broader metrics of societal well-being and sustainability.
- **20.** Conduct frequent fiscal stress testing, which forecasts the impact of negative scenarios on public sector balance sheets. This could include the impacts of a second wave of a COVID-19 or an extended economic downturn.
- **21.** Produce accessible summary material, and appropriate narrative and notes within the financial statements. The accompanying narrative in financial statements helps users make sense of the figures; it should try to avoid bias and address critical issues.
- **22.** Include a breakdown of outturn by policy area and present trend data in the financial reports. This will give non-expert decision makers a clear view of the sector's unfolding financial position.
- **23.** Participate in discussions with colleagues in the global public finance community on good practices in financial reporting in the public sector, as many issues are common across countries.
- 24. Finally, public finance professionals in countries not on an accrual basis should prioritise analysis that provides the most immediate analytical support in navigating the crisis, such as identifying and monitoring the top 10 risks to the public sector balance sheet (eg by applying the '80/20' rule).

SUSTAINABLE PUBLIC FINANCES THROUGH COVID-19 | EXECUTIVE SUMMARY

THE CENTRAL RECOMMENDATION OF THIS REPORT IS OF THIS REPORT IS THAT GOVERNMENTS MUST TAKE A BALANCE-SHEET APPROACH TO MANAGING THEIR FINANCES THROUGH THIS CRISIS.

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Introduction

The COVID-19 pandemic has shaken the global economy to its core, with billions of people confined to their homes and activity in numerous industries coming to a standstill.

In response to these twin economic and health shocks, governments across the world embarked on innovative fiscal and monetary interventions on an unprecedented scale. This expanded set of measures seeks to minimise the long-term economic damage brought about by the crisis, but – if poorly executed – could put the long-term sustainability of public finances at risk.

The current project sought to answer two questions. First, how have public sector balance sheets been impacted by governments' COVID-19-related fiscal policy interventions? And second, and possibly more importantly, how can public sector balance sheets (PSBSs) help governments in navigating the crisis and its impact over the longer term?

The result of this work has led to one key recommendation: governments must turn their attention to public sector balance sheets to manage their finances effectively through this crisis and beyond. Balance sheet information informs decision making, should act as the benchmark for new fiscal targets, and will support governments in despatching sufficient fiscal firepower to rebuild their economies for a more inclusive and greener future. It has become clear that government financial positions are too complex to be measured and managed through the limited view of cash flows and the stock of debt. Instead, the focus must be on public sector net worth, which includes non-debt liabilities and public assets, to give a holistic view of a government's financial position.

In its recommended practice guidelines, the International Public Sector Accounting Standards Board (IPSASB) defines long-term fiscal sustainability as 'the ability of an entity to meet service delivery and financial commitments both now and in the future' (IPSASB 2013). For many countries, structural and demographic changes have meant that governments' ability to meet long-term commitments was already becoming questionable. The pandemic makes this issue even more acute. In response, public finance professionals must apply 'a balance-sheet approach' to their governments' responses to the pandemic. This critical information will enable policymakers to rebuild the economy and preserve the well-being of citizens, while also maintaining intergenerational equity through sustainable public finances.

Acknowledgements

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In addition, an earlier draft of this report was shared with colleagues at the World Bank, IPSASB staff, the International Federation of Accountants (IFAC) and UK Treasury officials. Their input was highly beneficial in shaping the final document. All views and errors remain the authors'.



1. A new **economic reality** for **public finance**

It is becoming increasingly clear that 2020 will see the most severe global recession in many decades, probably at least since the Great Depression of the 1930s.

In its June *Global Economic Outlook Report*, the World Bank forecast a 5.2% drop in world GDP this year with declines of around 6% in the US and 9% in the eurozone (World Bank Group 2020). Emerging markets are forecast to suffer a 2.5% fall in GDP, the worst since comparable records began in 1960. This is a global downturn like no other, with the number of economies in recession reaching 93% in 2020 – the highest level ever reached, according to records dating back to 1871 (see Figure 1.1). Meanwhile, in its June 'Economic Outlook', the OECD is more pessimistic, forecasting a 7.7% fall in world GDP this year, including declines of 8.5% in the US and 11.5% in both the eurozone and the UK (OECD 2020). Behind these annual numbers there is a huge degree of volatility, essentially involving a disastrous first half of the year followed by some sort of recovery in the second half – assuming no significant second wave. After modest falls in GDP in the first quarter of 2020, most economies (apart from China) have experienced truly catastrophic falls in output in the April to June period. This is when lockdowns and restrictions imposed in attempts to control the spread of the virus were at their maximum. Predictions of the scale of the collapse in activity in the second quarter vary but, for advanced economies, are concentrated in the 10% to 20% range – unprecedented falls in GDP over the course of a single quarter.



FIGURE 1.1: Number of economies in recession, 1871 to 2020

Source: World Bank Group 2020

Emerging markets (EMs) are being hit especially hard by the COVID-19 crisis. EMs are suffering the domestic demand impact of efforts to contain the spread of the virus, as in advanced economies. But there are several additional channels through which they are suffering economic harm. First, many EMs are heavily reliant on commodities exports to advanced economies, where demand and prices have fallen significantly since the global economy entered recession. In addition, overseas tourism accounts for a significant proportion of GDP in many EMs, so the virtual ending of overseas visits is having a material effect on these countries. Other economies rely on remittances from migrant workers overseas to support domestic activity, and these have fallen in value significantly as those workers have lost their jobs or been furloughed in their host country.

With the exception of East Asia and the Pacific, the World Bank expects every EM region to experience economic contraction this year (World Bank Group 2020), underlining the truly global nature of the COVID-19 economic shock.

Economic factors affecting the COVID-19 crisis

It is worth setting out the global economic backdrop prevailing immediately before the COVID-19 shock plunged the global economy into a severe downturn. Many of these factors will remain relevant once the crisis has passed and they will influence the future path of growth, inflation and interest rates – all of which will have a major impact on the sustainability of public finances. This section covers:

- levels of government debt
- borrowing costs
- nominal GDP growth
- the r minus g equation.

Government debt

The global financial crisis (GFC) of 2007-09 resulted in what at the time was the worst global recession since the 1930s. Falling output and fiscal measures to support growth resulted in large budget deficits, approaching 10% of GDP in many cases. Public sector debt to GDP ratios jumped and continued to increase for some time as fiscal deficits remained high despite austerity measures. Weak nominal GDP also hindered the reduction of debt ratios. As Figure 1.2 shows, advanced economy debt stabilised from 2012 onwards about 25 percentage points higher than before the GFC. By contrast, emerging market debt has increased steadily over the last 10 years. Both debt ratios will jump significantly over the next two years as large fiscal deficits emerge as a result of the COVID-19 crisis.

Borrowing costs

Despite elevated levels of public sector debt, the cost of servicing that debt has not only remained low since the GFC but has generally continued to fall for both advanced and emerging market economies. Government bond yields have been trending down for much of the last 20 years and especially since the GFC. Indeed, in recent years bond yields have turned negative, notably in Germany and Japan.



There are two main factors that explain why government borrowing costs have fallen in recent years – one policy driven, one a structural economic factor.

1. Central bank quantitative easing (QE)

Following the banking crisis of 2007 to 2009, central banks slashed interest rates and engaged in QE – the creation of money and its use to buy assets from the private financial sector. The assets purchased in QE programmes were predominantly own-country government bonds. This 'buyer of last resort' function helped put downward pressure on government bond yields in many advanced economies during and after the financial crisis (Figure 1.3). Central banks in the US, the UK, the eurozone and Japan all engaged in significant QE during this period. The Bank of Japan and the European Central Bank still had active QE programmes in the months immediately before the COVID-19 shock.

During the COVID-19 crisis many central banks, including those in some EMs, have launched new QE programmes on an even greater scale than during the GFC. This has put renewed downward pressure on advanced economy bond yields. But the already stretched financial positions of many EMs have been exacerbated by this crisis and they are now facing higher borrowing costs, reflecting greater default risk. World Bank data shows that EMs on average now are having to pay over six percentage points more interest on new sovereign debt than advanced economies. This compares with around three percentage points more in December 2019 (See Figure 1.4.).









Source: World Bank Group 2020

2. China's integration into the global economy

Even before the GFC, government bond yields had been on a declining trend. Much of this was said to be attributable to the increasing influence of China in the global economy, following its admission to the World Trade Organisation in 2001. China's export-driven growth model resulted in a powerful disinflationary force in the global economy as Western consumers benefited from lower-cost imported consumer goods from China. The consequent reduction in inflation expectations helped maintain a downward trend in government bond yields. The reduction in consumer inflation rates allowed central banks to keep their interest rates lower for longer. Meanwhile, China accumulated a huge stockpile of savings in the form of large current account surpluses, which peaked at 10% of GDP in 2007. These surpluses were recycled through capital outflows and involved the extensive purchase of US Treasury bonds, exerting further downward pressure on bond yields: pressure that slipped over into other government bond markets.

The China example above is a specific example of a more general influence bearing down on interest rates. This became known as the 'savings glut' – an excess of global savings over investment. China and other big surplus economies, such as Germany, generated substantial savings while investment spending remained relatively low because the corporate sector's need for property, plant and equipment declined as the service sector and the digital economy expanded rapidly. So while China's surpluses have fallen significantly in recent years and even Germany's domestic savings may be taken up, to some degree, by an emerging budget deficit, this structural force keeping interest rates low is likely to persist in the post-pandemic world economy.

Nominal GDP growth

For debt sustainability, the other key economic variable is the trend rate of growth of an economy. Recoveries after a financial crisis tend to be protracted and drawn out, taking a long time to regain the level of output prevailing before the recession. This was the case following the GFC of 2007-09, when economies took several years to recover lost ground. Much of this was due to the need to rebuild impaired balance sheets. But other factors appear to have done more permanent damage to growth in many economies. This has been reflected in the poor productivity performance relative to the period before the financial crisis. In the OECD, total factor productivity growth halved between the periods immediately before and after the financial crisis. This fall in productivity could be driven by ultra-low interest rates allowing 'zombie' companies to survive - rather than fail with consequent reallocation of capital to more productive use – and/or a lack of transfer of best practice from highly productive firms to less productive ones within the same sector. What is clear is that there has been a decline in productivity growth across advanced economies which has reduced their potential rate of real GDP growth.





Source: World Bank Group 2020

The combined effect of the two influences – lower inflation and weak real GDP growth – has resulted in a period of low nominal GDP growth among advanced economies. For example, in the 10 years before the GFC, OECD nominal GDP growth averaged 5.7% a year, but in the 10 years since then this annual average dropped to just 4% (see Figure 1.5). Low nominal GDP growth has potential implications for debt sustainability – intuitively, the faster the nominal GDP growth, the more sustainable the debt. This issue raises a final consideration that frames the current COVID crisis: the r – g equation.

The r – g equation is crucial for debt sustainability

Lower interest rates clearly benefit governments in reducing their debt-servicing costs. A key relationship in government debt sustainability is the differential between the interest rate and growth – the gap between the interest rate paid on government debt (r) and the rate of nominal GDP growth (g). If the interest rate–growth differential is positive, ie interest rates exceed the nominal GDP growth rate, a government fiscal surplus is needed to stabilise or reduce the debt-to-GDP ratio.¹ The higher the initial debt level, the higher the primary surplus will need to be. Conversely, a persistently negative interest rate differential, ie the interest rate is lower than nominal GDP growth, would imply that debt ratios could naturally reduce even in the presence of primary budget deficits. Thus 'r - g' is a crucial measure by which to judge debt sustainability.

The good news is that, since recovery from the GFC, many advanced economies have been in the latter position where nominal GDP growth exceeded the interest rate on their debt (see Figure 1.6).

EMs have also tended to enjoy an interest rate below their nominal GDP growth rates. Interest rates are often kept relatively low domestically by financial repression measures and captive and distorted domestic markets.

