Institute for Fiscal Studies

IFS Report R207

David Bell
David Eiser
David Phillips

Options for reforming the devolved fiscal frameworks post-pandemic

UNIVERSITY of STIRLING Management School

UNIVERSITY of STRATHCLYDE FRASER OF ALLANDER INSTITUTE

UKRI Economic and Social Research Council

Options for reforming the devolved fiscal frameworks post-pandemic

David Bell, University of Stirling Management School

David Eiser, Fraser of Allander Institute, University of Strathclyde

David Phillips, Institute for Fiscal Studies

Copy-edited by Judith Payne

Published by **The Institute for Fiscal Studies**

7 Ridgmount Street

London WC1E 7AE

+44 (0)20 7291 4800

mailbox@ifs.org.uk

http://www.ifs.org.uk/

@TheIFS

ISBN 978-1-80103-062-5

Preface

This is the second report of a year-long project, funded by the Economic and Social Research Council (grant reference ES/W00173X/1) as part of UK Research and Innovation's rapid response to COVID-19. The project has three aims:

1. To analyse how the devolved governments' fiscal frameworks and funding arrangements have coped during the pandemic. This was the focus of our first report (Bell, Eiser and Phillips, 2021).
2. To consider changes to the fiscal frameworks and funding arrangements to make them more robust to future pandemic waves or similar shocks, and/or to support recovery. This is the focus of this second report.
3. To appraise any changes recommended or agreed as part of upcoming independent and intergovernmental reviews of the Scottish fiscal framework. This will be the subject of our third and final report.

The authors would like to thank those taking part in our online workshop 'Fiscal federalism during the pandemic', held on 8 July 2021. Particular thanks go to Gordon Anderson, Pietrangelo de Biase, Jörg Broschek, Marius Brülhart, Sean Dougherty, Pascale Duran-Vigneron, Andoni Montes Nebreda and Willem Sas for presentations and/or discussion of the experiences of other countries. The authors also thank officials from HM Treasury, the Scottish and Welsh governments, and the Northern Ireland Executive for their views on the performance of existing devolved fiscal frameworks and funding arrangements and options for reform. In addition, they thank Carl Emmerson for comments on earlier drafts of this report. However, all opinions stated and any remaining errors or omissions are the responsibility of the authors alone.

Contents

Executive summary

The COVID-19 pandemic has been a significant challenge for all tiers of government across the world. In the UK, the devolved governments of Northern Ireland, Scotland and Wales are responsible for most of the public services significantly impacted by the pandemic, and have designed and implemented large parts of the public health response to it. They have also been responsible for designing and administering grants and property tax reliefs for businesses.

They have had to discharge these responsibilities and manage their budgets in the context of fiscal frameworks agreed before the pandemic – although the UK government made modest, but important, temporary changes to funding arrangements in 2020–21. These changes, in combination with the enormous increases in funding made available by the UK government, and the fairly symmetric impact of the pandemic across the four nations of the UK, meant the risk of a major funding crisis for the devolved governments was averted. But this 'success' does not mean there is not room for improvement to the existing fiscal frameworks in order to make them more robust to future shocks, or that the same ad hoc changes would necessarily be appropriate if another extreme adverse shock occurred.

This report considers a range of options to reform the existing fiscal frameworks, with two main objectives in mind: first, to make them more robust to future crises, including a potential reintensification of the COVID-19 pandemic during Winter 2021–22; and second, to help the devolved governments support economic and social recovery from the pandemic.

Options for reforming the frameworks

We distinguish between reforms that we recommend as permanent changes to the frameworks, to address what might be considered underlying design weaknesses, and those that could be made as temporary changes during crises.

Appraising these options

Our appraisal of these options draws on a review of the performance of the existing frameworks and ad hoc changes during the pandemic, principles set out for the design of the frameworks, consultation with the UK and devolved governments, and some simple quantitative scenario analysis. From the perspective of the devolved governments, we assess the extent to which reforms would provide greater clarity over funding, more flexibility to respond to fiscal shocks, and greater insurance against the risk those shocks are asymmetric. From the perspective of the UK government, we also consider the reforms' potential impact on its control of overall public sector borrowing and debt, and their fairness to all parts of the country, including England. Our appraisal of options is also informed by a review of subnational frameworks in other countries, focusing particularly on their performance (as well as the wider experience of intergovernmental coordination) during the pandemic, drawing on several case studies.

Recommendations

Our review leads us to reject some changes to the fiscal frameworks, recommend others, and argue that whether some changes should take place depends in part on subjective views about the nature of the UK's political union. This is particularly true for changes to the degree of redistribution and insurance to be provided to the devolved governments, and the nature of intergovernmental coordination.

Key recommendations

Our assessment of potential permanent changes

1 The funding guarantees provided to the devolved governments in 2020–21, which provided the devolved governments with extra up-front funding and funding certainty, should not be provided on a permanent basis. In 'normal' times, it is less likely that there will be substantial in-year increases in planned spending in England, as was the case last year. The benefit of providing greater up-front funding certainty to the devolved governments is therefore outweighed by the risk that the use of funding guarantees would result in the devolved governments seeing a significantly larger increase in funding than England, which would be unfair. However, the risk that the devolved governments have to make

late in-year cuts to spending if funding for England is cut later in the year should be addressed by guaranteeing that they will be able to defer any such cuts, perhaps by extending the scope of their borrowing powers to cover this eventuality.

2 More generally, there is a case for a modest extension to the scope and scale of the devolved governments' borrowing powers in 'normal' times. The ability to borrow to fund discretionary resource spending would provide additional flexibility to respond to unforeseen events and therefore reduce the need to hold back funding instead. Even fairly substantial borrowing by the devolved governments would have little impact on the UK's borrowing and debt. But it would raise concerns about fairness given England would lack such borrowing powers. An annual discretionary borrowing limit of 1% of the devolved governments' resource budgets would provide useful additional flexibility while minimising these equity concerns.

3 The Scottish Government's annual borrowing limit for addressing forecast errors should be increased to £600 million on a permanent basis. This limit, and the Welsh Government's equivalent limit, should then be indexed to changes in overall block grant adjustments, rather than being fixed in cash terms.

4 To provide further flexibility, drawdown limits on the Scotland and Wales Reserves should be enhanced and potentially abolished. Consideration should be given to increasing the total amount that can be held in reserves and, at the very least, existing limits should be indexed rather than fixed in cash terms.

Our assessment of potential temporary changes during shocks

5 The additional flexibilities we recommend as part of the normal operation of the devolved fiscal frameworks would not be sufficient during an extreme and rapidly moving adverse shock like the COVID-19 pandemic. In such circumstances, some combination of a reintroduction of funding guarantees and extensions to the devolved governments' borrowing powers is likely to be warranted. This would ensure that policymaking is not held up by having to wait until funding becomes available via the Barnett formula, after policies have been announced for England. The UK government should also be prepared to bypass the Barnett formula if a shock is having clear and significant asymmetric impacts across the UK,

but it is likely to be very difficult to rapidly develop a bespoke needs-based formula for such purposes.

6 Beyond this, we do not consider it practical to set out in advance the criteria for determining when an extreme adverse shock is occurring, or the changes that should apply to normal funding arrangements if one is identified as happening. This is because such shocks are, by definition, difficult to foresee and the most appropriate response will differ depending on the nature of the shock. Instead, decisions will inevitably have to be made in an adaptive and ad hoc way. But we should be clear in advance that policy will be nimble if such shocks do occur.

7 Improved collaboration between the UK and devolved governments could help identify how a shock is impacting (or is likely to impact) across the nations of the UK, and inform the design of an appropriate fiscal response. A genuinely collaborative approach, aimed at forging consensus, would also provide greater legitimacy to any decisions taken, which could be important if a shock is affecting part of England particularly badly and it makes sense to top up only England's funding.

8 To aid such improvements, formal channels for communication and coordination should be strengthened, and we agree with recommendations for a permanent intergovernmental secretariat to serve a reformed Joint Ministerial Committee. However, a change in culture at both UK and devolved government levels is also needed to maximise the benefits of collaboration and coordination.

9 A particular focus for intergovernmental coordination should be where policy responsibilities significantly overlap, interact or are likely to have spillover effects on other parts of the UK. In the context of the COVID-19 pandemic or a future pandemic, this includes (central) responsibility for the biggest economic support measures such as the furlough scheme, and (devolved) responsibilities for public health restrictions. Given that devolved governments cannot really exercise full control over the latter in the absence of appropriate economic support measures, a feasibility study into making furlough-type support available on a geographical basis should be urgently undertaken and published. If it is feasible, such support could be made available both if disease cases or hospitalisations exceed particular thresholds (paid for by the UK government) or at the request of a devolved government (paid for by that government).

1. Introduction

The COVID-19 pandemic has been a significant challenge for all tiers of government across the world. In the UK, the devolved governments of Northern Ireland, Scotland and Wales are responsible for most of the public services significantly impacted by the pandemic – including health and education services – and have designed and implemented large parts of the public health response to it. These include the nature and duration of social restrictions, contact tracing programmes and vaccination roll-out. In addition, while the UK government designed and implemented the furlough and self-employment income support schemes to mitigate the economic impact of the pandemic and public health measures, devolved governments have been responsible for designing and administering grants and property tax relief for businesses.

The devolved governments have had to discharge these responsibilities and manage their budgets in the context of fiscal frameworks agreed before the pandemic – although the UK government made modest but important temporary ad hoc changes to the operation of these frameworks in 2020–21. It is therefore important to ask whether or not the fiscal frameworks – and the temporary ad hoc changes – have provided sufficient fiscal flexibility to the devolved governments over the last 21 months. Looking forwards, would these ad hoc changes and/or other reforms make the frameworks more robust to future economic and public health shocks (including a reintensification of the COVID-19 pandemic) and support recovery? And how can strengthened mechanisms for intergovernmental communication and coordination aid responses to future shocks?

This is the second report of a project, funded by the Economic and Social Research Council, that examines the lessons of the COVID-19 pandemic for the design of devolved government funding arrangements in the UK. Our first report (Bell, Eiser and Phillips, 2021), published in April 2021, set out the pre-pandemic structure of the fiscal frameworks. It discussed the potential and actual challenges that the devolved governments faced due to the pandemic. It showed that the risk of major funding crises for the devolved governments was averted during 2020–21 by a combination of: (1) one important ad hoc change made to the frameworks; (2) the sheer volume of spending allocated by the UK government to address the pandemic; and (3) 'good luck'. The ad hoc change was the temporary use by the UK government of 'funding guarantees', which provided the devolved governments with more notice and certainty about their short-term funding outlook. The 'luck' element was the fact that no single nation of the UK was significantly disproportionately negatively affected by the health or economic effects of the pandemic than the others. And as a result, the large population-based funding allocations to the devolved governments – underwritten by 'guarantees' – were sufficient for the devolved governments to respond to the pandemic.

There were some improvements in intergovernmental fiscal relations during the height of the pandemic. Communication around health and the economy seemed to improve, albeit temporarily. And the UK government showed a willingness to respond to some of the concerns raised by the devolved governments by making temporary adjustments to the fiscal frameworks. But the pandemic also accentuated some of the underlying challenges and tensions around devolved government funding. These include the devolved governments' inability to respond in-year to unexpected increases in spending need unless the UK government has also increased spending in England, and difficulties in ensuring effective coordination between tiers of government with interacting and interrelated responsibilities (such as setting public health restrictions and designing and funding economic support policies).

Having set out the issues that did, and did not, arise during the pandemic in our previous report, this report looks to the future. Its aim is to draw on the lessons of the past 21 months to consider how the devolved governments' fiscal frameworks should evolve in order that the frameworks:

1. are more robust to potential future crises, including a potential reintensification of the COVID-19 pandemic during winter 2021–22; and/or
2. provide adequate capacity to the devolved governments to support pandemic recovery.

In so doing, we distinguish between *permanent* changes that perhaps stem from original design weaknesses in the frameworks and *temporary* changes that might be invoked during future crises.

Our identification and appraisal of these options draw on consultation with the UK government and each of the three devolved governments, on a set of principles and on some simple quantitative scenario analysis. We also draw on international evidence on the workings of subnational fiscal frameworks in other countries, including a number of detailed case studies derived from a workshop which we organised in Summer 2021. In doing this, we focus on the performance of these frameworks during the pandemic and how these were adapted to meet the particular challenges it posed.

We restrict the issues we consider and the conclusions we draw in two main ways.

First, we limit our attention largely to reform options that relate to the effectiveness with which the devolved governments can exercise their existing policy competences. We therefore consider issues around how funding is allocated, the degree of flexibility that devolved governments have in aspects of budget management (via borrowing and reserves), and arrangements for intergovernmental coordination and communication. We do not appraise broader changes to the devolved settlements themselves, such as changes to the public service, social security and tax responsibilities and powers exercised in Belfast, Cardiff, Edinburgh or Westminster. There is one exception to this general rule: when considering the potential for reforms to intergovernmental coordination arrangements, we also discuss both the centralisation and decentralisation of powers related to public health restrictions and economic support policies in response to a reintensification of the current pandemic or future pandemics.

Second, we do not propose the overhaul of the devolved fiscal frameworks. We do believe some changes are required – such as changes to resource borrowing limits and reserves, and some related rules – and think other changes should be ruled out as *permanent* features of the fiscal frameworks – such as 'funding guarantees' in excess of formula-based funding allocations. However, decisions on other changes – such as more substantial changes to borrowing limits and powers, reforms to how UK government funding is allocated between the nations of the UK, and new coordination and institutional arrangements – require normative judgements about the role not only of redistribution and risk-sharing across the Union, but also the constitutional arrangements within the UK. These are highly contentious. Instead, we limit our role to setting out the issues – economic and political – and the trade-offs involved.

The rest of this report proceeds as follows. Chapter 2 asks what would be the purpose of reforming the fiscal frameworks. This draws on our analysis of the fiscal pressures posed by the pandemic. Chapter 3 considers the international experience of subnational fiscal frameworks, both in general and in relation to the pandemic. Chapter 4 examines the case for making permanent changes to the existing fiscal settlements to make the devolved budgets more resilient to future shocks. Chapter 5 considers temporary changes that could be made in response to extreme shocks such as a major pandemic, and the role improved communications and coordination could play in better crisis response. Chapter 6 concludes. In addition, the appendix explains our methodology and provides detailed results from modelling the potential scale of negative income tax revenue and welfare spending forecast errors in Scotland – an important factor in determining the appropriate annual borrowing limit for the Scottish Government.

2. Options for reform of the fiscal frameworks

Given a number of potential shortcomings of the devolved governments' existing fiscal frameworks thrown into relief by the COVID-19 pandemic and discussed in our previous report (Bell, Eiser and Phillips, 2021), this section identifies a number of objectives and options for reform of the frameworks.

2.1 What should reform of the funding frameworks seek to achieve?

Our first report argued that the devolved governments' funding arrangements managed well overall with the pandemic. There were three important contributory factors to this:

- **The largely symmetric nature of the health and economic effects of the pandemic across the UK.** This matters because the Barnett formula used to determine funding for the devolved governments provides the same per-capita increase in funding for each of the devolved governments as that planned for England. With a symmetric shock, this approach may be broadly appropriate. Had the effects been less symmetric though, such population-based increases in funding would have been less appropriate. In particular, one or more devolved government could have found itself with too little funding to respond appropriately to the pandemic, exacerbating its economic and health consequences.
- **The huge sums of money provided by the UK government in response to the pandemic in England.** The UK government's planning and management of some aspects of spending – notably around procurement of the Test and Trace programme and PPE – were arguably not very efficient, but the large amounts

allocated to England as a result meant large amounts for Scotland, Wales and Northern Ireland via the Barnett formula too.

- **An important ad hoc change to the usual funding rules.** Normally, it is only when the UK government announces new spending on comparable public services in England that a consequential change in devolved government funding is triggered via the Barnett formula. In the early stages of the pandemic, the high frequency of new policy and spending announcements from the UK government created planning challenges for the devolved governments. In particular, they could not make their own policy decisions until they knew how much funding they would receive in response to policies announced for England, and faced uncertainty about whether some of this funding could be clawed back later in the year. In response to the difficulties this posed, in July 2020 the UK government moved to a system of guaranteed funding for the devolved governments. These were minimum guaranteed increases in the devolved governments' block grants for the 2020–21 financial year, set above the levels implied at that stage by the Barnett formula. These guarantees meant that the devolved governments could make financial plans in the knowledge that they would receive at least these minimum grant uplifts, even if the UK government's eventual spending would have implied lower allocations under the traditional Barnett formula approach.

The apparent success of these financing arrangements during the COVID-19 pandemic might suggest there is no need to propose or appraise reforms. After all, if the system responded well during the height of the pandemic, then surely there is no problem that needs fixing? There are several reasons why it is nonetheless prudent to consider reforms aimed at improving the resilience of the devolved fiscal frameworks to a future shock.

The experience of the devolved governments at the beginning of the pandemic, before the introduction of the funding guarantee, was characterised by funding uncertainty, and this uncertainty was compounded by a lack of tools available to the devolved governments to flex their budgets themselves. Can changes be envisaged that would relieve some of this uncertainty at the earlier stages of a future adverse event? This might be enabled by moving more quickly to funding guarantees, or by allocating tools to the devolved governments to enable them to flex their budgets more easily themselves.

Crisis was also only narrowly averted on a couple of occasions. The UK government's initial decision to withdraw the furlough scheme in Autumn 2020 did influence Welsh and Scottish government decision-making on public health restrictions, and could have become a significantly more acrimonious issue if not for the last-minute decision to extend the furlough scheme into 2021 when England's November 2020 lockdown was announced. More generally, unlike the pandemic, a future crisis might have very asymmetric territorial impacts. It is prudent to consider how the funding settlements might respond to such an eventuality, to ensure that the future response is effective and proportionate across the whole of the UK.

We therefore consider a variety of reforms to the devolved fiscal frameworks and funding settlements. We consider, first, *permanent* reforms that could improve the resilience of the devolved budgets to unforeseen fiscal shocks when those arise. We then go on to consider *temporary* adjustments to the fiscal frameworks in the event of another extreme fiscal shock, including the risk that such a shock might have an asymmetric impact.

Our identification of potential options for reform has been informed by consultations with both the devolved and UK governments. In these consultations, the devolved governments have stressed to us the importance of several factors underpinning the devolved funding settlement:

- **Certainty.** Having a degree of certainty over the level of funding that they can access helps the devolved governments to plan policy responses. Our first report highlighted that the centrality of UK government decisions on spending in England in determining funding allocations to the devolved governments can lead to uncertainty over funding levels, potentially holding up policy formation and implementation.
- **Flexibility.** The devolved governments have limited ability to vary their budgets at short notice. They cannot borrow to fund discretionary resource spending, and their ability to borrow to address shortfalls in revenues is constrained. There are also tight controls on their use of reserves, limiting their

ability to transfer spending from one financial year to the next.[1] The Scottish and Welsh governments are even prevented from raising additional revenues from their main devolved revenue stream, income tax, as tax system parameters cannot be changed in-year (whereas the UK government can, and has done so on occasion).

- **Insurance/protection against the risk of asymmetric shocks.** The devolved fiscal framework provides significant insurance against symmetric shocks. As discussed above, the Barnett formula provides the devolved governments with a population share of the change in funding for England, and the system of block grant adjustments (BGAs) for devolved taxes offsets falls in revenues if they are proportionately the same as those in England. But this approach leaves unanswered the question of how the UK government could or should respond to a fiscal shock that disproportionately affects one of the UK nations.
- **Transparency and coordination.** The devolved governments frequently stress the value of information-sharing, transparency around the type of policy decisions that will affect them, and coordination of activities within their respective territories. To an extent, there are parallels with the issue of funding certainty highlighted above. But the issues here are broader. They include, for example, the likely timing of fiscal and other policy announcements, and knowledge-sharing about economic and fiscal conditions and how these are evolving, as well as the UK government's thinking about possible policy responses and any spillovers these may have on the devolved governments' competences.

2.2 What sorts of reforms could be considered?

We now identify a number of possible changes to the devolved fiscal frameworks and associated intergovernmental communications and coordination machinery that

[1] Important temporary changes to normal arrangements were made by the UK government during 2020–21 to enable the devolved governments, exceptionally, to defer large amounts of funding from 2020–21 to 2021–22. This change was made to reflect that just six weeks before the end of the financial year, many billions of additional funding for services in England was announced. The devolved governments may have struggled to effectively spend the funding that they received as a result (£1.1 billon in the case of Scotland, £650 million in the case of Wales and £300 million in the case of Northern Ireland) by the end of the financial year. They were therefore given special dispensation to carry this funding forward into 2021–22 if they so wished – an offer they all took up.

could potentially provide more certainty, flexibility, insurance and/or transparency to the devolved governments.

In the context of permanent changes to the fiscal frameworks, we first consider the extent to which the **funding guarantees** adopted in 2020–21 should be used in 'normal' times. We then examine the case for enhancing the devolved governments' abilities to flex their budgets through the following:

- **Reforms to borrowing rules**, enabling devolved governments to borrow, subject to limits, to fund discretionary changes in resource spending and tax policies, and/or to address any reduction in funding arising from late changes in planned spending in England.
- **The ability to hold and draw down greater reserves**. This would enable the devolved governments to build up and deploy more significant 'rainy day' funds, to address shortfalls in revenue or unexpected needs to spend more money. This is similar to having additional borrowing powers, with the difference being that reserve drawdowns would be 'pre-funded'.
- **The ability to transfer funding from capital to resource budgets**. Devolved governments can presently shift funding from resource to capital budgets, but not vice versa. Flexibility to do so would provide a way of increasing funding for day-to-day spending or tax cuts if needed, without increasing overall expenditure or borrowing. The UK government has made such transfers on several occasions with respect to English NHS spending.
- **Increased borrowing limits to offset forecast error**. The aim of these would be to ensure that the devolved governments have access to sufficient borrowing to address asymmetric shocks to revenues arising from forecast errors on devolved tax revenues or on spending on demand-led social security benefits.