Since the financial crisis of 2007-9 there has been a large increase in the levels of government debt, both in advanced and EM economies. Despite this, debt servicing costs have tended to fall, reflecting a shift to a lower interest rate environment. While nominal GDP growth rates have also tended to fall, they nevertheless remain above interest rates, implying that a crucial test of debt sustainability is met. The present exceptional degree of economic uncertainty and economic volatility makes it difficult to judge whether this will still be the case once the current crisis is over.



FIGURE 1.6: Changes in favourability of government debt dynamics over time

Source: Federal Reserve Bank of St Louis Economic Databank (FRED) 2020

SUSTAINABLE PUBLIC FINANCES THROUGH COVID-19 | 1. A NEW ECONOMIC REALITY FOR PUBLIC FINANCE



THIS IS A GLOBAL DOWNTURN LIKE NO OTHER, WITH THE NUMBER OF ECONOMIES IN RECESSION REACHING 93% IN 2020 – THE HIGHEST LEVEL EVER REACHED, ACCORDING TO RECORDS DATING BACK TO 1871.

2. Public finance **innovation**: **expanding the toolkit**

The scale of the global economic shock has required governments to embrace new tools for intervening in the economy, as well as novel methods for managing public finances during the global pandemic.

The following account demonstrates that, in this new environment, traditional economic measures of the public sector's fiscal health – such as debt-to-GDP ratios – inadequately inform policymakers. Instead, governments need to embrace the decision-useful information created through public sector balance sheets (PSBSs) and take a net-worth perspective.

An expanding toolkit for public finance

Table 2.1 sets out examples of the policy interventions adopted by governments to combat the COVID-19 pandemic. These are divided into monetary and fiscal policy responses, with 'monetary financing' intersecting these two areas.

i. Monetary policy responses

With the outbreak of COVID-19, central banks have increased their monetary policy interventions in order to support their economies – boosting lending to the private sector and increasing the affordability of government debt.

Low or negative interest rates

In the wake of the GFC, central banks rapidly cut policy interest rates to exceptionally low levels, where generally they have remained ever since. In recent years some central banks, including the European Central Bank (June 2014) and Bank of Japan (January 2016) have introduced negative interest rates (NIRs). COVID-19 has triggered further rate cuts from central banks. For example, the UK policy rate was cut from 0.75% to 0.1%. The European Central Bank cut its existing NIR by a further 0.1 percentage point.

Quantitative Easing

Quantitative Easing (QE) was introduced by most major central banks in response to the GFC as an additional policy measure, once interest rates were at or close to zero. QE involves the creation of money by central banks and its use to buy financial assets, mainly government bonds, from the private sector. QE boosts liquidity and money holdings in the economy, supporting growth. It also boosted asset prices in the years after the GFC.

TABLE 2.1: Examples of policy interventions to combat the pandemic

I. MONETARY POLICY RESPONSES	III. FISCAL POLICY RESPONSES		
 Low or negative interest rates Quantitative easing Yield curve control 	 Conventional tax-and-spend interventions Wage and profit subsidies Cash transfers to households Tax cuts or deferral Loan guarantees Convertible loans Equity injections 		

Central bank balance sheets expanded dramatically as a result of QE programmes and that expansion has remained in place throughout the post-GFC period. Now, the onset of the COVID-19 crisis has prompted renewed QE measures from many central banks, often on an even bigger scale than adopted during the GFC.

Yield Curve Control

Yield curve control is another policy option available when short-term interest rates are at or close to zero. Here, the central bank buys and sells government bonds in order to achieve a target for long-term government bond yields. By maintaining both short and long-term interest rates at a certain level, yield curve control is intended to boost borrowing and spending. The Bank of Japan adopted this measure in late 2016, targeting 0% on its 10-year government bond, and it is being discussed by other central banks in the wake of the current crisis.

ii. Monetary financing

Monetary financing is where monetary and fiscal policy meet: the government issues debt to finance its budget deficit with the debt being bought entirely by the central bank. It is the route by which countries such as Zimbabwe, Venezuela and the Weimar Republic in 1920s Germany ended in hyperinflation. QE involves essentially the same process as this with two exceptions:

- that government bonds in QE are bought from the private sector and not directly from the government, and
- the declared intention under QE is that central bank holdings of government bonds will be temporary

 they will be sold back to the private sector when normal conditions are re-established.

This latter exception has not applied after the GFC, with little 'quantitative tightening' taking place. QE and pure monetary financing of budget deficits look identical on a central bank balance sheet. Ultimately, it is likely that the QE currently undertaken will de facto amount to monetary financing as central banks will hold the debt to maturity. The crucial issue is: who has the power to stop the process - governments or central banks? Concerns about monetary financing arise when governments decide how much to borrow, and the central bank buys the debt issued - so-called 'fiscal dominance'. Though monetary financing is receiving additional attention from public commentators (Wolf 2020), this tool still needs to be managed to avert high inflation and cannot be seen as a permanent means of closing the gap for governments with persistent budget deficits.

iii. Fiscal policy responses

Alongside the coordinated response by central banks, governments have responded to COVID-19 with an unprecedented scale of conventional revenue and expenditure interventions, alongside a considerable expansion in 'below the line' measures, which rely on PSBSs to support the economy. The IMF defines 'below the line' measures as those that involve the creations of assets (such as loans or equity in firms) or government guarantees that have no immediate upfront cost and do not change the deficit or debt position.²

Conventional revenue and expenditure interventions

The fiscal policy response to COVID-19 dwarfs the response to the 2007-09 GFC and is set to have a profound and long-lasting impact on public finances. Beyond their scale, these interventions have also expanded the range of the fiscal policy toolkit. For example, short-term COVID-19 response packages have included furlough schemes that provide subsidies that keep millions of employees on firms' payrolls, taxable grants are made available to self-employed workers affected by COVID-19, and many countries have agreed temporary expansions of government-subsidised sick pay. These measures provide support to firms and households that are unable to work owing to government guidance related to the pandemic (eq quarantines or full-scale lockdown). The broad policy intention in these measures is to provide a lifeline to firms and households, while governments require their economic inactivity, with the hope that business can continue operating after restrictions are lifted.

Tax deferral measures have supported firms and households – providing many with needed liquidity. For example, Austria alone has deferred 10bn euros of personal and corporate income taxes in 2020. The deferral of payment provides a simple mechanism, within existing systems, for improving the short-term financial position of firms and households.

In addition to the above, certain jurisdictions have announced permanent changes to their social benefit programmes in response to the crisis. In Spain, the government has approved a minimum income floor for its citizens of up to 1,050 euros per person each month. This new benefit is intended to be a permanent measure and should support many poor households that would otherwise be ineligible (including those with informal connections to the labour market). This programme is a targeted top-up to existing social benefits and is forecasted to cost about three billion euros a year, or 0.24% of GDP (The Economist 2020).

² IMF 2020a, Box 1.1, has a full description of 'above the line' and 'below the line' measures.

A new focus on 'below the line' interventions

Governments have also undertaken innovative approaches to supporting their economies during the pandemic, where the primary innovation in fiscal policy has been the use of PSBSs. These interventions have included significant loan guarantees and equity injections. For example, on 13 May 2020, the government of India announced a collateral-free lending programme with a 100% guarantee for certain small businesses (TNN 2020). Germany has allocated €100bn to acquiring direct equity in larger affected companies and strengthening their capital position (IMF 2020b).

Recent analysis by the IMF shows that the pandemic produced an initial, global fiscal policy response of about US\$9 trillion (Battersby et al. 2020). Figure 2.1 shows the breakdown of this intervention across the G20 economies. The result from the IMF's latest analysis shows that, of the \$9 trillion, the majority is made up of below-the-line measures (US\$4.6 trillion) – such as loan guarantees or equity injections. For some countries, such as Italy and France, the below-the-line measures represent the vast majority of their immediate fiscal policy response to the COVID-19 pandemic.

These below-the-line interventions are not sufficiently captured in many traditional economic indicators, such as the debt-to-GDP ratio or public sector net debt. For example, a loan guarantee would only affect traditional public finance metrics, such as debt-to-GDP, if a loss is realised. In addition, tax deferral should be recognised in PSBSs as accounts receivable – which will grow in many countries as a broad range of tax payments are deferred. The next chapter will set out the broad advantages, and other considerations, for governments that take this balance-sheet perspective (see Chapter 5 for an exploration of how this perspective supports the 'build back better' agenda). For clarity, the chapter includes an explanation of the interaction between government finance statistics and public sector accounting data.



FIGURE 2.1: G20 fiscal response to the COVID-19 pandemic, above-the-line and below-the-line measures

Source: IMF 2020a

FOR SOME COUNTRIES, SUCH AS ITALY AND FRANCE, THE BELOW-THE-LINE MEASURES REPRESENT THE VAST MAJORITY OF THEIR IMMEDIATE FISCAL POLICY RESPONSE TO THE COVID-19 PANDEMIC.



BELOW-THE-LINE INTERVENTIONS ARE NOT SUFFICIENTLY CAPTURED IN MANY TRADITIONAL ECONOMIC INDICATORS, SUCH AS THE DEBT-TO-GDP RATIO OR PUBLIC SECTOR NET DEBT.

3. Taking a **balance-sheet approach** to COVID-19

Traditional economic analysis of a government's financial health focuses on flows (ie revenue and expenditure) as well as covering the stock of public debt (often expressed as a debt-to-GDP ratio). Figure 3.1 demonstrates that, by value, the majority of fiscal policy interventions to COVID-19 are 'below-the-line' measures and are not captured in this standard analysis. Therefore, policymakers need to expand their toolkit for managing public finances – by taking a balance-sheet approach and adopting public sector net worth as a key indicator for navigating the global crisis.

Key recommendation

Governments must turn their attention to public sector balance sheets, which include non-debt liabilities and public assets, to manage their finances effectively through this crisis.

Understanding the frameworks for producing a public sector balance sheet

There are a variety of accounting and statistical frameworks that require the presentation of a PSBS. Figure 3.1 sets out common reference frameworks used in the public sector for reporting financial information. These can be summarised as follows.

- National accounts, such as the System of National Accounts and the European System of Accounts, provide an agreed statistical framework for measuring key international items, such as gross domestic product.
- Government finance statistics (GFS) provide a macroeconomic statistical framework, intended for analysing and evaluating fiscal policy. The GFS Manual is published by the IMF (2014).
- Public sector accounting (PSA) standards, such as the IPSAS, provide guidelines on the recognition, measurement and disclosure of economic activity for general-purpose financial statements.

FIGURE 3.1: Current reference frameworks National Accounts Government Finance Statistics (GFS) Public Sector Accounting (PSA) INTERNATIONAL GUIDELINES / REQUIREMENTS International Public Sector Accounting Government Financial Statistics Framework System of National Accounts (SNA 2008) (GFSM 2014) Standards (IPSAS) SPECIFIC REQUIREMENTS FOR EU MEMBER STATES OR COUNTRIES WITHIN THE EUROPEAN STATISTICAL SYSTEM Manual on Government Deficit and Debt Development of European Public Sector European System of Accounts (ESA 2010) Accounting Standards (EPSAS) in progress. To date there exist no EU specific public sector accounting standards. (MGDD) Excessive Deficit Procedure (EDP)^a OBJECTIVES Economic analysis, decision-Accountability and decision-making Fiscal analysis making and peacemaking Excessive deficit procedure reporting is only applicable for countries under the EU fiscal surveillance (ie EU Member States). It is essentially only a specific statistical

a) Excessive deficit procedure reporting is only applicable for countries under the EU fiscal surveillance (ie EU Member States). It is essentially only a specific statistica output of GFS and does not depict a reference framework in its own right.