Such changes would provide enhanced certainty, flexibility and insurance in the context of short-term shocks. However, borrowing, reserve drawdown and capital–resource funding switches are not appropriate to address the effect of long-term shocks. We therefore consider the role of **changes to how funding is allocated**, including via specific needs assessment, and **how the tax and welfare BGAs are indexed**, in order to provide greater insurance against long-term asymmetric shocks.

We then consider whether any of the above measures could be **utilised or extended on a temporary basis** if an extreme fiscal shock actually arises. We also explore the critical importance of effective and well-functioning systems of **intergovernmental communication and coordination** for the UK's system of territorial finance to function as effectively as possible during major crises.

2.3 How we appraise the options

How should the advantages and disadvantages of these different options be considered, and by what criteria should we decide whether a particular reform is appropriate or not?

The UK has no written constitution setting out specific criteria against which such reforms might be evaluated. Our approach has therefore involved considering the extent to which a given reform addresses one or more of the existing system's weaknesses or risks identified by one or more of the governments, within the context of various general principles for operating the devolved fiscal frameworks set out in the framework agreements and associated policy reviews and reports.

As highlighted above, the devolved governments have stressed the importance of four criteria underpinning robust funding frameworks: stability, flexibility, insurance against the risk of fiscal shocks, and the importance of transparency and coordination in relation to UK government policy changes that affect them.

The UK government's objectives for devolved government funding are informed by a different set of criteria. These include the sustainability of UK public finances, pan-UK equity in the fiscal treatment of the different nations, and the avoidance of overly complex approaches that could lead to practical or political difficulties with implementation. These objectives can clearly clash with those of the devolved governments. For example, enhanced devolved government borrowing powers might provide additional budget flexibility, but might (1) hinder UK fiscal sustainability and (2) be seen as inequitable if such flexibility was not available to all UK residents.

Unfortunately, existing intergovernmental agreements or legislation do not provide much insight into how such trade-offs might be resolved. The fiscal frameworks of Scotland and Wales have been informed by a set of funding 'principles' identified by the Smith Commission (2014), as discussed in Box 2.1. These principles are not always internally consistent (Bell, Eiser and Phillips, 2016). And they are generally too broad and open to interpretation to be of direct use in determining what is an appropriate level of fiscal-risk-sharing during a crisis, or how to balance the benefits to devolved governments of additional borrowing against the risks for the UK's public finances. Furthermore, the Smith Commission principles are not the only game in town: whilst the Smith Commission's principle of 'economic responsibility' has been interpreted in the fiscal frameworks to mean that the devolved governments bear the risks in full of relatively weaker growth in devolved tax bases, the UK government makes frequent use of terms such as 'one nation' and 'union dividend' which might lead one to believe that there is an implicit limit to the devolved governments' risk exposure.

This ambiguity in legislation and intergovernmental agreements to inform policy design is familiar. McEwen et al. (2020), for example, note that the Memorandum of Understanding agreed by the UK and devolved governments refers to certain basic, shared principles, including good communication and information exchange, but that these principles – for example, what amounts to 'good' communication and what might be 'practicable' in terms of information exchange – are sufficiently broad that they tend to be interpreted very differently by the parties involved.

Given the absence of a formal constitution and these ambiguities in high-level 'principles', options have to be appraised on an ad hoc basis. Thus, for any potential reform, we consider the likely scale of benefit to the devolved governments under different circumstances – particularly in terms of the extent to which the reform provides meaningful additional flexibility, stability, insurance, or coordination benefits. We compare this with the scale of costs and risks as perceived by the UK government, where these include implementation costs, threats to UK fiscal sustainability, and inequities. We aim to appraise critically the arguments that are used, or likely to be used, by both the devolved and UK governments in making the case for or against reform.

Box 2.1. The Smith Commission principles

- 'No detriment', which means that the devolution of powers in itself should not financially or otherwise cause detriment to either the devolved nation or England. It has been interpreted to mean that in the absence of any deviations from policy in the rest of the UK following tax or spending devolution, the devolved government's net financial position should, in expectation, be the same as if devolution had not taken place. It relates to wider principles that the devolution settlement should be 'fair' to both the devolved nations and England – although the definition of fairness is likely to vary between people.
- 'Economic responsibility', which means that the devolved governments bear in full the yield or cost of their fiscal policy decisions, with the UK government bearing in full the yield or cost of its decisions. Fully satisfying this principle in practice is infeasible, as many policies are likely to have spillovers that either cross borders or impact on other tax bases or spending items. And in practice it is difficult to disentangle the wider impacts of policy decisions from other factors affecting tax bases and spending levels, meaning there is a trade-off between ensuring economic responsibility and providing insurance and risk-sharing for differential changes in tax bases and spending needs driven by other underlying factors.
- 'Sufficiency of fiscal flexibilities', which means that the borrowing and reserves powers available to the devolved governments are such that they can effectively address the impact of economic shocks on their revenues and spending. This principle recognises that the devolution of taxes and demand-led welfare expenditure increases the degree of fiscal risk faced by devolved governments. Without sufficient borrowing and reserves powers, negative or positive fiscal shocks would necessitate cuts or increases to other spending (or increases or cuts to taxes) at short notice, to maintain budget balance.
- 'Implementable and stable', which means that the fiscal frameworks should be able to operate on an automatic basis as far as possible, avoiding the need for negotiations on their workings on a year-to-year basis. Moreover, they should aim to be politically stable, avoiding contributing directly to disagreements over constitutional issues.
- 'A risk-sharing union', which means that the UK government should be responsible for bearing and addressing fiscal shocks that affect the whole of the UK to the same extent, including impacts on devolved responsibilities. Alongside the principle of 'economic responsibility', this principle underlies the approach to indexing the block grant adjustments that account for tax and welfare devolution. In particular, by indexing them in line with the tax base or revenue performance in the rest of the UK, the devolved governments' budgets are insulated by the block grant adjustments from revenue or spending shocks that affect the UK as a whole, but lose or gain from shocks that disproportionately affect their nation.

3. International experience

As well as using a set of criteria and principles, our assessment of the options for reform should be guided by experience and evidence from elsewhere. In the first part of this chapter, we therefore consider the characteristics of subnational governments' fiscal frameworks in other countries in broad terms. We draw on guidance published by the OECD and IMF on factors that are relevant in designing subnational government fiscal frameworks.

Section 3.2 explores the fiscal experiences of subnational governments during the COVID-19 pandemic in five specific countries: Belgium, Canada, Germany, Spain and Switzerland. We examine issues such as the extent to which normal subnational government finance rules were suspended during the pandemic, whether the division of policy responsibilities between levels of government affected the nature of the response to the pandemic, and the extent to which it created funding tensions or constraints. The analysis is informed by inputs from external experts in each of the five countries.

3.1 Lessons on the general principles of designing subnational fiscal frameworks

The OECD and IMF emphasise that there is no 'one size fits all' recommendation for subnational fiscal frameworks (e.g. Blochliger and Kantorowicz, 2015; Eyraud et al., 2020; OECD, 2020; Vammalle and Bambalaite, 2021). This is because there are differences in the desired balance of competences between central and subnational governments, and in the degree of risk-sharing and redistribution across subnational units, both of which will affect what fiscal frameworks and rules are most suitable. However, drawing on public finance theory and practical experience from a wide range of countries, the OECD and IMF do make suggestions on the appropriateness of different forms of rules on borrowing (distinguishing between capital and resource borrowing, for example), on escape clauses and on coordination and institutional arrangements.

As set out in a ‘How To’ note prepared by Eyraud et al. (2020), the IMF, for example, suggests that the benefits of allowing subnational governments to borrow significant amounts to finance resource expenditures are limited: centralised borrowing avoids coordination problems when addressing common shocks, and can facilitate risk-sharing when addressing idiosyncratic ones. Moreover, the authors highlight how access to borrowing may facilitate damaging tax competition and may be excessively used if it is perceived that problems would be addressed by a central bail-out. In the UK context though, it is important to note that the devolved governments bear the idiosyncratic risk for devolved tax bases, and, in the absence of risk-sharing, some degree of subnational borrowing is necessary to avoid the risk of pro-cyclical fiscal policy (i.e. having to cut spending or raise taxes when a negative idiosyncratic shock hits).

The IMF highlights how subnational fiscal rules need to both prevent excessive borrowing and allow subnational governments to tailor fiscal policies to local preferences. Indeed, designing rules involves tricky trade-offs because:

> **‘On the one hand, the scope for deficit bias and excessive borrowing is larger at the subnational level, so rules need to be more binding. On the other hand, subnational fiscal rules must have some flexibility, primarily for two reasons: subnational budgets tend to be rigid, and allocative efficiency needs to be preserved.’**
>
> Eyraud et al., 2020

The IMF suggests several possible rules, including those requiring a balanced current budget (so borrowing is only allowed for capital investment or payment of principal on existing debt) or the so-called ‘golden rule’, where borrowing is allowed only for new investment (so a current budget surplus must be run to repay principal). It notes, however, that such rules may allow excessive borrowing for investment purposes, potentially imposing fiscal costs on other parts of a country (e.g. related to national fiscal rules or bail-out possibilities). Additional rules may be needed to prevent this, such as caps on debt interest or servicing costs, or limits on borrowing. At a high level, this bears a resemblance to the approach taken with devolved governments in the UK, with centrally determined limits placed on both annual and cumulative borrowing by the devolved governments. Such rules can also be self-imposed or defined though, with the prudential regime operating for local government in the UK being an example of this approach.

The IMF analyses several ways of making subnational fiscal frameworks responsive to shocks that reduce revenues or increase spending needs. These include proxies of the cyclically adjusted budget balance rules that sometimes apply at national levels; in other words, allowing subnational governments the ability to run larger deficits during economic downturns. The Scottish fiscal framework's higher borrowing limits when a Scotland-specific economic shock is forecast or occurs are an example of such a rule, albeit one that tightly defines when it can be invoked. It is also a limited 'escape clause', which suspends the normal fiscal framework's rules in the case of a significant idiosyncratic negative shock. The IMF suggests that escape clauses should precisely define when they can be invoked using indicators that subnational governments cannot easily manipulate. However, it recognises that this might be difficult in the case of natural disasters or other non-standard shocks (such as a global pandemic), thereby suggesting a degree of discretion is also important. The IMF also highlights that 'rainy day' funds can provide an additional source of financing during negative shocks, but are unlikely to be sufficient on their own, especially if their scale is limited.

Vammalle and Bambalaite (2021) at the OECD highlight how the principles of fiscal rules are often set out in constitutions or constitutional laws, and reflect the more general relations between tiers of government. Hence, in federations, subnational fiscal rules for regional/provincial/state governments are often self-imposed and self-monitored. Rules may also result from intergovernmental negotiations and 'pacts' but may be imposed centrally in unitary states. Based on a survey of 26 OECD and 3 non-OECD countries, typical rules include: constraints on borrowing, including limiting planned borrowing to investment purposes; requiring approval from central government for borrowing; and, in some cases, fixed limits on debt stocks and/or debt servicing costs.

The OECD authors also highlight that there is considerable variation across countries in the stringency of their rules, especially limits placed on debt or debt servicing costs. However, most (17 out of 29) require subnational governments' *planned* current budgets to be in balance or surplus. Only 3 of these completely forbid borrowing for current purposes though, reflecting the fact that there may be circumstances where some borrowing is actually required – for example, if revenues are unexpectedly low or expenditure unexpectedly high.

In addition, Vammalle and Bambalaite (2021) discuss the monitoring and enforcement of fiscal framework rules. In certain cases (such as Spain), an independent fiscal institution is tasked with monitoring compliance with subnational fiscal rules. Designing the rules though is typically either governmental or intergovernmental, although independent bodies (such as Australia's Commonwealth Grants Commission) sometimes advise on the distribution of funding across subnational governments.

In earlier work, Blochliger and Kantorowicz (2015) at the OECD provide an approach for analysing and comparing subnational fiscal frameworks over time. This involves characterising the frameworks along several dimensions:

- 'Autonomy', which is the extent to which subnational governments can conduct their own fiscal policy.
- 'Responsibility', which is the degree to which subnational governments are exposed to budget constraints and must assume responsibility for their own policies.
- 'Co-determination', which is the extent to which subnational governments can shape fiscal policy at the federal level.
- 'Budget frameworks', which is the degree to which fiscal rules constrain fiscal policy at both the subnational and national level.
- 'Stability', which is the ease with which rules determining fiscal frameworks can be amended.

They highlight the particular importance of coherence between these characteristics. For example, a coherent framework aligns levels of autonomy with responsibility and appropriate budget frameworks. The authors then use their approach to classify countries into two broad groups based on their 'fiscal constitutions':

- Decentralised fiscal constitutions, providing for a high level of autonomy and responsibility, low levels of co-determination and relatively permissive fiscal rules and frameworks. This characterises countries such as the US, Canada, Switzerland, Australia, Argentina and Mexico, and arrangements tend to be stable.

- Integrated fiscal constitutions, which tend to involve low autonomy and responsibility, with a high level of co-determination and stringent fiscal rules and frameworks. This characterises countries such as Austria, Belgium, Germany, Italy and Spain, and such arrangements tend to be relatively less stable over time, although the reason for this is unclear.

Moreover, they find that there has been an increase in the stringency of fiscal rules over time, as well as some decline in both autonomy and responsibility, as the role of fiscal transfers and national social security programmes has increased in government expenditure. And they find that coherence in subnational fiscal rules is associated with lower levels of public debt (at least since 1980), higher economic growth and potentially fewer fiscal crises.

In its assessment of subnational fiscal systems during the COVID-19 crisis, the OECD (2020) also highlights that, alongside fiscal frameworks, broader devolution settlements and coordination arrangements are important during crises.

- First, an effective settlement tries to minimise issues caused by the delineation of competences between tiers of government. This involves several elements including: allocating responsibilities to the most appropriate tier of government given economies of scale, spillover effects and preferences over policies (and policy variation); avoiding overlapping responsibilities; and providing sufficient financial capacity to discharge assigned responsibilities.
- Second, coordination mechanisms are important, but are especially so where responsibilities overlap and interact. Such mechanisms involve intergovernmental communication channels, standardisation of procedures and policies, and monitoring and benchmarking of policies and outcomes.

This suggests that in considering reforms to the fiscal frameworks of the UK's devolved governments, the emphasis that should be placed on coordination between devolved and central government should be greater if the underlying settlements continue to imply significant interactions between responsibilities (e.g. between public health restrictions and economic support schemes).

3.2 Lessons from five countries' experiences during the pandemic

The UK is not unique in having to grapple with issues around subnational fiscal frameworks during the COVID-19 crisis. In a number of other countries, subnational governments have substantial policy autonomy in respect of health and economic policy, and varying degrees of autonomy and responsibility for revenue-raising and borrowing.

The OECD (2021) has highlighted that the vast majority of OECD countries have introduced financial measures to support subnational governments during the pandemic. These include suspension of normal subnational government rules on borrowing and debt, increased grant funding, and revenue protection measures. Subnational governments have also played a key role in implementing public health measures, although the degree to which these have been determined by subnational governments has varied.

This section reviews the experiences of five countries in which subnational governments have a significant role in managing the health and/or economic impacts of the pandemic. It considers how responsibility for managing different elements of the pandemic was shared across national and subnational governments, and how the responses of the different levels of government have been funded.

It structures the analysis around the following issues:

- The extent to which 'normal' subnational financing arrangements have been adapted or suspended during the pandemic.
- The extent to which financing arrangements have provided subnational governments with sufficient flexibility and scope to mitigate the health and economic impacts of the pandemic.
- The extent to which the pandemic has created intergovernmental tensions around policymaking and financing, and how these were resolved.
- The extent to which the division of decision-making responsibilities between national and subnational levels has helped or hindered the response to the pandemic.

The countries considered are Belgium, Canada, Germany, Spain and Switzerland. These five were selected as countries at similar levels of development to the UK, which have experienced the pandemic over similar time frames, and which each have subnational governments with reasonably significant degrees of policy autonomy. Nonetheless, the countries clearly do differ from one another and from the UK in a range of constitutional, socio-economic and policy dimensions. The analysis has primarily been informed by academic experts with knowledge of subnational governance and finance issues in the five countries, and who participated in a workshop in July 2021. We express our gratitude to those experts for taking the time to share their expertise.

Have normal arrangements been adapted or suspended during the pandemic?

In most countries, subnational governments' response to the pandemic has been funded through a combination of increased borrowing and additional transfers from the federal government. However, the response has varied significantly depending on institutional arrangements and the policy responsibilities of the subnational governments. In some cases, substantial changes to existing fiscal rules and transfers were made, whilst in others, few if any changes were implemented.

In Germany, the debt brake – which has curtailed the ability of Länder to borrow since 2009 and required them to run balanced budgets from 2020 – was relaxed in 2020, and Länder have been able to borrow, provided they set out detailed deficit reduction and debt repayment plans. Additional borrowing is the main channel through which the Länder have dealt with the funding aspects of the crisis, although the federal government bears the funding responsibility for a large part of Germany's overall COVID-19 response.

In Switzerland and Belgium, additional borrowing was the main channel through which the cantons and regions funded their response to the pandemic in 2020. This did not require a relaxation of fiscal rules, as both countries are characterised by having few formal rules on subnational borrowing, and in both cases the regions and cantons had significant fiscal space as a result of prudence in prior years. Again, however, it is worth noting that the federal government bore much of the fiscal costs of the pandemic. In Switzerland, for example, the federal government has been responsible for funding furlough and income support schemes, and the majority (approximately three-quarters) of the business grant schemes. Cantonal fiscal impacts relate largely to additional healthcare and public health spending.

In Spain, the national government substantially increased the regional governments' grant funding in 2020, most notably via the €16 billion COVID-19 fund, equivalent to almost 10% of the regions' regular funding. The fund was allocated on the basis of an assessment of needs (including measures of at-risk populations, hospitalisations and revenue losses), but was not earmarked in any way. Fiscal rules around regional borrowing were also relaxed, and requirements for regional governments to pay back differences between revenue forecasts and out-turns were suspended in 2020. In practice, however, the vast majority of the additional spending associated with the pandemic has been funded by the national government either directly or via transfers to the regions, rather than via regional borrowing.

The Canadian federal government has also made additional grant payments to the provinces. These include a top-up to the 'Canada Health Transfer' grant, and a 'Safe Restart Grant' from Autumn 2020 aimed at supporting test-and-trace programmes and other requirements of safe reopening, although not actually earmarked for this purpose. In addition, Canadian provinces have significant autonomy to borrow, and much of their response has been funded by increased borrowing. But despite the significant policy autonomy of Canadian provinces, the vast majority of all COVID-related expenditures in Canada were made by the federal government.

Have arrangements provided sufficient flexibility and scope to address the health and economic impacts of the pandemic?

There are few, if any, examples of subnational governments facing funding crises as a result of the pandemic. Nor do subnational funding constraints appear to have had a major impact in influencing subnational governments' responses to the pandemic. More surprisingly still, there are also relatively few examples of funding issues creating new or heightened tensions between national and subnational governments; tensions, where they have arisen, are more likely to have been around the stringency of health restrictions (discussed below), rather than the funding response.

The fact that funding issues have not emerged as major flashpoints reflects the fact that national governments have not felt it necessary to take fiscally restrictive approaches to the pandemic. Rules on subnational government borrowing have been suspended or adapted where they constrain subnational government responses.

Additional grant funding from the federal government has been relatively generous, and generally come with few constraints in how it is used.

Also important is the fact that, in most countries (with the exception of Canada), restrictions have been set fairly uniformly across the country – whether by agreement or national decree. Moreover, it has tended to be the federal government that is primarily responsible for most COVID-related spending (e.g. on furlough-type schemes), even in a country such as Switzerland where cantonal policy autonomy and responsibility are generally wide-ranging.

Has the pandemic led to intergovernmental tensions and, if so, how were these resolved?

The response to the pandemic has created tensions between subnational governments, and between national and subnational governments, in several countries. However, the tensions have largely been in relation to public health policies, rather than in subnational financing.

The German federation is characterised by shared rule and a requirement for joint decision-making. In setting health restrictions, agreement between the federal government and 16 Länder has to be reached, and passed by both chambers of parliament. The requirement for consultation and agreement can lead to delays in establishing health restrictions, and a tendency for those restrictions to reflect a lowest common denominator (although individual Länder can implement stricter restrictions than agreed nationally, as Bavaria has done at various points). These matters of coordination were an issue during the first wave, but became more acute in subsequent waves. A meeting of the Conference of Minister Presidents (the main intergovernmental forum) in March 2021 lasted 15 hours and resulted in agreement for relatively weak restrictions, resulting in Chancellor Merkel threatening to take unilateral federal action (probably an empty threat given the constitutional authority to do so does not exist).