Source: International Bank for Reconstruction and Development/The World Bank 2019

Each of these frameworks is intended to meet particular objectives (eg PSA provides accountability and supports good decision making, while GFS is used for fiscal analysis) and, therefore, have different reporting boundaries and conceptual differences. For example, GFS and national accounts frameworks use current market prices for measuring all flows and stocks, whereas IPSAS requires an accounting policy choice on whether to measure assets and liabilities on a fair value, historic cost or other basis. At the same time, all three frameworks have considerable overlap. Each framework uses accrual information; includes assets, liabilities, revenue, and expense; and sets out cash flows over the period. As a result, the financial information created through IPSAS can be made suitable for the production of statistical reports, such as GFS. A recent publication by the World Bank's PULSAR group noted that 'IPSAS are suitable for the compilation of GFS under ESA 2010 and/or GFSM 2014, although reconciliation steps are necessary due to the different underlying paradigms' (International Bank for Reconstruction and Development/The World Bank 2019). To help bridge this gap, governments should consider producing a consistent, multipurpose 'Chart of Accounts' that supports the preparation of full accrual financial statements, as well as providing information for other reporting purposes.

What is 'the public sector' for the purposes of PSA and GFS?

Reporting a PSBS requires clarity on the accounting boundary and definitions.³ In the case of PSA frameworks, the IPSAS Board designs its standards for public sector entities that:

- a) are responsible for the delivery of services to benefit the public and/ or to redistribute income and wealth
- b) mainly finance their activities, directly or indirectly, by means of taxes and/or transfers from other levels of government, social contributions, debt or fees, and
- c) do not have a primary objective of making profits.

In this case, commercial public sector entities are expected to apply the International Financial Reporting Standards (IFRS). For consolidation purposes, IPSAS requires the inclusion of all public sector entities (which meet all the criteria above) and commercial public sector entities. IPSAS is based on IFRS and diverges only where there is a specific public sector need – making the consolidation and reconciliation process more efficient.

In comparison, the GFS boundary includes the categories of general government, publicly owned financial corporations, and publicly owned non-financial corporations. Table 3.1

ASSETS	LIABILITIES	
 Financial assets: Monetary gold and special drawing rights Currency and deposits Debt securities Loans Equity and investment fund shares Insurance, pensions and standardised guarantee schemes Financial derivatives and employee stock options Accounts receivable 	 Financial liabilities: Monetary gold and special drawing rights Currency and deposits Debt securities Loans Equity and investment fund shares Insurance, pensions and standardised guarantee schemes Financial derivatives and employee stock options Accounts payable 	
Non-financial, produced assets:Fixed assets		
Non-financial, non-produced assets:LandMineral and energy resources		
TOTAL GOVERNMENT ASSETS	TOTAL GOVERNMENT LIABILITIES	
NET WORTH = ASSETS – LIABILITIES		

TABLE 3.1: Illustrative public sector balance sheet, based on the GFS framework

3 A detailed account on the definitions of the public sector can be found in the appendix of ACCA 2016.

Source: IMF 2018a

illustrates the categories of assets and liabilities that are included in the GFS framework. This includes financial assets, non-financial produced assets, and non-financial non-produced assets. The net-worth position is then achieved by subtracting the liabilities from the assets.

The 10 case examples summarised in Chapter 4 rely on the GFS-compliant data published by the IMF and are supplemented by other sources (see Appendix B for a full description of the methodology). The illustrative PSBS in Table 3.1 includes produced assets (eg property, plant and equipment) and non-produced assets. For comparability, non-produced assets, such as land and energy resources, are excluded from this report's analysis. Natural resources (eg subsoil resources and the electromagnetic spectrum) are among these exclusions – an area currently under review by the IPSAS Board (IPSASB 2019).

Accrual accounting – the foundation for public sector balance sheets

Taking a balance-sheet approach, using any of the frameworks above, requires that public sector organisations produce good accounting data through the implementation of international accounting standards and robust financial management systems. A significant global report, published in late 2018, found that 40% of central governments were transitioning from a traditional cash basis, which records only cash receipts and payments, to an accrual basis, which records the substance of transactions - including assets, liabilities, revenues, and expenditure - irrespective of whether cash is actually received or not. If these plans are realised, 65% of central governments will be reporting on a full accrual basis by 2023 (IFAC and CIPFA 2018). This would mark excellent progress on the adoption and implementation of accrual accounting in the public sector - which is a prerequisite for taking a balance-sheet approach to governments' responses to COVID-19.

Reconciling national accounts and public sector accounting frameworks

PSBSs provide a more comprehensive view of a public sector's financial health by expanding the analysis to include stocks (ie non-debt liabilities and public assets), alongside flows. Many of the 'below-the-line' interventions announced by governments around the world would be captured by the non-debt liabilities included in PSA frameworks. Non-debt liabilities can include, for example, public sector pensions commitments and provisions for loan guarantees – as set out in the illustrative reconciliation between national accounts and PSA in Figure 3.2. Reconciling the national accounts framework with PSA also requires the addition of public assets – including property, plant and equipment, and investments (see Figure 3.2 for a full list of public assets excluded from the national accounts framework).

The reconciliation of national accounts to a full-accrual PSA, such as IPSAS, provides a fuller view of public sector finances. For example, Public Sector Net Debt in the UK, which is based on the National Accounts framework, was £1,779bn in 2017/18. In comparison, the net-worth position using the UK's PSA framework results in net liabilities of £2,565bn. This is a considerable change in the scope and understanding of the financial position of the country – where, in the UK, public sector pensions represent larger liabilities than the total public debt.

FIGURE 3.2: An illustrative reconciliation between public sector net debt (national accounts) and net worth (PSA)

PUBLIC SECTOR NET DEBT (PSND) (NATIONAL ACCOUNTS)

Add liabilities not recognised in national accounts

- Net public sector pensions liability
- Provisions
- Private finance initiative (PFI) contracts

Adjust assets measured differently in national accounts

Add assets and liabilities excluded from PSND

- Property, plant and equipment
- Investment property
- Intangible assets
- Trade and other receivables
- Prepayments and accrued income
- Inventories
- Investments
- Trade and other payables
- Accruals and deferred income

Deduct liabilities not recognised in PSA

• Housing associations

Other adjustments including eliminations

NET WORTH POSITION (PSA)

\mathbb{A} Box 3.1: A cautionary word on the balance-sheet approach

Using the information from public sector balance sheets provides many advantages to governments, as they seek to address the economic damage caused by the COVID-19 pandemic. At the same time, there are limitations to balance sheet information, and it should be used in conjunction with other accounting and finance data for the proper management of public finances.

Certain assets and liabilities are difficult to measure reliably (eg heritage assets) and a higher degree of knowledge and scrutiny is required for decision makers to benefit fully from the financial information presented on a balance sheet. For example, it is possible for governments to maintain a negative equity position because of a substantial unmeasured intangible asset: their ability to raise tax in the future. Many public assets are illiquid, and it is therefore critical that governments remain committed to effective cash management. Finally, asset valuations can fluctuate or be hard to measure at all (eg non-listed equity holdings).

To help mitigate these issues, jurisdictions should reference or implement full-accrual IPSAS, the only globally accepted accounting standards for the public sector, in the production of their general-purpose financial reports. Finance professionals should also apply their judgement in reporting assets or liabilities that are hard to measure reliably. For example, heritage assets may be given a nominal value, allowing them to be recorded on the balance sheet without affecting the net-worth position. PSBS will support users and non-expert decision makers best when accompanied by a clear narrative and appropriate notes. Finally, the above should be complemented by public finance experts participating in global community discussions on good practices in financial reporting in the public sector, as many issues are common across countries transitioning to accrual accounting.



The benefits of the balance-sheet approach during a crisis

Figure 3.3 presents the evolution of the UK's PSBS from 2000 to 2016. The bars below zero on the y-axis represent the size of the country's liabilities, while the bars above zero represent the public assets held by the government. The UK's net worth (the black line) is then calculated as the net of the government's assets and liabilities. Before the GFC, the UK had a negative net worth of about 31% of GDP (such that the UK government's liabilities outweighed its assets) (IMF 2018a). The last economic crisis produced a considerable expansion in the UK government's balance sheet and an overall decline in its net-worth position which fell to a negative figure of 126% of GDP by 2016. The deterioration in the UK's public finances was driven by large-scale rescue measures for the financial sector. This reclassification saw public financial corporation liabilities increase from 0% of GDP in 2007 to 89% of GDP in 2008.

The last crisis produced significant movements in PSBSs and the COVID-19 pandemic will be no different. Significant new non-debt liabilities are being created and these must be effectively identified, measured and managed. In adopting a balance-sheet approach to this crisis, governments will benefit from:

- increased clarity about the true position of the public finances, as well as an understanding of the fiscal room available for further government action
- improved value for money and financially sustainable decision making, and
- enhanced public sector resilience and the embedding of key financial metrics to drive performance management.

The first benefit – a clear view of a government's financial position, including non-debt liabilities and public assets - will be critical in navigating the crisis. Policymakers will need to make difficult decisions on the timing and size of support measures and require a clear view of the fiscal room available to them. Even before the COVID-19 outbreak, there was clear evidence that governments needed to take a more holistic view of their finances. For example, Andreas Bergmann – a professor of public finance at the Zurich University of Applied Sciences explained in an interview with ACCA in late 2019 that: 'the consolidated liability position in Switzerland was about four times the non-consolidated government bond position'. The incomplete picture offered by traditional metrics of public sector fiscal health is no longer sufficient, particularly with the large scale 'below the line' measures that will only be captured properly through a PSBS.

On the second and third benefits – the new information generated through accrual accounting, and included in a PSBS, will support good value for money and policymakers' adoption of financially sustainable policies. It also provides new information that allows for stress testing, as well as the identification and management of fiscal risks (for example, through the reporting of contingent liabilities). A comprehensive PSBS reduces fiscal illusions and improves the management of public assets and liabilities. These benefits are explored in more detail in Chapter 5 – which sets out how comprehensive PSBSs can support the 'build back better' agenda after COVID-19.



FIGURE 3.3: The UK's public sector balance sheet, 2000–2016 (% of GDP)

POLICYMAKERS WILL NEED TO MAKE DIFFICULT DECISIONS ON THE TIMING AND SIZE OF SUPPORT MEASURES AND REQUIRE A CLEAR VIEW OF THE FISCAL ROOM AVAILABLE TO THEM.

4. The effect of **COVID-19** on **public sector balance sheets** in **10 countries**

The following provides a high-level summary of the analysis undertaken by Cebr on the impact of COVID-19-related fiscal policy interventions on PSBSs in 10 countries. These countries are:

- US
- Japan
- UK
- Italy
- Brazil

- South Africa
- Indonesia
- Canada
- New Zealand, and
- Turkey.

Though not comprehensive, this sample of countries includes at least one case study from every inhabited continent, at a variety of levels of economic development, and represents about 42% of world GDP (World Bank Data 2019). The detailed presentation of each country case study can be found in Appendix A.

The analysis sheds light on the impact of the COVID-19-related fiscal response in each country, considering both financial and non-financial assets and liabilities. The analysis includes two important assumptions worth noting at the outset.

- First, the value of each country's total assets and liabilities as a share of GDP has been projected until 2022, under the fixed assumption that GDP returns to 2019 levels in real terms by 2022.
- Second, these projections only consider the effects of newly announced fiscal interventions related to the COVID-19 outbreak. As a result, other factors, such as automatic stabilisers,⁴ are not included in the forecasts. The full methodology is described in Appendix B.

Each country's fiscal outlay from COVID-19 is subject to considerable uncertainty, and will depend on the spread of the disease, the effectiveness and costs of existing policy interventions, and the possible need for additional stimulus measures in future. To capture this uncertainty, lower-bound, central, and upper-bound scenarios have been developed for the 10 countries, showing a different level of fiscal spending during the COVID-19 crisis under each scenario.

The impact of fiscal policy interventions on public sector balance sheets

Chapter 1 demonstrated that the pandemic, and the associated lockdown measures that have been implemented to contain it, have led to a sharp contraction in economic output in 2020. Governments' economic responses have been highly varied, as have the structures of their fiscal packages. Figure 4.1 displays the size of the direct fiscal expenditure for each country relative to the total value of loans and credit that each government has committed to supporting.⁵ In the US, the vast majority of measures represent fiscal expenditures that will have a direct impact on traditional economic metrics, such as debt-to-GDP. In the case of Italy, however, only a small share of the COVID-19-response package comprises direct fiscal expenditures, with a far larger portion coming from loan guarantees from the government. Italy's preference for 'below the line' interventions might be explained by its comparatively high debt-to-GDP ratio, because a fiscal response based on government-backed guarantees does not immediately affect Italian fiscal limits.

⁴ Automatic stabilisers include the decline in tax revenues and increases in government transfers that occur in an economic downturn.

⁵ Data is not available on the total size of the loan guarantee scheme in Indonesia, so this country has been excluded from Figure 4.1.

In line with the IMF analysis presented in Chapter 2 (see Figure 2.1), our analysis shows that four countries in the sample have announced fiscal policy interventions that are dominated by 'below the line' interventions: Italy, the UK, Japan and Turkey (Figure 4.1). For each of these countries, debt-to-GDP ratios would not accurately capture the impact of their fiscal policy responses. Across the full sample, about 57% of the fiscal policy responses were 'below-the-line' interventions.

As of 2019, the average net worth across the 10 sample countries, excluding produced assets, was about minus 17% of GDP. Only three countries in the sample - Canada, New Zealand, and Indonesia - entered the crisis with a positive net worth. By 2022, the average net worth across the sample is forecasted to drop to about minus 30% of GDP. The largest deteriorations in government net worth are expected to occur in the US (with a 27-point decline) and Japan (with a 20-point decline). It is also forecast that, by 2022, only two countries in the sample will maintain a positive net worth: New Zealand and Indonesia. This broad deterioration accounts for only the immediate fiscal policy response by governments to COVID-19. The full impact of COVID-19 on PSBSs will be much worse since other factors, such as reduced tax receipts and increased health and social benefit spending, will put additional negative pressure on public finances.

COUNTRY	2019	2020	2021	2022
UK	-49%	-59%	-55%	-52%
US	-16%	-36%	-40%	-43%
Japan	-47%	-64%	-66%	-67%
Italy	-73%	-90%	-87%	-85%
Brazil	-45%	-59%	-60%	-60%
South Africa	0%	-9%	-12%	-14%
Indonesia	10%	4%	3%	3%
Turkey	-6%	-13%	-14%	-14%
New Zealand	53%	43%	41%	40%
Canada	4%	-3%	-4%	-4%

TABLE 4.1: Ratio of government net worth to GDP, Central scenario, 2019 – 2022

Source: Cebr analysis





Underneath these top-line results is considerable movement in the asset and liability positions of the 10 sample countries. For example, Figure 4.2 shows that financial and produced assets in Brazil are set to deteriorate from over 50% of GDP in 2020 to about 45% of GDP in 2022. Part of this trend is driven by the assumed GDP growth rates over the period, but also reflects the assumptions on announced investment in the country.6 The Office for Budget Responsibility (OBR) in the UK provides projections of government capital expenditures over the next three years, which explains the marked increase in UK public assets over the period (OBR 2020). Non-produced assets were excluded from the data presented in this report because of the variability in their measurement and lack of data in certain jurisdictions. At a high level, the average size of non-produced assets across the country sample was 43%, with significantly

higher levels of non-produced assets as a share of GDP observed in EMs and developing countries (eg South Africa and Brazil).

On the central scenario, COVID-19-related fiscal policy interventions are set to increase government liabilities from an average 89% of GDP in 2019 to 100% of GDP in 2022. The analysis accounts only for currently announced measures in 2020, with upper and lower bound scenarios, given the immediate uncertainty. Therefore, the full impact of the COVID-19 crisis on government liabilities could be substantially worse, if reduced tax receipts and increased social benefit costs were captured in the analysis. A second wave of the virus, and subsequent shutdown, or a higher rate of default on government-guaranteed loans would further compound this increase in financial liabilities across the 10 sampled countries.



Source: Cebr analysis

ON THE CENTRAL SCENARIO, COVID-19-RELATED FISCAL POLICY INTERVENTIONS ARE SET TO INCREASE GOVERNMENT LIABILITIES FROM AN AVERAGE 89% OF GDP IN 2019 TO 100% OF GDP IN 2022.

6 Excluding the UK, which relies on the OBR forecasts, government capital expenditure for each year is based on the IMF's projections of total government expenditure and the historic ratio of capital expenditures to total expenditures in each country.





FIGURE 4.4: Financial liabilities forecast in the US, Turkey and Italy, central scenario, 2019 – 2022



SUSTAINABLE PUBLIC FINANCES THROUGH COVID-19 4. THE EFFECT OF COVID-19 ON PUBLIC SECTOR BALANCE SHEETS IN 10 COUNTRIES

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5. Using public sector balance sheets to 'build back better'

Earlier chapters demonstrated the unprecedented economic downturn resulting from the COVID-19 pandemic (Chapter 1), the unaccounted-for 'below the line' policy interventions in response to this crisis (Chapters 2 and 3), and the broad deterioration in public finances (Chapter 4). Together these three challenges provide a difficult backdrop to the global call for countries to 'build back better' (see Box 5.1 for a description of the 'Build back better' campaign).

The following account demonstrates that governments will be better placed to rebuild their economies, and address the three challenges in Figure 5.1, by taking a balancesheet approach.

FIGURE 5.1: The challenging context for building back better



5.1 Deteriorating public finances: tax rises or public sector austerity?

Chapter 4 outlined the impact on PSBSs of the initial fiscal policy interventions to the crisis, which have sought to provide desperately needed support to firms and households during lockdown. Governments' financial firepower will still be needed to lay the foundations for 'building back better', but traditional metrics of public sector financial health give an incomplete picture and suggest that there will be limited fiscal room for governments to lay this foundation.

Our analysis shows that the pandemic will trigger a broad deterioration of public finances. The fiscal policy responses to COVID-19, in isolation, are set to reduce government net worth in our 10 sample countries by an average of 13% of GDP. The OECD's Economic Outlook reinforces this view (OECD 2020). Their June report forecasts a near 20 percentage point rise in the debt-to-GDP ratio among its members in the two years to 2021. While budget deficits will tend to fall somewhat once generous support measures are phased out, they are still likely to remain above pre-crisis levels and exert upward pressure on debt levels. What is the likely policy response to this?

GOVERNMENTS WILL BE BETTER PLACED TO REBUILD THEIR ECONOMIES, BY TAKING A BALANCE-SHEET APPROACH.

Box 5.1: Building back better

Countries and multilateral institutions, alongside citizens and a wide range of multi-stakeholder coalitions, are focusing on how to rebuild economies so that people recover their livelihoods in a resilient, inclusive and prosperous way – once the worst of the health and immediate economic impacts of the pandemic have passed.

'Building back better' through recovery plans linked to COVID-19 has been taken to mean ensuring that policies and packages are both green and inclusive. Both objectives are intended to support interconnected near and longer-term government policy objectives.

For example, green policies may focus on climate and nature-focused programmes that support net-zero carbon targets and county-level ambitions aligned to the Paris Climate Agreement. They also can create ready-to-go green jobs, through a range of 'shovel ready' projects linked to, for example, retrofitting buildings to improve insulation, rolling out green infrastructure and energy development, and urban design for active travel and health.

The 'inclusive' approach is a recognition that those who have been hardest hit during this pandemic have been the least well off, both from health and income perspectives. The pandemic has been deepening and accelerating deprivation among groups with a higher prevalence of working in less-protected, more precarious jobs and in the hardest-hit sectors such as retail and hospitality. Furthermore, the brunt of systemic changes to industries will be borne by those working at the end of global supply chains that have been fundamentally disrupted. Inclusive policies will support expansion of social protection schemes, retraining programmes, better public service provision and improving air quality and nutrition, which determine many health outcomes.

Kindly contributed by Jimmy Greer, Head of Sustainability, ACCA



Governments are likely to want, first, to stabilise their spending and then to begin rebuilding their balance sheets after the crisis. There are two traditional responses available to governments to achieve this stabilisation: reduce public spending or increase taxes. Ideally, governments could avoid this difficult decision by expanding their economies so that the burden of gross liabilities falls over time – but this expansion is not guaranteed. Another option would be to promote inflation, reducing the burden of certain government liabilities over time (eg nominal public debt).

After the last economic crisis, governments in many advanced economies embarked on austerity programmes as they sought to reduce budget deficits, which had ballooned with their efforts to support their economies during the crisis. The composition of adjustments between spending cuts and tax hikes varied across countries. For example, in Italy the adjustment was nearly all taxbased, while in the UK and Ireland public spending cuts dominated. Spain lay between these extremes, although it leaned more towards spending cuts than tax hikes (Alesina et al. 2015).

Turning to the current crisis, it seems unlikely that spending cuts will similarly dominate any deficit reduction policies post-pandemic. Health and social care spending will be subject to even greater upward pressure in coming years, both for demographic reasons and because of the public's demand for improved preparedness in case of another health crisis.

Meanwhile, the scope for major tax increases may be relatively limited as a fragile private sector undergoes postcrisis structural change. Nonetheless, the proposed EU Recovery Fund may offer some clues as to where a higher tax burden may fall. This Fund, initiated by the European Commission, will first raise money in capital markets to distribute to EU countries badly affected by COVID-19. But the debt will ultimately be repaid with tax revenue, the main sources of which are tentatively identified as increased taxes on 'big tech' and on carbon emissions.

Additional options for achieving sustainable public finances

In the current environment, some combination of austerity and tax increases will be required in many countries – but governments can look to minimise their reliance on these two measures by taking a balance-sheet approach to fostering sustainable public finances. This can be achieved through maximising the return on public assets, focusing on value for money in the use of public resources, and expanding the scope of the PSBS to include a broader range of capitals. Maximising the return on public assets: Dag Detter, a former director of Sweden's Ministry of Industry, argues that taking a net worth perspective, with the aim of improving the return on public assets, could generate more revenues annually than developed economies currently receive in corporate tax collections (Scuriatti and Detter 2019). Where appropriate, policymakers will need to take a commercial approach to the management of public assets – creating new revenue and reducing the need to rely on tax increases or austerity to balance the books.

At the same time, many public assets are not marketable, as policy objectives (eg running a public school) do not typically align with generating financial returns. The New Zealand government seeks to address this issue by classifying its assets and liabilities as social, financial and commercial – where commercial assets have more scope for financial returns. This classification is used in the country's Investment Statement, which must be produced by Treasury at least every four years and sets out the expected changes to the PSBS in the near future (Treasury [New Zealand] 2018). In a similar vein, the government of New South Wales in Australia created an Asset and Liability Committee in 2016, with the intention of providing expert advice to government on how best to weigh the risk and return objectives to unlock the value of the state's balance sheet.

Achieving value for money and financially sustainable policies

Good, sustainable policies can only be achieved with the aid of robust financial information. Governments have long avoided difficult fiscal realities by relying on fiscal illusions: 'accounting devices that give the illusion of change without its substance' (Irwin 2012). The severity of the current crisis means that these avoidance tactics are no longer an option. For example, privatisation could provide value for money to citizens - but this will not be clear unless governments take a balance-sheet approach. The IMF notes, in 'Fiscal Monitor: Managing Public Wealth', that, in a cash accounting environment, 'privatisations increase revenue and lower deficits but [ultimately] also reduce the government's asset holdings. Similarly, cutting back maintenance expenditure reduces the deficit and lowers debt, but also reduces the value of infrastructure assets' (IMF 2018a). Therefore, taking a balance-sheet approach means that governments are more likely to avoid poor-value privatisations, while also recording the effects of any maintenance backlog.