In Canada, the provincial governments have had almost complete autonomy to determine health restrictions. This has resulted in a fairly heterogeneous approach. Several of the smaller Atlantic provinces pursued a strict elimination strategy, with tight rules on inter-provincial movement. Others have pursued a less stringent approach. This has created tensions with the federal government, which has at times implored provinces to respond more robustly. In principle, the federal government does have the constitutional authority to mandate national standards, but politically it has not felt able to do so.

Spain lies somewhere between the German and Canadian examples in terms of where responsibility for health restrictions sits. In March 2020, the Spanish government declared a state of emergency. This brought responsibility for setting restrictions to the national government, which mandated national-level restrictions. The lifting of restrictions at the end of the first wave then proceeded differentially at regional level, with regional governments needing to request permission from the national government to lift particular restrictions. In practice, regions' requests to remove restrictions were determined largely by party politics rather than by differences in their economic or public health conditions. During the second wave, a state of emergency was again declared, but this time regional governments had more flexibility to deviate from national rules (e.g. curfew times or limits on number of households able to meet could be varied slightly).

Switzerland's response to the first pandemic wave was not dissimilar from Spain's, in the sense that the federal government took on exceptional powers to mandate national standards. The Swiss constitution allows for the triggering of federal-level powers where there is a 'special situation' or an 'extraordinary situation'. During the first wave of the pandemic, the federal government declared an 'extraordinary situation', which allowed it to specify national health restrictions without consultation with the cantons. In contrast, the second wave was declared as a 'special situation', which again allowed the federal government to set health restrictions, conditional on agreement of the 26 cantons. However, in neither the first nor second wave did the setting of restrictions at national level appear to create substantial dissent or tension across the cantons, and certainly much less than seen in Germany or Spain.

Has the delineation of decision-making and responsibilities helped or hindered pandemic responses?

An interesting question to consider is the extent to which federalism – or at least relatively autonomous subnational governments – has helped countries mitigate the effects of the COVID-19 pandemic (perhaps because it enables responses that are tailored to needs), or hindered the response (perhaps because of delays arising from the need for coordination and agreement).

In the case of Switzerland, an argument has been made that the need for cantonal agreement on restrictions in the second wave resulted in critical delays in implementing restrictions, and thus led to increased deaths. In principle, the constitution allowed an easy way to avoid this – the federal government could simply have declared an ‘extraordinary situation’ as it did during the first wave, allowing restrictions to be imposed unilaterally and therefore more quickly.

Similarly, it has been argued that the need for joint decision-making across German Länder created delays in implementing restrictions, and also that the restrictions agreed were often too lax, reflecting the lowest common denominator of agreement. Unlike in Switzerland however, there is no obvious way that this situation could have been avoided, as the constitution does not allow for the federal government to declare any form of state of emergency that would obviate the need for this joint decision-making.

In principle, the Canadian constitution offered the potential for a more effective approach, as strong executive power and autonomy could, and perhaps should, have offered the scope for swift action. In reality, whilst smaller Atlantic provinces did take decisive and robust action, many other provinces arguably did not act decisively or robustly enough, preferring instead to engage in politicking and blame games with the federal government. The federal government in turn was reluctant to proactively facilitate coordinated action. And whilst a federally mandated approach to the setting of restrictions was constitutionally possible, it was not politically feasible.

3.3 Summary

While subnational fiscal frameworks vary significantly across countries, common themes emerge from our analysis of both the frameworks themselves and how they coped and were adapted during the COVID-19 pandemic.

The first is that most countries place restrictions on subnational borrowing, especially for resource spending, although it is rare to forbid this completely. The second is the importance of coherence between different aspects of fiscal frameworks. Systems that grant significant fiscal autonomy to subnational governments, including to determine their own borrowing rules and levels, should and generally do couple this with measures to ensure the subnational governments bear the associated risks. In contrast, systems that provide limited autonomy and strict fiscal frameworks should and typically do provide for more risk-sharing, and often a role for subnational governments in determining national policy. Given the UK is characterised by limited fiscal autonomy for the devolved governments, this suggests considering whether this autonomy should be increased, or more risk-sharing and a greater role in determining national fiscal policy provided.

Turning to our case studies on subnational fiscal arrangements during the COVID-19 pandemic, they show that additional subnational borrowing has played an important role in several countries. But across all countries, it has been the national or federal government that has borne the larger part of the fiscal costs of mitigating the impacts of the pandemic, through a combination of additional grant funding for subnational governments and direct funding of national-level economic support schemes. There was some relaxation of normal subnational borrowing rules in Germany and Spain, but subnational borrowing rules in the other countries were already sufficiently flexible as to be able to accommodate the impacts of the pandemic.

Subnational funding crises have been avoided in all five countries, and there have been surprisingly few tensions over subnational funding issues. This is largely due to the fact that national governments have been willing to be fiscally very expansive during the pandemic, as well as the fiscal flexibilities available to the subnational governments themselves.

Approaches to setting health restrictions during the pandemic have varied significantly. In Switzerland and Spain, the pandemic triggered the declaration of exceptional circumstances, which brought much of the responsibility for setting the public health restrictions to the federal level, particularly during the first wave. In Germany, restrictions were also set uniformly across the country, but the process for doing this differed. Rather than being set unilaterally by the federal government, the 'shared rule' nature of the German constitution required restrictions to be agreed jointly by the Länder, potentially resulting in delayed and more lax restrictions than was optimal. Canadian provinces had full discretion to set restrictions, leading to some tensions between federal and provincial levels.

As is often the case with comparative exercises such as this, substantial differences in the institutional context in each country mean that the scope for drawing lessons for UK devolution directly is limited. In general, the subnational governments in these comparator countries do have greater ability to vary their own budgets than the UK devolved governments, but it has remained the federal level that has borne the brunt of the fiscal response to the COVID-19 pandemic.

Another key lesson is the importance of being able to set restrictions and other special measures swiftly at the onset of a crisis. However, the approaches in Spain and Switzerland, where health measures were exceptionally determined at federal level, would prove politically extremely contentious in the UK. The UK and devolved governments did appear to coordinate well in the setting of restrictions at the start of the pandemic – and arguably more so than in Germany or Canada – but this coordinative approach waned over time, and highlights the importance of robust arrangements for intergovernmental working.

4. Reforming the devolved fiscal frameworks

In this chapter, we consider what options exist for making the devolved fiscal frameworks more robust to the risk of fiscal or economic shocks in future. Key to this is the extent to which these frameworks can provide the devolved governments with a greater degree of certainty about the funding available to them, flexibility to rapidly address changes in their spending needs or revenues, and insurance against asymmetric shocks.

We begin by discussing whether the funding guarantees put in place in 2020 should be a permanent feature of the devolved fiscal frameworks. We then consider four measures to provide the devolved governments with additional financial flexibility:

- a widening of the range of purposes for which they can engage in resource borrowing;
- a relaxation of limits on reserve levels and drawdowns and Northern Ireland's system of Budget Exchange;
- the ability to utilise a portion of capital funding for resource spending;
- increased resource borrowing limits to address tax and welfare forecast errors.

These flexibilities would also help address short-term asymmetric shocks, but would be of little help in addressing longer-term asymmetric shocks. We end by considering whether reforms to how funding is allocated and adjusted to account for tax devolution are practical ways of providing increased insurance for long-term asymmetric shocks.

4.1 Providing funding guarantees on a permanent basis

As discussed in our first report (Bell, Eiser and Phillips, 2021), the funding guarantees provided by the UK government in 2020–21 served two main purposes:

- First, because they were initially set at levels higher than would be implied by the Barnett formula and spending in England, they gave the devolved governments some financial leeway to respond to the evolving COVID-19 situation without having to wait for the UK government to announce additional spending in England.
- Second, they meant that the devolved governments would not see funding clawed back if budgets for UK government departments serving England were reduced at the Supplementary Estimates stage (although, in the end, substantial further boosts to these budgets were announced, generating additional funding for the devolved governments).

These features were clearly very useful in 2020–21. But what about in more ‘normal’ fiscal times, including during the recovery from the pandemic?

In more normal circumstances, big in-year increases in spending in England are not usually announced. This means funding guarantees set at a level meaningfully higher than what would be implied by the Barnett formula would almost certainly lead to the devolved governments receiving more than their population-based share of funding increases. While it is debatable whether the current version of the Barnett formula itself is a suitable way of allocating funding, its use of population to allocate funding increments could be considered in some way ‘fair’ (or at least ‘reasonable’). It is more difficult to justify providing an amount arbitrarily higher than a population-based share of funding changes: unless this were based on some evidence of greater need for additional funding in the devolved nations, it can easily be seen as unfair to England.

Even setting the guaranteed funding level at what is initially implied by the Barnett formula would mean that if there were subsequent in-year cuts in planned spending in England, the devolved governments would receive more than their population-based share of any changes in funding, which could again be seen as unfair. An alternative way to avoid the devolved governments having to make in-year cuts at short notice is to give them the flexibility to defer the cuts to a later date. Indeed, the UK government has allowed this in the past (in 2010, for example). There is a case for this flexibility to be made automatically, rather than requiring the permission of HM Treasury on an ad hoc basis.

In summary, the funding guarantees were an important part of the adaptations to the normal operation of the devolved funding frameworks during the height of the pandemic. But as a more permanent change, the difference that guarantees are likely to make to the degree of funding certainty is, in our view, outweighed by the risk that their use would result in an inequitable distribution of funding across the UK. Nonetheless, the devolved governments should have the ability, on a more permanent and formal basis, to defer in-year reductions in grant funding to future years.

4.2 Extensions in the scope of resource borrowing powers

One way to provide the devolved governments with the automatic ability to defer spending cuts resulting from in-year cuts to planned spending in England would be to extend their resource borrowing powers to allow them to borrow to cover the cuts they would otherwise have to make. This would mean the devolved governments would not need to hold back funding in case in-year cuts are announced, or make last-minute cuts to spending once they are announced, but would be 'fair' to England as the devolved governments would still eventually need to make the same cuts. Relative to simple deferral, an extension of borrowing powers would provide more flexibility as the deferred cuts could be spread over several years rather than limited to the following year.

It is also worth asking whether the devolved governments should have access to borrowing powers for additional reasons other than addressing forecast errors.

One obvious example is where an asymmetric shock that temporarily depresses devolved revenues or increases devolved social security spending relative to equivalent revenues and spending in the rest of the UK is forecast. Under the current frameworks, the devolved governments are not able to borrow to offset these forecast funding shortfalls. Instead, they must draw down any reserves they hold (subject to the drawdown limits discussed below), reduce spending or increase tax rates so that they can continue to balance their budgets.

Such forecast shortfalls in revenue or increases in social security spending are different from forecast errors that become apparent in-year: they are known before budgets and tax rates are set, and hence any changes to spending or tax rates can be planned in advance. They should therefore be easier to address than the in-year changes to spending or taxes that would be needed if the devolved governments could not borrow to address forecast errors.