The mismanagement of assets can extend beyond poor-value privatisation or maintenance. Without taking account of net worth, governments may be tempted to sell public assets at a loss in order improve their cash holdings –a balance-sheet approach will show the net profit or loss arising from the sale. On the other side of the balance sheet, the proper recognition of liabilities will be important for achieving value for money from the government interventions addressing COVID-19. For example, these could include recognising that monies transferred to a struggling business, where repayment is likely to be suspended, are grants rather than loans. The proper classification of transactions related to government interventions will support decision making and provide a clearer view on the long-term sustainability of public finances.

Broadening the scope of the PSBS to 'build back better'

Achieving an inclusive and green recovery will also require policymakers to look beyond their financials.⁷ Informed decisions on the recovery should, where possible, include an expansion of the PSBS to include four capitals: natural, human, social, physical / financial. Natural capital includes all aspects of the natural environment that support human life (eg soil, water, air); human capital encompasses people's knowledge, skills, physical and mental health; social capital comprises the norms and values underpinning the society (eg public trust, the rule of law, cultural identity); and, finally, financial and physical capital represents the roads, buildings, equipment and financial assets that support the material living conditions in the country (Deloitte n.d.). A broadly scoped analysis of the PSBS is currently applied in New Zealand, where the Treasury's vision is to raise the living standards of New Zealanders. The Public Finance Act in New Zealand requires the government to maintain levels of net worth that provide a buffer against future shocks – improving the resilience of the state. At the same time, the ultimate objective of monitoring and strengthening net worth is improved well-being and living standards. PSBS information is used as a tool for understanding progress towards this vision and helping officials to ask the right questions. Figure 5.2 sets out the country's approach to measuring performance through a balance sheet lens, which includes example questions and indicators across five dimensions. It will be important for governments to consider these broader metrics when tackling the aftermath of COVID-19, particularly when public spending in other areas (eq education) could be crowded-out by the need to redirect expenditure to the pandemic response. While addressing the immediate crisis, it will be essential for public finance officials to consider how any redirection of resource affects broader metrics of societal well-being and sustainability.

DIMENSION	TO KNOW THAT THE GOVERNMENT IS INVESTING FOR WELL-BEING, WE ASK:	EXAMPLE INDICATORS
Effectiveness	Are the highest-priority investments to improve well-being, being made?	Well-being outcomes, functionality, condition, financial returns, satisfaction with service
Efficiency	Given the investments made, are they being used productively?	Use, condition, availability, surplus assets, operating efficiency, financial returns, cost of capital
Sustainability	Is funding sufficient to sustain expected service delivery, under current policy settings?	Forecast financial spend, affordability analysis, gearing and capital structure, forecast profitability, capacity, capability
Resilience	To what extent can the investment cope with unexpected events, for example; financial shocks or natural disasters?	Sensitivity analysis, adequate contingency, responses to previous shocks
Adaptability	To what extent can the investment respond to long-term trends, for example, technological, demographic, and societal changes?	Transformation programmes, scenario planning, demand planning, flexibility of assets

FIGURE 5.2: New Zealand's approach to measuring balance sheet performance

Source: McLoughlin 2020

⁷ Other international bodies have established comparable multi-capital frameworks, such as the International Integrated Reporting Council's Six Capital Framework (IIRC 2013).

5.2 Responding to the unprecedented economic downturn

The deteriorating public finances are closely linked to the broader economic downturn. Even so, there are ways that governments can work to rebuild their economies – applying a balance-sheet approach – so as to support a more inclusive and sustainable economy in the future.

Establishing a new fiscal framework to help rebuild the economy

The initial policy measures, as captured in Chapters 2 and 4, sought to protect the productive capacity of each country's economy and provide a lifeline in order to restart these economies after the pandemic has passed. Governments have increased employment protection, subsidised firm payrolls, and deferred tax payments to provide additional short-term liquidity.⁸

The attention of many policymakers is now turning to the best way of rebuilding economies. The next round of policy measures will be costly for many governments – for example, through large-scale public investment in economic activities that have a high multiplier and are sustainable (see next subsection). To achieve this investment, governments must have a clear view of what fiscal firepower remains to them, allowing for the largest possible intervention, while protecting public sector resilience to future shocks and maintaining the long-term sustainability of public finances. Figure 5.3 sets out the nature of the challenge ahead, where the horizontal axis shows the size of the government fiscal policy response and the vertical axis represents the medium- to long-term sustainability of that government's public finances. A too-small intervention, or premature tax increases, will stifle the recovery and could reinforce the country's downturn. This would be caused by underinvestment, renewed austerity measures and premature tax increases. At the other extreme, a toolarge fiscal policy response by government will increase debt and non-debt liabilities beyond manageable limits and produce an increasingly negative outlook for the sustainability of public finances. This curve, presented in Figure 5.3, is merely illustrative. Each country must navigate a different curve to achieve sustainable public finances through the COVID-19 recovery, where there maybe few options that generate a positive outlook in some jurisdictions. But the overall objective is the same: maximising the countercyclical response (ie reaching the apex of the curve), while providing the economic foundations for a green and inclusive recovery.

Therefore, governments need to revisit their current economic frameworks, in light of the COVID-19 crisis, and consider what fiscal rules will guide their decision making during the recovery phase. This new framework should include fiscal rules that move beyond debt-to-GDP ratios and instead rely on public sector net worth, providing a comprehensive view of public finances that includes public





- Underinvestment, austerity, and procyclical responses drive an economic contraction – resulting in a reduced tax base and a negative outlook for public finances.
- (2) Balanced fiscal response is countercyclical and builds foundations for recovery, without jeopardising the long-term sustainability of public finances.
- (3) An excessively large fiscal intervention supports economic recovery, but produces a long-term negative outlook.

8 See the IMF's frequently-updated COVID-19 policy tracker for more detail (IMF 2020b).

assets and non-debt liabilities. Policymakers will also need to use their revised fiscal frameworks to establish a planned path to recovery, setting out how sustainable public finances will be achieved over the medium- to long-term.

Improving the allocation of public investment

A sustained recovery from the COVID-19 crisis will require the effective allocation of public resources, for example through public infrastructure investment.⁹ This must be incorporated into each jurisdiction's vision for rebuilding its economy. The following discussion covers two areas of consideration for governments seeking the best ways of allocating their capital to support the recovery: government spending multipliers and the size of government investment as a share of GDP.

The government spending multiplier is a measure of how much GDP changes after a given change in government spending. Recipients of an increase in government spending will spend a proportion of it on goods and services, and the sellers of these do likewise and so on, generating a stream of extra spending that boosts GDP by more than the initial government spend (ie the multiplier is greater than one). Therefore, in the current circumstances the issue is whether an appropriately targeted increase in public spending may, through a multiplier effect, help give momentum to post-crisis economic recovery. There is great uncertainty about the value of multipliers, which vary over time and across countries. Multipliers may be affected by the state of the public finances in a country: a spending boost undertaken when budget deficits and public sector debt are at a high level may trigger volatility in financial markets that results in a fall in spending elsewhere in the economy, offsetting the initial boost. In 2012 the IMF revised its estimates of multipliers for the period after the GFC of 2007-9, to be in the range 0.9 to 1.7 rather than 0.5, which had been used in the forecasting process. From a public spending efficiency perspective, spending that improves supply-side performance – such as investment in infrastructure, skills and training – is more likely to produce a higher multiplier (IMF 2012).

Beyond the economic multipliers from different public investment choices, it is also worth considering the size of government investment as a whole. Good public investment decisions, including in non-current assets such as transport infrastructure or schools, can improve a country's productivity and support social outcomes. Analysis by the OECD of government investment in 38 countries shows that investment, on average, fell from 3.7% of GDP in the sample countries in 2007 to 3.3% of GDP in 2017 (see Figure 5.4). As part of resetting fiscal limits, governments should develop medium-term plans for capital spending that support a green recovery and inclusive growth – while also considering the possible economic multipliers arising from any public investment decision.



9 See ACCA's previous work with CPA Canada (Metcalfe and Valeri 2019).

5.3 Accounting for policy interventions and fiscal risks

Previous chapters made the case for using PSBS for proper recognition and management of the new assets and liabilities that are being created through the public sector response to COVID-19 (see Chapters 2 and 3). But this leads to an important question: how can jurisdictions not currently using an accrual basis benefit from the balancesheet approach during the COVID-19 crisis?

The 2018 International Public Sector Financial Accountability Index found that only 25% of countries, in its sample of 150 central governments, had implemented accrual accounting in 2018 (IFAC and CIPFA 2018). Though this figure was forecast to increase from 25% to 65% by 2023, this still suggests that many countries will not yet be able to rely on accrual information (see Figure 5.5 for the global results of the Index).

First, even jurisdictions operating on a cash basis can apply the mindset of balance-sheet management to their decision making. All public sector organisations maintain some form of accounting data, for example the purchase price of an asset from a previous financial year, and can consider this information when deciding whether a change represents value for money. Strategic decisions, such as whether to privatise a service, can similarly benefit from considering the implications on net worth – even where accrual information does not exist. Second, countries transitioning to accrual, or still on a cash basis, should

Accrual (37)

apply the Pareto principle (or 80/20 rule) to maximise the benefit of the balance-sheet approach during the crisis. The Pareto principle asserts that 80% of outputs result from 20% of all inputs (Kruse 2020). Therefore, public finance professionals in countries not using an accrual basis should prioritise analysis that provides the most immediate analytical support for navigating the crisis, such as identifying and monitoring the top 10 risks to the PSBS.

Governments should also consider adopting the nonauthoritative guidance issued by the IPSAS Board on reporting long-term financial sustainability (Recommended Practice Guideline 1 (RPG 1)), as well as the Board's guidance on financial statement discussion and analysis (Recommended Practice Guideline 2 (RPG 2)). The application of RPG 1 is particularly critical as it establishes, using current policy assumptions, the ability of an entity to meet its service and financial commitments, now and in the future. The production of long-term fiscal sustainability reports provides decision makers with important information on whether their policy decisions, taken during the COVID-19 crisis, support intergenerational equity. Clearly, substantial budget deficits in many countries will cause a deterioration of the long-term sustainability of the public sector, but policy decisions that reinforce this downward trajectory must be properly reported to users. Therefore, during the economic crisis, independent fiscal policy institutions should either begin fiscal sustainability reporting, or increase its frequency. In addition, central finance departments should be required to respond publicly to these reports in a timely manner.

No data (106)

FIGURE 5.5: Current financial reporting basis from the International Public Sector Financial Accountability Index

Cash (46)

Cash transitioning to accrual (67)

Source: IFAC and CIPFA 2018

Managing fiscal risks through the COVID-19 crisis

As in previous crises, during the COVID-19 pandemic PSBSs have acted as a tool for socialising risk. The dominance of 'below the line' policy responses to COVID-19 demonstrates the substantial new risks that governments are taking on to support the private sector during the crisis. Unfortunately, many new loan guarantees could ultimately be called upon and the government must consider what fiscal buffers will be required to respond to this need. Public finance professionals will need to conduct frequent fiscal stress testing, forecasting the impact of negative scenarios on PSBSs. The New Zealand Treasury publishes the results of stress testing across a number of scenarios. In New Zealand's 2018 Investment Statement, the scenarios included a foot-and mouth outbreak (summarised in Table 5.1), a severe Wellington earthquake, and a major international economic downturn.

Considering the current crisis, public finance professionals should use balance sheet information as the foundation for applying stress tests. This could include the impacts of a second wave of a COVID-19, as well as that of an extended economic downturn. The results of these stress tests will help inform government on what expenditure and investment can be safely made while maintaining a sustainable and resilient financial position.

PSBSs will also include information on contingent liabilities, which could affect the balance sheet and budget were the liabilities to crystallise. Analysis by the IMF shows that realised contingent liabilities can have substantial impact on PSBSs. Between 1990 and 2014, the IMF recorded 230 contingent liability realisations with an average fiscal cost of 6.1% of the affected country's GDP (Bova et al. 2016). The PSBS can be used as the basis for a fuller picture of the risk taken on by government during the crisis, as well as the effect of possible negative scenarios in the near future. It will be important to remain conscious of how decisions affect the resilience of the sector during the crisis (eg from the introduction of additional stimulus to support the economy), where an informed decision can be made across the balance of risks and the need for sustainable public finances.