However, an inability to borrow to address temporary falls in revenue or increases in welfare spending that are forecast in advance could engender a degree of pro-cyclicality to the devolved governments' fiscal policy. In particular, when relatively slow economic growth is forecast to reduce tax revenues or increase welfare spending relative to the rest of the UK, the devolved governments would have to cut spending or increase taxes (unless sufficient reserves are available and can be drawn down), potentially exacerbating the economic slowdown.

There is therefore a case to allow for the devolved governments to borrow to address shortfalls in revenue or increases in welfare spending that are forecast as well as those that arise unexpectedly after forecasts are made (and lead to forecast errors). One interpretation of the Scottish Fiscal Framework Agreement is that it does allow for such borrowing if a Scotland-specific economic shock (growth below 1% a year, and growth at least 1 percentage point less than in the UK) is declared. In particular, paragraph 64 of HM Government and Scottish Government (2016) says that the annual borrowing limit of £600 million that is allowed in the case of a Scotland-specific economic shock is available to address 'any observed or *forecast* shortfall' (our italics). However, when a Scotland-specific economic shock was declared in January 2021, the UK and Scottish governments interpreted the Agreement as allowing an increase in the amount of borrowing to address forecast errors, but not allowing borrowing to address forecast shortfalls in revenue or increases in spending.

This may reflect the difficulty in defining what counts as a forecast shortfall in revenue or increase in social security spending. This is because changes in revenues and spending relative to the rest of the UK can reflect both differences in underlying factors (such as economic performance) and differences in policies. And distinguishing between temporary differences in relative performance and longer-term differential trends (for which ongoing borrowing is less appropriate) is impossible.

This suggests that rather than provide powers specifically to address forecast revenue shortfalls or spending increases, it may be more practical to provide some degree of general discretionary resource borrowing powers to the devolved governments. None currently has such powers, reflecting a view that fiscal and macroeconomic policy is a ‘reserved’ function of the UK government. In the UK public finance framework, the devolved governments are effectively treated little differently from departments of the UK government, with HM Treasury establishing departmental control totals that devolved governments must operate within – barring any ‘balanced budget’ spending increases that are funded through changes to devolved taxation or (limited) reserve drawdowns.

In the early part of the pandemic, the Scottish Government argued that it should have a number of additional budget flexibilities, including the ability to use its £500 million cash management borrowing limit to borrow to fund additional resource spending (Forbes, 2020). A number of independent analyses also argued for a temporary relaxation of normal borrowing rules to allow modest discretionary resource borrowing to better address short-term asymmetric impacts of the crisis (Ifan, 2020; Phillips, 2020).

The subsequent move by the UK government to the provision of substantial ‘funding guarantees’ largely negated the need for discretionary borrowing by the devolved governments during the pandemic. But it is nonetheless worth considering the case for discretionary borrowing powers, in order to provide the devolved governments with additional flexibility to respond to temporary shortfalls in revenue or increases in spending need. Here we consider the case for providing such powers on a permanent basis, including to pre-empt a fiscal shock, with the next section considering the potential introduction or expansion of powers in the case of an extreme fiscal shock.

The UK government has traditionally been reluctant to countenance discretionary resource borrowing by the devolved governments on two grounds: first, risks to the UK ‘fiscal aggregates’; and second, on equity grounds.

- The fiscal aggregate point is that devolved government borrowing implies some loss of control of overall fiscal policy as borrowing by devolved governments counts towards UK government borrowing and UK government fiscal targets.
- The equity point is that since the UK government implicitly already borrows on behalf of the devolved governments, it would be both unnecessary and unfair to enable the devolved governments to borrow 'on top of' that underlying UK government borrowing. The argument about unfairness is that it would be unfair for taxpayers in one part of the UK to be able to benefit from borrowing and additional resource spending, when those in other parts of the UK do not have that option.

We examine the fiscal aggregate point in detail in Box 4.1. To summarise, even substantial increases in devolved government borrowing seem unlikely to make a material economic difference to the UK fiscal aggregates. Devolved government resource borrowing of 3% of their budgets, for example, would amount to just 0.07% of UK GDP. In other words, measured as a percentage of GDP, even substantial devolved government borrowing is little more than a 'rounding error'.

Devolved government borrowing could, in theory, mean the difference between a UK fiscal target being met or not. But, in practice, this eventuality seems unlikely given the magnitudes and margins of error involved. And even if the eventuality did arise, a marginal difference in whether a target is hit or not has only political rather than economic significance.

Box 4.1. The impact of devolved government borrowing on UK fiscal aggregates and targets

One of the Treasury's main reasons for reticence in allowing the devolved governments to borrow more is the effect that such borrowing might have on the UK's 'fiscal aggregates'.

The fiscal aggregates are broad measures of the UK's overall fiscal position. They include measures of total expenditure (split by resource and capital), borrowing (i.e. the deficit, the difference between revenues and expenditure) and public sector net debt. The fiscal aggregates can be measured in cash terms or as a percentage of GDP. Importantly, devolved government spending, borrowing and debt are counted as part of these UK-wide fiscal aggregates. But would increases in devolved government borrowing and debt have a material impact on UK borrowing and debt figures? And might they affect the likelihood of the UK government meeting its fiscal targets? This box considers that question.

The impact on UK fiscal aggregates

The first point to make is that devolved government borrowing is likely to make very little difference to UK fiscal aggregates expressed as a percentage of GDP.

Table 4.1 shows how much borrowing the devolved governments would be allowed per year if limited to 1%, 2% or 3% of their resource block grants in 2022–23 in both cash terms (the top panel) and measured as a percentage of forecast UK GDP in 2022–23 (the bottom panel). It shows that even if limited to 3% of the resource block grants, the £1.9 billion in annual borrowing allowed – a significant sum for the devolved governments – would amount to just 0.07% of UK GDP. Limits of 1% of the resource block grants would allow for a total of £0.6 billion in borrowing – roughly equivalent to what can be borrowed to address forecast errors currently in 'normal' times – equivalent to just over 0.02% of UK GDP.

Table 4.1. Various devolved government borrowing limits in cash terms (top panel) and as a percentage of UK GDP (bottom panel)

	1% of resource block grant	2% of resource block grant	3% of resource block grant	10% of capital block grant
Devolved government borrowing (£m)				
Scotland	350	700	1050	560
Wales	150	300	450	260
NI	130	260	390	180
Total	630	1,260	1,890	1,000
As a percentage of UK GDP				
Scotland	0.01%	0.03%	0.04%	0.02%
Wales	0.01%	0.01%	0.02%	0.01%
NI	0.01%	0.01%	0.02%	0.01%
Total	0.02%	0.05%	0.07%	0.04%

Source: Authors' analysis of HM Treasury (2021).

Of course, the devolved governments also have capital borrowing powers, the use of which also contributes to the UK's overall budget deficit. But even if we assume that devolved government capital borrowing limits were extended to 10% of their capital block grant, that would permit up to a further £1 billion of capital borrowing across the three devolved governments, equivalent to a further 0.04% of UK GDP. Even combined with resource borrowing of up to 3% of resource block grant, the total amount that could be borrowed per year (£2.9 billion) would amount to a maximum of 0.11% of UK GDP. This is still no more than a rounding error.

The impact of debt is somewhat more complex to assess. But if we assume that the capital debt stock across the three devolved governments was capped at £7 billion (as now), that resource debt stock was capped at £6 billion (about three times the current limit) and that these caps were reached simultaneously across the devolved governments in 2025–26, then this would increase the UK's debt ratio in that year from 84.2% of GDP (currently forecast) to 84.7% of GDP.

So even quite substantial increases in devolved government borrowing limits would not make a material economic difference to the UK fiscal aggregates expressed as a percentage of GDP.

The impact on UK fiscal targets

Devolved government borrowing could in theory have a material impact on whether the UK government meets its fiscal targets. In practice, however, this seems unlikely given the magnitudes and uncertainties involved.

In his October 2021 Budget for example, Rishi Sunak established a new mandate for fiscal responsibility. This set targets for debt to be falling as a percentage of GDP by the third year of the forecast period (2024–25 currently) and to balance the current budget over the same period. The Chancellor is on course to meet this target with £24 billion of headroom according to the Budget forecasts. Devolved government borrowing of even £2.9 billion would hardly dent this. Similarly, debt as a percentage of GDP is forecast to fall in 2024–25 by 0.6 percentage points. Devolved government borrowing of £2.9 billion in that year would reduce that to around 0.5 percentage points.

The point here is that the UK government tends to build in sufficient headroom against forward-looking targets that even significant borrowing by the devolved governments is unlikely to materially affect those forecasts. And if targets are based not on forecasts but on out-turns (as has sometimes been the case in the past), the orders of magnitude involved make it very unlikely that devolved government borrowing would make a material difference.

The second point about targets is that, even in the unlikely event that devolved government borrowing did make the difference, at the margin, between a target being met or not, the failure at the margins to achieve a particular target would have virtually no economic significance. Fiscal targets are important but whether they are met or missed by a small margin is not. The UK government has adopted 11 sets of fiscal targets in the past seven years, with most being missed before being dropped. Emmerson and Stockton (2021) argue that 'rather than having firm and fixed fiscal rules, it would be better for these to be considered rough rules of thumb that Chancellors should strive to keep to in most periods'. Sensible rules of thumb would not be knocked off course by the sorts of devolved government borrowing discussed here.

Turning to the equity argument, one might argue that as long as the costs of devolved government borrowing are borne uniquely by the devolved governments and devolved taxpayers in future, then the equity concerns do not provide a strong justification against devolved government borrowing. On the other hand, if devolved governments did choose to borrow additional funds – despite the associated debt servicing costs in future – this shows that that borrowing is valued, and the fact that the option to capitalise on that is only available to some UK residents could be seen as unfair.[2]

Taking this together, it seems to us that there is a case for the devolved governments to have the ability to undertake a modest level of discretionary resource borrowing. This would provide them with a useful tool to address forecast shortfalls in revenue or increases in spending need, and provide greater flexibility to address a fiscal shock that impacts them in-year, including managing short-term uncertainty about what, if any, additional UK government funding will be allocated

[2] While voters in England could elect a government that was willing to borrow more, such borrowing would either be for UK-wide spending (such as pensions or defence spending) or for devolved spending in England, generating additional funding for Scotland, Wales and Northern Ireland via the Barnett formula. Thus it would not be possible for the English to benefit from additional borrowing on top of UK government borrowing in the same way residents of the devolved nations could.

to them. At modest levels, such borrowing powers would not pose a risk to the UK fiscal aggregates or create substantial equity concerns.