Achieving credibility and clarity for PSBS

To be most useful, PSBSs must be properly audited and disclosed. Independent audit increases the reliability and credibility of financial statements, with qualified opinions setting out areas of improvement. This can be particularly important for comprehensive PSBSs that seek to consolidate the position of many public sector entities (for example, the UK's 2017/18 Whole of Government Accounts consolidated the accounts of over 8,000 public sector entities) – where inconsistencies in the application of accounting policies across entities can produce material misstatements.

In addition, Supreme Audit Institutions can conduct performance audits, or value for money audits, which may identify cases where public money was not used effectively, efficiently or economically in combating the COVID-19 crisis.¹⁰ For example, a recent report by the Government Accountability Office, the Supreme Audit Institution in the US, found that over one million economic impact payments had been sent to deceased individuals, with a total value near US\$1.4bn (GAO 2020). General-purpose financial statements gain additional legitimacy – and should improve government practices – through this audit and oversight.

COST TYPE	FINANCIAL IMPACT	COMMENT
Balance sheet revaluation	~\$9bn	Driven by falls in the values of the government's New Zealand equity investments and property assets. Partially offsetting these downward revaluations are gains due to lower real interest rates and currency movements.
Direct fiscal costs	~\$6bn	Includes discretionary support to affected farmers, eradication and compensation costs.
Indirect fiscal costs	~\$6bn	Driven predominantly by higher benefits and welfare expenses as a result of job losses in affected sectors.
Total financial impact on the Crown	~\$22bn	In today's dollars.
Source: New Zeeland Treesury 2018		

TABLE 5.1: New Zealand Treasury's Foot-and-mouth outbreak stress test results

Source: New Zealand Treasury 2018

10 The UK's National Audit Office provide a helpful summary of the '3 Es' criteria used in value for money audits (NAO n.d.)

To achieve credible and clear PSBSs, public finance professionals need to produce accessible summary material, and appropriate narrative and notes within the financial statements. The accompanying narrative in financial statements can help users make sense of the figures and should try to avoid bias and address critical issues. A balanced narrative is essential. Ideally, reporting would also include a breakdown of outturn by policy area and the presentation of trend data in order to give non-expert decision makers a clear view of the sector's unfolding financial position. Overall, if done well, the use of these statements supports transparency and accountability at a time when many countries will need to navigate a series of difficult policy choices.

Box 5.2 Keep the receipts: The role of the global accountancy profession in 'building back better'

The IMF recently called on governments 'to do what it takes' in launching emergency measures to address the adverse impact of the COVID-19 pandemic on people and firms, 'but to keep the receipts'. Implicit in this is a recognition of the importance of effective oversight. To be sure, global organizations such as the Financial Action Task Force have noted the increased risk of misdirection or exploitation of government funds or international financial assistance in the COVID-19 context.

This is where the global accountancy profession comes in.

Professional accountants are central to building back better. First, as this report details, professional accountants generate the data necessary to make the difficult, generation-defining decisions facing policymakers around the world.

Equally as important, professional accountants and professional accountancy organisations in every region of the world have been actively engaged with policymakers in devising and delivering solutions to COVID-related challenges. Once in place, professional accountants are on the front line of making sure those solutions function as intended and are not subject to abuse.

As a public-interest profession guided by the International Code of Ethics – and as engaged citizens – professional accountants play an instrumental role in fighting fraud and corruption. This is at the heart of what professional accountants do and is a core priority for the profession at a global level. And the data is clear: jurisdictions with greater numbers of accountants score better in international measures of corruption.

At the same time, there is a growing recognition of the link between public sector accounting and corruption, and that adoption of high-quality accrual accounting standards in the public sector leads to lower incidences of corruption. Together, professional accountants and accrual standards are the foundation of a well-functioning public sector financial ecosystem.

And integrity in this ecosystem is most critical when governments are acting quickly and decisively in the face of crises such as the COVID-19 pandemic. Looking ahead with a view to building back better, professional accountants are ensuring that governments achieve the best possible outcomes in the COVID-19 recovery and in any future crises that we must overcome.

With so much at stake, it is vital that every cent delivers on its objectives.

Kindly contributed by Scott Hanson, Principal, Public Policy and Regulation, International Federation of Accountants

Conclusion

COVID-19 has produced a health and economic crisis that is leading to acute fiscal distress for the public sector. At the same time, the sector is being called upon to support firms and households and build the foundations for a sustainable and inclusive recovery.

Better financial information and thinking must be applied to help manage public finances through this crisis, in order to avoid sovereign debt defaults, a degradation of public services and – in extreme situations – civil disorder. Public finance professionals around the world must provide critical input to achieve sustainable public finances, applying a balance sheet approach to support government decision making. The severity of the current crisis means using poor-quality accounting data in the public sector is no longer an option. It is time for balance sheet information to take primacy in informing policymakers on how to achieve an inclusive and sustainable recovery.

Appendix A:

Detailed presentation of country-specific case studies

Here, we evaluate the impact of COVID-19-related fiscal policy interventions on the public sector balance sheets in 10 countries, covering a diverse range of geographies and varying levels of development. These countries are:

- US
- Japan

Italy

Brazil

UK

- South Africa
- Indonesia
 - Canada
 - New Zealand, and
 - Turkey.

These forecasts were completed by 5 June 2020 and a full methodological description can be found in Appendix B.

US

Data from the IMF show that the value of the US government's financial liabilities stood at US\$22.8 trillion in 2019. This is more than 6% larger than US GDP, which was US\$21.4 trillion in 2019. Indeed, the US government's financial liabilities are the largest in the world by a considerable margin. Even so, the US government's default risk is minimal, given that the vast majority of its debts are denominated in US dollars. Moreover, US government debt securities are regarded as the world's pre-eminent safe haven asset, which allows the US government to access credit more cheaply than other countries (He et al. 2016). Meanwhile, data compiled by the OECD shows that the value of non-financial produced assets held by the US government was US\$13.8 trillion in 2018. This includes US\$6.2 trillion of non-residential buildings and more than US\$1.2 trillion of intellectual property products. The US does not have data on the value of the government's non-produced assets, such as land or minerals. Excluding non-produced assets, the value of the US government's assets amounted to 90% of GDP in 2019. This implies a net worth of -16% of GDP.

COVID-19 fiscal response

The bulk of the US's economic response to the COVID-19 crisis is contained within the Coronavirus Aid, Relief and Economic Security Act, which was signed into law on 27 March 2020. Further fiscal responses are also included in the Coronavirus Preparedness and Response Supplemental Appropriations Act and the Families First Coronavirus Response Act. In total, the value of these fiscal interventions comes to an estimated US\$2.5 trillion – or 12% of 2019 GDP.

The central estimate of the size of the fiscal stimulus package relative to GDP is larger in the US than in any of the other countries covered in this report. As a result, the value of the government's liabilities is set to soar from 106% of GDP in 2019 to 131% in 2020. The US government was on course to run relatively large fiscal deficits during

TABLE A1: Scenarios for US fiscal outlay in response to COVID-19 pandemic

SCENARIO	SIZE OF FISCAL RESPONSE	EQUIVALENT TO % OF 2019 GDP
Lower estimate	US\$2.2 trillion	10.1%
Central estimate	US\$3.0 trillion	13.9%
Upper estimate	US\$3.9 trillion	18.3%



FIGURE A1: Projections for the US government's net worth as a share of GDP (excluding non-produced assets)

the remainder of the forecasting horizon, meaning that government liabilities are projected to fall only slightly, to 130% of GDP by 2022.

The value of the government's assets is forecast to rise in nominal terms over the next three years. This growth is expected to be outstripped even by the nominal rate of GDP growth, bringing down the ratio of US government assets to GDP from 90% in 2019 to 87% in 2022. This would take the net balance of government assets and liabilities from -16% of GDP in 2019 to -43% of GDP in 2022.

Japan

Japan has the highest ratio of financial liabilities to GDP of all the countries included in the study. The gross value of government liabilities has been rising consistently since the country's financial crisis in the early 1990s and reached ¥1.3 quadrillion in 2019. This equates to 238% of GDP. At the same time, Japan has the highest level of financial and produced assets within the sampled countries (84% and 107%, respectively). The government has often deployed fiscal policies in an effort to inject life into the economy, which has driven the debt burden towards the levels seen in the country today. High rates of inflation can bring down countries' debt-to-GDP ratio over time by reducing the real-terms value of debt securities, which are generally defined in nominal terms. Persistently low rates of inflation in Japan have therefore also played a role in the ballooning debt-to-GDP ratio.

Japan's public finances look less precarious when considering the other side of the government's balance sheet. Indeed, the value of produced assets held by the government was more than ¥603 trillion in 2018, while the value of non-produced assets stood at ¥119 trillion. This, together with the government's ¥468 trillion of financial assets, means that the government assets-to-GDP ratio was around 214% in 2019. This corresponds to a net worth of -26% of GDP including non-produced assets, and -47% of GDP excluding non-produced assets.

COVID-19 fiscal response

On 20 April, the Japanese government unveiled its revised Emergency Economic Package Against COVID-19, which included direct fiscal spending amounting to ¥50.3 trillion.¹¹ A large portion of this expenditure is directed towards a universal cash handout programme for Japanese households. Other policies include measures to reduce the spread of COVID-19 domestically and expand treatment capacity, policies to support the recovery in the aftermath of the pandemic, and steps to enhance levels of preparedness for future outbreaks.

The scale of Japan's fiscal stimulus package relative to the size of the economy is the second highest of the countries analysed in this report. The additional borrowing that this will require the government to undertake means that the ratio of government liabilities to GDP is forecast to reach a record high of 259% of GDP in 2020. In subsequent

11 This figure includes the ¥10 trillion of fiscal spending announced in December 2019 to counter the economic slowdown at the end of 2019.

years, the debt-to-GDP ratio is projected to inch down but remain at a highly elevated level, as the effects of fiscal consolidation policies begin to be felt.

Turning to the other side of the Japanese government balance sheet, growth of the economy in the aftermath of the COVID-19 crisis is expected to erode the assets to GDP ratio, from a peak of 295% in 2020 to 182% in 2022. This is under the assumption that levels of investment spending will be constrained by the need to address the size of Japan's financial liabilities. The projected trajectories of liabilities and assets will cause the Japanese government's net worth to fall from -47% of GDP in 2019 to -67% in 2022.

TABLE A2: Scenarios for Japan's fiscal outlay in response to COVID-19 pandemic

SCENARIO	SIZE OF FISCAL RESPONSE	EQUIVALENT TO % OF 2019 GDP
Lower estimate	¥44.5 trillion	8.0%
Central estimate	¥60.4 trillion	10.8%
Upper estimate	¥78.0 trillion	14.0%

FIGURE A2: Projections for the Japanese government's net worth as a share of GDP (excluding non-produced assets)



THE PROJECTED TRAJECTORIES OF LIABILITIES AND ASSETS WILL CAUSE THE JAPANESE GOVERNMENT'S NET WORTH TO FALL FROM -47% OF GDP IN 2019 TO -67% IN 2022.

UK

The global financial crisis in 2007-9 and the ensuing recession had a marked impact on public finances in the UK, with the gross debt-to-GDP ratio rising from 42% in 2007 to 86% in 2019. Most of this increase took place between 2008 and 2010, owing to the various policies that were introduced to support the economy during the crisis, which included temporarily cutting the rate of VAT from 17.5% to 15%, bringing forward capital spending projects, and the bail-out of financial institutions. Another dynamic came from the automatic stabilisers that kick in during economic downturns, whereby rising levels of unemployment and falling business revenues weigh on tax receipts while increasing welfare and other expenditures.