Concerns that devolved governments might ‘overuse’ discretionary borrowing powers could be allayed in several ways. These include:

- Setting a fairly stringent limit on the total stock of debt that could be incurred as a result of discretionary borrowing and/or requirement borrowing and requiring it to be repaid over a short time period. This would prevent the devolved governments from borrowing on an indefinite basis (indeed they would have an incentive to maintain headroom against the limit so that they can respond to an unforeseen shock) and would mean more of the costs of repaying debt incurred would fall due when the politicians that incurred the debt are still likely to be – or at least hoping to be – in office.
- Requiring any discretionary resource borrowing by a devolved government to be funded through bonds issued directly by itself, rather than by borrowing through the UK government. This would ensure that costs of servicing the debt reflect the perceived risks of holding devolved government debt, and limit the scope for any negative spillovers onto UK taxpayers.
- Requiring the devolved governments to notify their respective legislatures whenever they plan to utilise their discretionary resource borrowing powers, enabling the rationale for that decision to be robustly scrutinised.

In summary, there is a case for the devolved governments to have some limited ability to borrow to fund discretionary spending in ‘normal’ times. We suggest that an annual borrowing limit of 1% of the devolved governments’ resource budgets might be a useful starting point. At this level, there is little risk to the UK fiscal aggregates, and limited grounds for equity concerns.

Risks that devolved governments might ‘overuse’ borrowing powers can be mitigated through a combination of: legislative limits on borrowing and the stock of debt; a requirement for borrowing to be through own-government bonds; and explicit measures for ensuring parliamentary scrutiny of borrowing decisions.

4.3 Use of reserves

The Scottish and Welsh governments each have access to a reserve which can be used to manage volatility associated with devolved tax revenues and annual underspends. The reserves can in theory also be used as a way to flex the budget modestly in-year in response to changing circumstances.

There are no annual limits for payments into the Scotland Reserve or Wales Reserve. But the reserves are capped at an aggregate limit of £700 million in Scotland and £350 million in Wales. Annual drawdowns from the reserves are also fixed in 'normal' times. For Scotland the annual drawdown limits are £250 million for resource and £100 million for capital, while for Wales these annual drawdown limits are £125 million and £50 million respectively. The Scottish fiscal framework allows for the annual drawdown limits to be waived when there is a 'Scotland-specific economic shock' (i.e. in this case, annual drawdowns can be as much as the aggregate limit of £700 million). No such provisions are made in the Welsh fiscal framework.

The Northern Ireland Executive does not have access to a 'reserve', but maintains the system of 'Budget Exchange' that operated in Scotland and Wales before significant tax devolution to those jurisdictions took place. Budget Exchange works by allowing the Executive to 'surrender' unspent funding back to the UK government in one year and have an equivalent amount added to its block grant for the following year. Unlike with the Scotland and Wales Reserves, it is not possible to hold a balance and transfer spending across multiple years. The Executive can carry forward 0.75% of resource funding and 1.75% of capital funding, with any excess forfeited (consistent with the rules for UK government departments). The Budget Exchange mechanism, with its relatively tight limits on transfers of spending, is an attempt by HM Treasury to balance two things: on the one hand, the risks associated with an inefficient year-end 'splurge' of spending by departments if no underspends are allowed; on the other hand, HM Treasury's desire to maintain control over year-ahead aggregate spending at the UK level.

The devolved governments can request permission from the UK government to carry forward funding outside of their respective reserve limits, but the expectation is that this would happen only in exceptional circumstances (such as happened at the end of 2020–21 to allow the devolved governments to carry forward into 2021–22 funding that was announced very late in the financial year).

The main argument in favour of increasing drawdown limits from the Scotland and Wales Reserves is that these reserves are not in fact more 'generous' than the previous Budget Exchange arrangements that operated prior to tax devolution. To the extent that the reserves are intended to provide the devolved governments the flexibility to address slippage *and* volatility from devolved taxation, they do not provide a great deal of flexibility.

To think of a practical example, the Scottish Government's income tax reconciliation for 2018–19 was just over £300 million, but could easily have been higher. This reconciliation amount in itself is above the annual resource reserve drawdown limit of £250 million. The implication is that the Scottish Government could not have addressed this forecast error without using its borrowing powers, if that was something it wanted to do. The reserve could also exceed its limits remarkably quickly. A positive tax reconciliation of £300 million, combined with underspends of £200 million, would result in £500 million into the reserve, of which only £250 million could be withdrawn the following year.

The Scottish and Welsh governments are therefore not incentivised to build up much of a buffer in their reserves, both because of the cap and because of the limits on annual drawdowns. This reduces flexibility in addressing budget issues.

As with modest borrowing powers, raising the cap and/or the annual drawdown limits does not raise major issues of taxpayer fairness across the UK – this would provide more flexibility in when funding is spent, but would not provide additional funding to the devolved governments. Moreover, again as with modest borrowing powers, utilisation of enhanced reserves powers would have very little effect on UK fiscal aggregates.

In summary, we therefore think there is a case for enhanced reserves powers. In particular, drawdown limits should be increased and potentially abolished (as they already are for Scotland in the case of a Scotland-specific shock). Consideration should be given to increasing the total amount that can be held in reserves and, at the very least, existing limits should be indexed in some way to account for growth in devolved spending and tax revenues.

The Northern Ireland Executive should also be given the option to replace its existing Budget Exchange with a reserve – although the specific needs of

Northern Ireland in this respect will be informed by the ongoing deliberations of the Fiscal Commission Northern Ireland.

4.4 Capital-to-resource transfers

One of the flexibilities sought by the Scottish Government at the start of the pandemic was the ability to switch parts of its capital funding to its resource budget. Whilst the devolved governments normally have the ability to use resource funding for capital investment, utilising capital funding for resource spending is not permitted.

At the time this request was made, there was a clear rationale for it. In the early stages of the pandemic, significant social distancing restrictions imposed on the construction sector slowed the progress of construction projects significantly, risking substantial underspends of the capital budget. At the same time, it was relatively easy to identify areas of priority for additional resource spending. So at the time, transferring funding from the capital to the resource budget seemed an appropriate way to manage shifts in the demand for public spending.

The principal argument in favour of allowing devolved governments to transfer capital to resource spending more generally is that such switches would not 'cost' the UK government anything: one element of the devolved governments' spending limits would be being exchanged for another. And to the extent that devolved governments have the autonomy to allocate the resource and capital budgets, why should they not have the autonomy to determine the overall balance of their resource relative to capital spending? Additionally the distinction between what is classed as resource and capital spending is at times arbitrary, strengthening the case for the devolved governments to have some ability to transfer funding between the categories.

One argument against allowing capital to budget switches is that these changes would affect the UK government's fiscal aggregates. UK government fiscal rules frequently distinguish between capital and resource spending and impose separate targets on borrowing for those two elements of spending. However, even substantial switches from the devolved governments' perspectives would have next to no impact on UK-wide fiscal aggregates: for example, switching 10% of devolved capital funding (or approximately £1 billion) to resource budgets would raise the current budget deficit by approximately 0.04% of GDP (while leaving the overall budget deficit unchanged).

A second argument is that providing additional flexibility on the allocation of funding between capital investment and resource spending on an automatic basis to the devolved nations but not England could be considered unfair (although the Treasury has allowed the English NHS to switch funding in this way several times when it has faced particular spending pressures). However, again as with borrowing and reserves powers, a modest degree of flexibility to switch capital funding to resource budgets does not feel like a significant inequity.

On a practical level, it is unclear quite how often switching funding from capital to resource budgets will represent a policy that has obvious merit in more 'normal' times, or even during another economic crisis; the set of circumstances at the start of the pandemic, with construction activity stalling as a result of mandated shutdowns, may prove quite unique.

In summary, allowing the devolved governments some ability to transfer capital spending limits to resource budgets may be a useful way to provide additional budget flexibility. But it is a flexibility that seems likely to be less useful than either additional borrowing powers, or extended drawdown limits from the reserves. Given that we have recommended that the devolved governments should have some additional flexibilities relating to borrowing and reserves, this limits the case for providing flexibility in relation to capital–resource transfers during 'normal' times.

4.5 Enhanced borrowing limits to address forecast errors

The risk of forecast errors on devolved taxes (or devolved welfare spending in Scotland) provides an additional source of budget uncertainty for the devolved governments. This risk exists in 'normal' times as well as during major fiscal shocks such as the pandemic, although such shocks accentuate the possibility that revenue or spending out-turns may diverge from forecasts.

Under current arrangements – and in 'normal' times – the Scottish Government can borrow up to £300 million per annum to address forecast error, with a total limit on resource borrowing of £1.75 billion.[3] If the specific conditions of a 'Scotland-specific economic shock' are triggered, then the Scottish Government's borrowing limit to address forecast error increases to £600 million for the year in question and the following two years. As discussed above, the conditions for a Scotland-specific shock were triggered in January 2021, meaning the Scottish Government will have access to its enhanced borrowing limit until 2023–24.

The Scottish fiscal framework also makes provision for resource borrowing limits to be increased further, at the discretion of the UK government, during a Scotland-specific shock, in order to 'provide the Scottish Government with the necessary tools to manage extreme levels of volatility' (HM Government and Scottish Government, 2016).

The Scottish Government's forecast error borrowing limit of £300 million was determined fairly arbitrarily at the time the fiscal framework was agreed. One way to think about this limit is that it is equivalent to around 2.5% of devolved income tax revenues and barely 1.5% of all devolved and assigned tax revenues due to be transferred to the Scottish budget. Implicitly, the assumption made when this limit was set was that forecast errors on Scottish taxes would largely be positively correlated with forecast errors on equivalent rUK taxes.[4] Indeed, if forecast errors are perfectly positively correlated, then large absolute forecast errors on Scottish taxes are, in a budgetary sense, completely offset by the equivalent error on the equivalent rUK tax. For example, if Scottish tax revenues per person are 5% lower than forecast, then as long as rUK tax revenues per person are also 5% lower than forecast, the impact on the Scottish budget of lower-than-forecast revenues is offset by the lower-than-forecast block grant adjustment.

There are reasonable grounds for believing that, on average, Scottish and rUK forecast errors will be positively correlated to an extent. This is partly because Scottish and rUK economic cycles are strongly correlated, and partly because the Scottish Fiscal Commission (SFC) and the Office for Budget Responsibility (OBR) draw on similar methods and theories to interpret that data as they emerge. But

3 As well as the ability to borrow up to £300 million annually for forecast error, the Scottish Government can also borrow up to £500 million for the purposes of cash management, within a combined annual limit of £600 million across these two forms of borrowing. The cap of £1.75 billion pertains to both forms of borrowing.

4 rUK stands for the rest of the UK.

ultimately, the extent to which forecast errors do correlate is an empirical question. To date, we have only three complete years of data on forecasts and out-turn for income tax, land & buildings transaction tax and landfill tax in combination (but none yet for the aggregates levy, air departure tax, or the portion of VAT due to be assigned). In one of those three years, 2018–19, the forecast error for Scottish income tax was negatively correlated with the forecast error for rUK income tax, leading to a reconciliation of £309 million for the Scottish budget – in excess of the forecast error borrowing limit.