In the US and Japan, the value of government liabilities is balanced largely by the value of assets. This is not the case in the UK. Indeed, the value of financial and produced assets held by the UK government stood at £796bn in 2019, equating to just 36% of GDP.

COVID-19 fiscal response

In a series of announcements, the UK government has unveiled a range of fiscal interventions designed to mitigate the economic fallout from the COVID-19-related disruptions. The key policies are the Coronavirus Job Retention Scheme – which has initially allowed employers to claim back up to 80% of furloughed workers' salaries, up to a maximum of £2,500 per month – as well as government loan guarantees and tax holidays for businesses. The major loan guarantee schemes are the Coronavirus Business Interruption Loan Scheme (involving £330bn of loans that are 80% backed by the government) and the bounce-back loan scheme, where the government guarantees the full value of the loans.

The scale of the UK's fiscal stimulus – while very large by historical standards – is of a moderate size relative to that of other countries. These interventions will see the UK government's debt-to-GDP ratio climb from 86% in 2019 to 100% in 2020. Following this, the ratio is projected to edge down to 95% in 2022, under the assumption that the government continues to execute its pre-announced spending plans.

The government has made a commitment towards investment spending in the medium term, and the OBR forecasts that gross capital spending will have risen by around 50% between 2018 and 2024. This is projected to lead to a considerable accumulation of government fixed assets, bringing the ratio of financial and produced assets to GDP up to 43% of GDP by 2022.

 TABLE A3: Scenarios for the UK government's fiscal response to COVID-19 pandemic

SCENARIO	SIZE OF FISCAL RESPONSE	EQUIVALENT TO % OF 2019 GDP
Lower estimate	£108.1bn	4.9%
Central estimate	£144.1bn	6.6%
Upper estimate	£180.2bn	8.2%

FIGURE A3: Projections for the UK government's net worth as a share of GDP (excluding non-produced assets)



Italy

Italy is the world's eighth-largest economy and had a gross government debt-to-GDP ratio of 133% in 2019. The size of the economy coupled with this considerable debt overhang means that the health of its public finances is a matter of international concern. The reason why investors are more concerned about the Italian government's debtto-GDP ratio than that of the Japanese government (which is considerably higher) is firstly that Japan issues debt predominantly in its own currency, which is controlled by the Bank of Japan, which significantly lessens the risk of default. Italy, on the other hand, has only limited influence on the monetary policy pursued by the European Central Bank. Furthermore, government revenues in Italy amount to 47% of GDP, compared with 34% in Japan. This means that there is greater fiscal headroom in Japan to raise taxes should the need arise.

The Italian government held €866bn worth of produced non-financial assets in 2018. This implies an asset-to-GDP ratio of 61% – less than half the value of the liabilitiesto-GDP ratio. The Italian government's relatively low holdings of financial and non-financial assets is another factor underlying the perceived risks associated with Italy's public finances. It is important to note that – as is the case with the US – there is no reliable data on the value of the Italian government's non-produced assets available. The inclusion of these assets would increase the assets-to-GDP ratio, although the total value of assets would still be significantly below the value of liabilities. Excluding the value of non-produced assets, the Italian government's net worth was -73% of GDP in 2019.

COVID-19 fiscal response

Italy was the centre of the COVID-19 outbreak in Europe and is among the countries worst hit by the pandemic. The government's ability to respond has been stymied by the longstanding issues the country has faced with its public finances. The 'Cura Italia' emergency package contains €3.2bn of funds to bolster the health system and civil protection, and €10.3bn to support the incomes of self-employed workers and those who have been laid-off during the COVID-19 crisis. The Liquidity Decree, which includes €400bn of government loan guarantees, has the potential to represent the most sizeable fiscal intervention, given the high rates of loan defaults in Italy. Indeed, according to the World Bank, 8.4% of bank's gross loans are classed as non-performing loans. This implies that a substantial share of the government-backed loans that are issued will have a high risk of eventual default. The uncertainty surrounding the final cost of this policy means that there is a major differential between the lower, central and upper estimates of the size of the total fiscal response in Italy.

Italy's economy is expected to be among the worst hit by the COVID-19-crisis, with a 10% contraction in GDP forecast in 2020. The severity of the economic hit is due to the relative intensity of the COVID-19 outbreak in the economically important northern regions of Italy, the more limited fiscal response, and persistent structural challenges that predate the COVID-19 crisis. The value of the Italian government's liabilities is projected to spike from 133% of GDP in 2019 to 156% of GDP in 2020. Meanwhile, government investment in assets will be limited heavily

SCENARIO	SIZE OF FISCAL RESPONSE	EQUIVALENT TO % OF 2019 GDP
Lower estimate	€52.7bn	3.0%
Central estimate	€110.6bn	6.2%
Upper estimate	€239.1bn	13.5%

TABLE A4: Scenarios for the Italian government's fiscal response to the COVID-19 pandemic



FIGURE A4: Projections for the Italian government's net worth as a share of GDP (excluding non-produced assets)

by the borrowing constraints that Italy is likely to face as it rebuilds from the COVID-19 crisis. As a result of this, the value of assets held by the Italian government is projected to fall to just 58% of GDP in 2022. These trajectories would lead to a deterioration in the government's net worth, from -73% of GDP in 2019 to -81% of GDP in 2022. Even accounting for the non-produced assets that are held by the government but excluded from official figures, this indicates that the government's liabilities will significantly outweigh its assets throughout for the foreseeable future.

ITALY'S ECONOMY IS EXPECTED TO BE AMONG THE WORST HIT BY THE COVID-19-CRISIS, WITH A 10% CONTRACTION IN GDP FORECAST IN 2020.

77

Brazil

Brazil's economy is still reeling from the acute recession that took place between 2015 and 2016 as a result of weak commodity prices and political instability. The fall in economic output together with the widening of the fiscal deficit caused the government's gross debt-to-GDP ratio to jump from 62% in 2014 to 92% in 2019. Although the pension reforms that were passed in 2019 will significantly lower the government's spending demands, a substantial depreciation of the Brazilian real has inflated the value of government debt that is denominated in foreign currencies.

The asset side of the Brazilian government's balance sheet is more encouraging. The value of its financial assets relative to the value of its financial liabilities is higher than in many other countries. Meanwhile, Brazil's endowment of natural resources is among the most valuable in the world. As a result, the government's holdings of mineral and energy resources significantly bolster the total value of its assets. Therefore, by contrast to the US, UK and Japan, the total value of government assets in Brazil exceeds the value of liabilities. Nonetheless, excluding the value of non-financial, non-produced assets, the Brazilian government's assets stood at just 47% of GDP in 2019.

COVID-19 fiscal response

The Brazilian government declared a state of 'public calamity' on 20 March, which removed its obligation to

comply with its deficit targets for 2020. Policies that have been introduced to weather the economic storm include income support for vulnerable households, wage support for employees who have seen a temporary reduction in working hours, tax incentives for businesses to retain staff, a reduction in tariffs for imported medical supplies, and financial support for the health system. The IMF estimates that the direct fiscal spending associated with these measures will amount to 4.8% of GDP. There has also been an expansion of credit lines from public banks amounting to 3.5% of GDP.

Even before the COVID-19 crisis, the Brazilian government was operating a significant fiscal deficit, which averaged 8.0% between 2017 and 2019. The fiscal injection to support the economy in 2020 together with the expected contraction of economic output mean that the debt-to-GDP ratio is projected to rise from 92% in 2019 to 110% in 2020, falling to 106% of GDP by 2022.

Fiscal consolidation efforts will limit the amount of investment that the government can undertake over the coming decades. According to the IMF, capital expenditures made up just 4% of government spending in 2017 – a significantly lower share than in most of the other countries analysed in this study. In the short term, however, the value of government assets is set to exceed the value of government liabilities, despite the COVID-19-related fiscal outlay.

TABLE A5: Scenarios for the Brazilian government's fiscal response to the COVID-19 pandemic

SCENARIO	SIZE OF FISCAL RESPONSE	EQUIVALENT TO % OF 2019 GDP
Lower estimate	R\$317.9bn	4.4%
Central estimate	R\$433.3bn	6.0%
Upper estimate	R\$565.0bn	7.9%

FIGURE A5: Projections for the Brazilian government's net worth as a share of GDP (excluding non-produced assets)



Canada

Before the COVID-19 pandemic, the Canadian government's gross liabilities stood at 87% of GDP. This was largely balanced by holdings of financial and produced assets amounting to 92% of GDP in 2019. When including the estimated CAD371bn-worth of nonproduced assets held by the Canadian government, the total value of assets was 108% of GDP in 2019.

COVID-19 fiscal response

It is important to note that Canada's economy has been hit not only by the severe lockdowns and slowdown in demand associated with the COVID-19 outbreak but also by the related collapse in oil prices. While the US exports more oil than Canada, oil exports make up a far larger slice of the Canadian economy. Canada's COVID-19 Economic Response Plan includes CAD4bn worth of additional funds for the health system and CAD116bn in support for households and businesses, including wage subsidies and tax credits. There has also been a major push to boost liquidity through tax deferrals for individuals and businesses, the majority of which will become due later in 2020 (Government of Canada 2020). As a result, these measures – while providing an important boost during the depths of the crisis – do not constitute a direct fiscal expenditure for 2020 as a whole.

The fiscal outlay associated with the government's stimulus package alongside a forecast contraction of GDP means that the value of the Canadian government's liabilities is set to surpass the value of its financial and produced assets in 2020. The value of gross liabilities is on track to reach 98% of GDP in 2020 – even before taking into account the significant fall in revenues that is likely to take place this year as a result of the economic slowdown and the collapse of oil prices. As the economy recovers, liabilities as a percentage of GDP will fall gradually, although the Canadian government's net worth is set to remain negative in 2022.

TABLE A6: Scenarios for the Canadian government's fiscal response to the COVID-19 pandemic

SCENARIO	SIZE OF FISCAL RESPONSE	EQUIVALENT TO % OF 2019 GDP
Lower estimate	CAD108bn	4.7%
Central estimate	CAD144bn	6.3%
Upper estimate	CAD180bn	7.8%

FIGURE A6: Projections for the Canadian government's net worth as a share of GDP (excluding non-produced assets)



South Africa

In 2016, the IMF estimated that the value of the mineral and energy resources held by the South African government was over R4.4 trillion. This was larger than the size of South Africa's economy that year. It is estimated that the South African government's total assets in 2019 amounted to 146% of GDP.

That said, the South African economy is currently unsettled, with persistently high rates of unemployment weighing heavily on growth. The gross government debt-to-GDP ratio has doubled over the past decade from 30% in 2009 to 60% in 2019. This trend looks set to continue in the coming years, given the country's structural deficits and weak growth prospects. The South African rand has depreciated by 21% against the US dollar during the first quarter of 2020, placing an even greater strain on the public finances.

COVID-19 fiscal response

On 21 April, the South African government announced a R500bn package to support the economy during the COVID-19 outbreak. This package comprised a R200bn loan guarantee scheme, a reprioritisation of R130bn of existing spending, and R170bn of additional fiscal expenditures.

The total value of the assets held by the South African government is estimated to be more than double the value of its gross liabilities. This is owing primarily to a large stock of non-financial (and in particular nonproduced) assets. The composition of the government's asset holdings is relatively illiquid, however, and therefore provides limited reassurance to investors concerned about the country's short-term fiscal position. Excluding the value of non-financial, non-produced assets, the South African government held assets amounting to 60% of GDP in 2019. The value of these assets relative to the size of the economy is expected to erode slightly in the coming years as fiscal consolidation efforts constrain the government's ability to accumulate capital.

The value of South Africa's fiscal policies addressing the economic disruption brought about by the COVID-19 is smaller, relative to the size of the economy, than those of countries such as the US or Japan, which have more fiscal headroom. Although stimulus spending is lower, this will also contribute to a sharper contraction in GDP, which is projected to raise the debt-to-GDP ratio from 60% in 2019 to 72% in 2020.

 TABLE A7: Scenarios for the South African government's fiscal response to the COVID-19 pandemic

SCENARIO	SIZE OF FISCAL RESPONSE	EQUIVALENT TO % OF 2019 GDP
Lower estimate	R\$159.7bn	3.1%
Central estimate	R\$221.8bn	4.3%
Upper estimate	R\$299.4bn	5.8%

FIGURE A7: Projections for the South African government's net worth as a share of GDP (excluding non-produced assets)



Indonesia

In 2019, the Indonesian government had a gross liabilitiesto-GDP ratio of just 30%: the lowest ratio among the countries covered in this analysis. Meanwhile, the value of its financial and produced assets stood at 40% of GDP in 2019, equating to a government net worth of 10% of GDP. This makes Indonesia one of only three countries out of the 10 analysed where the value of the government's financial and produced assets exceeded the value of its liabilities before the COVID-19 outbreak, creating a positive net worth for the country.

COVID-19 fiscal response

On 19 May, the Indonesia government launched the National Economic Recovery Program – its largest fiscal

response to date to the COVID-19 crisis. Included in the package are increased social assistance to low-income households, expanded unemployment benefits, and reductions in the corporate income tax rate.

The economic fallout from the COVID-19 outbreak is expected to be less severe in Indonesia than in the other countries covered in this report. Indeed, Cebr forecasts that GDP will grow by a modest 0.5% in 2020. This means that the spike in the debt-to-GDP ratio is likely to be less sharp in Indonesia than elsewhere, rising from 30% in 2019 to a projected 37% in 2020. Even so, this jump will be enough to erode much of the government's net worth. By 2022, the government's net worth is expected to have fallen to 1.4% of GDP – down from 10.1% in 2019.

TABLE A8: Scenarios for the Indonesian government's fiscal response to the COVID-19 pandemic

SCENARIO	SIZE OF FISCAL RESPONSE	EQUIVALENT TO % OF 2019 GDP
Lower estimate	IDR606.8 trillion	3.8%
Central estimate	IDR809.0 trillion	5.0%
Upper estimate	IDR1,011.3 trillion	6.3%

FIGURE A8: Projections for the Indonesian government's net worth as a share of GDP (excluding non-produced assets)



New Zealand

New Zealand is the most fiscally sound country out of those analysed in this report, with gross liabilities standing at just 30% of GDP in 2019. Meanwhile, the value of financial and produced assets was 83% of GDP in 2019 – far outweighing the value of its liabilities. On top of this, the government operated a fiscal surplus in 2019, meaning that the value of its revenues exceeded that of its expenditures.

COVID-19 fiscal response

The strength of the New Zealand government's balance sheet going into the crisis means that it had more fiscal headroom than most to support the economy. In its 2020/21 budget, the government announced a raft of fiscal measures to boost the economy during the COVID-19 crisis and its aftermath. The major policies so far include a 12-week wage subsidy to support employers particularly harmed by the COVID-19 outbreak and a tax loss carryback scheme, which allows businesses to offset any losses sustained in 2020 or 2021 against profits made in 2019.

The New Zealand has made use of its strong fiscal position to roll out one of the largest fiscal stimulus packages – relative to the size of the economy – among the countries analysed in this report. In the central scenarios, the fiscal expenditures will raise the liabilities-to-GDP ratio from 29.6% in 2019 to 41.7% in 2020. Despite this significant increase, the government's net worth will remain firmly positive, falling from 53% of GDP in 2019 to 40% of GDP in 2022.

TABLE A9: Scenarios for the New Zealand government's fiscal response to the COVID-19 pandemic

SCENARIO	SIZE OF FISCAL RESPONSE	EQUIVALENT TO % OF 2019 GDP
Lower estimate	NZ\$24.3bn	8.0%
Central estimate	NZ\$32.4bn	10.6%
Upper estimate	NZ\$40.5bn	13.3%

FIGURE A9: Projections for the New Zealand government's net worth as a share of GDP (excluding non-produced assets)



Turkey

In 2019, the Turkish government had relatively low financial liabilities, representing 30% of GDP. At the same time, the government's holdings of financial and produced assets was the lowest out of the countries analysed in this report, constituting 24% of GDP in 2019.

COVID-19 fiscal response

Turkey's Economic Stability Shield Package provides a total of TL100bn worth of measures to support the economy during the COVID-19 crisis, including TL75bn of direct fiscal expenditures and a TL25bn credit guarantee fund. The Treasury and finance minister has since indicated that – as of 20 May 2020 – the total amount of fiscal support provided was TL252bn, excluding loan deferrals, and TL350bn including these deferrals.¹² Loan deferrals have not been included in the measures in Table A10 of the total fiscal response, since they are not associated with a direct rise in expenditure.

Turkey's economy is forecast to contract by 5.0% in 2020. This, together with the fiscal stimulus package outlined above, is set to bring the gross liabilities to GDP ratio up from 30.1% of GDP in 2019 to 38.5% of GDP in 2020. Even before the COVID-19 crisis, the IMF projected that Turkey was on course to run significant budget deficits in the coming years. On this basis, the gross liabilities are not expected to fall significantly during the economic recovery. By 2022, the Turkish government's net worth is set to fall to -15.3% of GDP, under the simplified forecast assumptions laid out in Appendix B of this report.

TABLE A10: Scenarios for the Turkish g	overnment's fiscal res	sponse to the COVID-19	pandemic
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SCENARIO	SIZE OF FISCAL RESPONSE	EQUIVALENT TO % OF 2019 GDP
Lower estimate	TL172.2bn	4.1%
Central estimate	TL232.4bn	5.4%
Upper estimate	TL297.5bn	7.0%

FIGURE A10: Projections for the Turkish government's net worth as a share of GDP (excluding non-produced assets)



¹² Loan guarantees make up 25% of the measures outlined in the original Economic Stability Shield Package. It has therefore been assumed that 25% of the additional stimulus described by the government was also made up of loan guarantees.

Appendix B:

Methodological overview of public sector balance sheet forecasts

GDP assumptions

The value of each country's total assets and liabilities as a share of GDP has been projected until 2022, under the fixed assumption that GDP returns to 2019 levels in real terms by 2022. The real-terms GDP growth rates (or contractions) in 2020 are based on Cebr's central forecasts for each economy.

COVID-19 fiscal spend

To reflect the possibility that further fiscal measures will be introduced later in the year, together with uncertainty about the final cost of policies that have already been announced, low bound, central and upper bound estimates have been developed. The central bound estimates allow for an additional stimulus amounting to 20% of the size of the stimulus that has already been announced. Meanwhile, the upper bound estimate allows for 50% additional fiscal stimulus on top of the measures that have been announced thus far. The lower bound estimates assume that only 90% of the value of the fiscal measures that have currently been announced end up being spent.

Another key source of uncertainty is the default rate on government-backed loans. The lower bound scenario assumes that the default rate on government-backed loans is in line with the ratio of non-performing loans to total loans in each country. The central and upper bound estimates assume a default rate twice and four times as high, respectively, as the ratio of non-performing loans to total loans. The ratio of non-performing loans to total loans is based on World Bank data (World Bank 2020). This assumes that, given the highly challenging economic circumstances, many of the loans will be issued to companies that are in a high degree of financial distress, meaning that there is a greater risk of default than would typically be the case. The aim of this study is to evaluate the scale of the fiscal interventions that governments have made, and how these will affect their balance sheets. Therefore, the projections for government assets and liabilities do not consider the other ways in which the COVID-19 outbreak will influence the public finances. This includes the significant falls in tax revenues that will take place during the economic downturn, meaning that the extra amount that governments will have to borrow will far exceed the direct cost of the fiscal measures they have announced.

Projections for value of government assets

The value of governments' assets in 2019 is based on data from the OECD for the US, the UK, Japan and Italy, and data from the IMF for South Africa, Brazil and Indonesia.

For each year of the forecasting period, the value of each government's total assets is calculated as the sum of the value in the previous year less depreciation of 4% per year (based on historical data from the UK's Office for National Statistics and the US' Bureau of Economic Analysis), plus the projected value of government capital expenditures in the current year. Government capital expenditure each year is based on the IMF's projections of total government expenditure and the historic ratio of capital expenditures to total expenditures in each country. The exception to this is the UK, where the OBR provides direct projections of government capital expenditures in over the next three years (OBR 2020). The source for the historic ratio of capital expenditures to total expenditures in each country was the OECD for the US, Japan and Italy. Data for Indonesia, Brazil and South Africa are collected from the World Bank, the IMF, and Statistics South Africa, respectively.

Projections for the value of government liabilities

The value of each government's total liabilities is computed as the sum of its liabilities in the previous year and the value of its current and capital expenditures in the current year, minus the value of government revenues in the current year. In this way, capital expenditures elevate the level of both non-financial assets and financial liabilities, meaning that investments have an overall neutral effect on the public sector balance sheets. Meanwhile, current expenditures increase the level of financial liabilities without any corresponding increase in the level of non-financial assets, and thus have a negative impact on government's net worth. Projections for total government expenditure and revenues each year are based on IMF data.

Balance sheet definitions

The countries' balance sheet positions¹³ have been computed on the basis of the following definitions.

- Gross financial liabilities: these are defined as all government debt liabilities including debt securities, loans, pensions, accounts payable, and special drawing rights. The value of each government's gross financial liabilities is taken from the IMF's World Economic Outlook for October 2019 (IMF 2019).
- 2. Gross financial assets: these include governments' holdings of currency and deposits, gold, debt securities, loans, accounts receivable, and special drawing rights. The value of each government's gross financial assets is equal to the difference between its gross financial debt and its net financial debt, as measured in the IMF's World Economic Outlook database.
- 3. Non-financial assets: the coverage and collection of data on non-financial assets – particularly for non-produced assets – varies significantly across different countries. Where possible, the value of each government's non-produced assets (eq natural resources or land) and produced assets (eq infrastructure or machinery) are calculated. In some instances, it is not possible to estimate the value of government's non-produced assets owing to data limitations. This is discussed further in the relevant sections. For comparability, only governments' financial and produced assets are included in the figures throughout Chapter 3. The value of produced assets is available for each of the countries analysed. When projecting the value of these assets in future years, it is assumed that the existing stock of produced assets depreciates by 4% per year.

- 4. Current government expenditure: the majority of government spending typically falls into the category of current expenditure. This is defined by the OECD as 'expenditure on goods and services consumed within the current year' (OECD 2007). In the case of governments, this includes the wages of public sector workers and spending on raw materials.
- 5. Capital government expenditure: some government expenditures represent investments that build up the value of the government's non-financial assets. Such expenditures include infrastructure projects and the purchase of buildings or machinery.
- **Total government expenditure:** this is defined as the 6. sum of current government expenditure and capital government expenditure. Levels of total government expenditure (excluding any COVID-19-related interventions, which are analysed separately) over the course of the forecasting horizon are based on IMF projections. These expenditures are then divided into current expenditures or capital expenditures depending on the ratio of capital spending and current spending by the government in the most recent year for which data is available. Note that the precise definition of capital expenditure varies from country to country. The source for the historic ratio of capital expenditures to total expenditures in each country was the OECD for the US, Japan and Italy. Data for Indonesia, Brazil and South Africa are collected from the World Bank, the IMF, and Statistics South Africa, respectively.
- Government revenues: these consist of taxes, social contributions and any other sources of incoming government revenue. The projections used in this analysis are based on data from the IMF's World Economic Outlook (IMF 2019).
- 8. COVID-19-related fiscal expenditure: this encompasses the fiscal interventions introduced by each government and designed to mitigate the economic impacts of the COVID-19 crisis. It is assumed that these expenditures fall under the category of current expenditures rather than capital expenditures. Note that COVID-19-related fiscal expenditure excludes any indirect fiscal impacts that will result from the economic slowdown. These could include higher welfare expenditures and lower tax revenues as a result of lay-offs and declines in businesses' profits.

¹³ The figures presented in this report refer to general government, which consists of central, state and local governments.

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