Analysis by the Scottish Fiscal Commission (2021) indicates that the normal £300 million per annum borrowing powers of the Scottish Government could be exceeded between one and four times per decade, and negative reconciliations greater than £600 million could arise up to two times per decade, as a result of income tax forecast errors alone. Undertaking similar analysis, the Scottish Government (2021, annex A) estimates that there could be a 5–17% probability of negative income tax reconciliations exceeding £300 million. These two analyses make different assumptions about the likely degree of forecast error, and the correlation of the SFC's errors with those of the OBR.

In the appendix, we undertake similar analysis of our own. We then extend it by incorporating forecast errors not only on income tax, but on the main element in devolved social security spending – spending associated with benefits linked to disability living allowance and the personal independence payment. This allows us to consider not only the importance of the correlation between Scottish and rUK income tax forecasts, but also the correlation between income tax reconciliations and social security reconciliations on the Scottish budget. Our findings largely reiterate those of the SFC and Scottish Government, namely that the frequency of reconciliations greater than £300 million will depend critically on the correlation between Scottish and rUK income tax forecast errors. It is not yet possible to foresee what this correlation will be over the longer term, but on the basis of what has happened so far, it does not seem unreasonable to think that income tax reconciliations will exceed the £300 million limit on a fairly frequent basis.

It is worth recalling that the Scottish Government can also draw down reserves to address forecast errors. Notwithstanding this, it is unclear why one would set limits on borrowing to address forecast errors at a level that could be expected to be regularly insufficient. Such borrowing is in any case capped by the scale of forecast errors, and forecasts are unlikely to be 'gamed' as they are undertaken by the independent SFC. A tight limit on cumulative borrowing and a requirement for short repayment periods would also prevent the Scottish Government from deferring the necessary spending cuts for a long period. Given this, the risks of making permanent the enhanced £600 million limit currently available following a Scotland-specific economic shock seem minimal.

The Welsh Government can borrow up to £200 million per annum to address forecast errors associated with its devolved taxes, with the stock of debt that can be incurred capped at £500 million. To date, we have limited information on the scale of forecast errors and resulting reconciliations that may apply in Wales, although the latest forecasts imply positive reconciliations in 2020–21 and 2021–22. However, the current limits are less obviously constraining than for Scotland.[5]

First, while lower in cash terms, they are substantially higher as a share of devolved revenues than Scotland's limits.[6] Second, we may expect the forecast errors for Welsh revenues and the block grant adjustment (BGA) to be greater than Scottish ones, further reducing the scale of reconciliation required. In part this is because the Welsh-rUK business cycles are more tightly correlated than the Scottish-rUK business cycles, but also reflects the fact that the OBR will forecast Welsh as well as rUK tax revenues (so the same forecasting methodology will be employed and, presumably, similar and consistent judgements will underpin each forecast).

The Northern Ireland Executive has no powers to borrow to address forecast error, as its funding is not reliant on tax forecasts or out-turns. Should the current NI Fiscal Commission recommend tax devolution to Northern Ireland, estimates of what would be an appropriate level of borrowing powers should be made.

In summary, there is a case for making Scotland's current temporary forecast error borrowing limit of £600 million permanent. In both Scotland and Wales, the borrowing limits should be indexed over time in line with the size of their

5 Unlike the Scottish one, the Welsh fiscal framework makes no provision for increased borrowing when there is an 'economic shock' specific to Wales. The rationale for not including a clause on a Wales-specific economic shock is not explicitly clear, but it might reflect the view that the 'normal' forecast error borrowing limits are, as a percentage of revenues, more generous for the Welsh Government.

6 The Welsh Government's £200 million forecast error borrowing represents around 7% of forecast revenues for 2022–23 from income tax, landfill tax and land transactions tax; the Scottish Government's standard £300 million forecast error borrowing represents around 2.1% of forecast revenues from income tax, land & buildings transactions tax and landfill tax in 2022–23.

overall tax and welfare BGAs. The NI Fiscal Commission should consider the need for forecast error borrowing limits in Northern Ireland in the context of the recommendations it makes for tax devolution in Northern Ireland.

4.6 Changes to how block grants and the BGAs are calculated

The aforementioned changes to borrowing and reserves powers would provide the devolved governments with increased flexibility and (self-)insurance to address *short-term* increases in spending needs or reductions in revenues, including those resulting from asymmetric shocks. However, neither reserve drawdown nor borrowing (nor indeed shifts from capital to resource budgets) is an appropriate tool to respond to longer-term asymmetric shocks to or trends in relative spending needs or revenue-raising capacity. Instead, insurance against long-term asymmetric shocks or trends can only be provided by changing the way funding is allocated. In principle, this could be done by providing funding on the basis of needs assessment, or by incorporating insurance into the revenues side of the equation by making changes to the calculation of the 'block grant adjustments' for tax.

Needs-based funding assessments and allocations

As highlighted above, the devolved governments' block grant funding is currently updated each year via the Barnett formula, which allocates the same per-capita increase in funding as is planned for comparable services provided by the UK government for England. This means funding allocations are not linked to any assessment of the spending needs of the devolved governments, and hence do not provide any insurance against changes in the relative spending needs of the devolved nations.

Whether the Barnett formula should be replaced with needs-based funding assessments and allocations has been debated since its introduction in the late 1970s. Indeed, the formula was initially a stopgap measure until alternative arrangements for funding the planned devolved assemblies in Scotland and Wales could be agreed. In the end, the assemblies were not set up following 'No' (or in Scotland's case, insufficient 'Yes') votes in referendums held in 1979, and the Barnett formula became a long-term feature of the UK's fiscal architecture.

In principle, there is a strong case for abandoning the Barnett formula as the default approach for allocating funding to the devolved nations. This is because the formula essentially leads to arbitrary levels of relative funding for the different devolved nations. In particular, while funding *changes* are population based, funding *levels* depend on historical funding levels, which are not population based, as well as these population-based increments. And the formula does not update funding levels to account for differential population growth (or indeed any other factors affecting spending need). Together, this means that the relative funding levels for the different UK nations depend arbitrarily on past relative funding levels, relative population growth, and growth in nominal spending in England. In particular, funding per person is higher relative to England if a devolved nation's population is growing more slowly (which has almost always been the case for Scotland and Wales) and when initial funding levels are higher than in England (which is true of Scotland, Wales and Northern Ireland), if spending growth in England is low. This is difficult to justify.

Whether the Barnett formula should be replaced with needs-based funding or some other system (such as funding based on revenue generation or simple equal per-person funding) depends on one's view about the degree of redistribution and insurance that should be provided across the UK. The principles underlying the fiscal frameworks for Scotland and Wales (such as the 'no detriment' principle) are little help because they are principles to apply to further devolution at the margin (rather than the existing stock of devolved spending and tax responsibilities) and take the existing status quo as their baseline.

Within each nation of the UK, funding for public services is often allocated between local areas in order to equalise on the basis of estimated spending needs and, in the case of councils, to offset differences in their own revenue-raising capacities. The aim of this with council funding has traditionally been to ensure that if all councils set their local taxes at a given reference level, and operated at the same efficiency level, they could all provide the same range and quality of services given the different demands and costs they face (given local demographics and property costs, for example). With health spending, the aim, within England at least, has been to go further and allocate more funding than is needed to provide comparable services to areas with less-healthy populations, with the hope that the additional or higher-quality services they could therefore offer would help reduce health inequalities.

Whether, in principle, one would want to replace the Barnett formula with a needs-based funding formula therefore depends on whether one thinks such equalisation and redistribution would be appropriate between the nations of the UK as well as within them. But practical issues also matter. Estimating the spending needs of different subnational jurisdictions is difficult: the typical approaches used can be subject to circular reasoning (past funding allocations determine past spending patterns, and in turn determine estimated relationships between regional characteristics and spending, and hence future funding allocations) and gaming by subnational jurisdictions (if the characteristics used in the spending needs formulas are partly under the control of subnational government). Approaches exist to address these problems but require good data on how spending is allocated within subnational jurisdictions (Harris and Phillips, 2018) and the exclusion of manipulatable characteristics from spending needs formulas, even though these may be good predictors of spending needs. And it is difficult to avoid subjective decisions such as, for example, the standard range and quality of services for which relative spending needs should be assessed.

This links to the real difficulty in implementing needs-based funding for the devolved governments: politics. Changes in the way funding is allocated would be effectively a zero-sum game, with some parts of the UK losing and some parts gaining. In particular, estimates suggest that Scotland could be a significant loser from needs-based funding allocations (Independent Commission on Funding & Finance for Wales, 2010), and it is hard to imagine such losses not becoming a major issue in Scotland's ongoing debate about independence. Moreover, implementation of needs-based funding is not one-off: formulas would need to be updated as the characteristics of the different nations and the drivers of spending needs change and as the balance between different services (for which patterns of relative need may differ) in total spending changes. Political disagreement would therefore likely be an ongoing feature of a needs-based funding system, at least while the constitutional future of the UK is such a live issue.

Thus, there is a strong principled case to move away from the Barnett formula, and its replacement with a needs-based funding system would provide both a more rational basis for redistribution and greater insurance for long-term asymmetric shocks to or trends in spending needs. Both practical and political challenges would need to be overcome in order to implement needs-based funding arrangements. We therefore recommend that any decision to replace the Barnett formula with needs-based assessments and allocations should be

considered as part of a UK-wide political review of the devolved fiscal frameworks, rather than be considered a 'technical' issue.

Reforming how the BGAs are calculated

Replacing the Barnett formula with a needs-based funding system would address long-term asymmetric shocks and trends on the spending side of the devolved governments' budgets. But what about long-term shocks or trends that affect devolved government revenues proportionately more (or less) than they affect the equivalent revenues in rUK?

The degree of insurance provided in such circumstances is determined by the block grant adjustments (BGAs) made to account for the devolved tax revenues the Scottish and Welsh governments now retain and control. The way these BGAs were initially calculated and have subsequently been indexed differs slightly between Scotland and Wales but in both cases reflects several of the Smith Commission principles we introduced in Chapter 2:

- The 'no detriment' principle informs the calculation of the initial BGA. In particular, when a tax is first devolved, the BGA is set equal to the amount of revenue devolved, so that the devolved government neither loses nor gains if its revenues per person are initially higher or lower than those of the rest of the UK.
- The 'economic responsibility', 'no detriment' and 'risk-sharing union' principles inform the indexation approach, which uprates the BGAs each year in line with the equivalent revenues or tax bases in the rest of the UK. This ensures that the devolved government bears the cost or reaps the rewards of its tax policy changes (and, albeit less perfectly, the UK government bears the cost or reaps the rewards of its policies). It also insulates the devolved government from any revenue shocks that affect the whole of the UK (because the BGAs will change in ways that offset the changes in devolved tax revenues). But, in addition, it means that the devolved governments bear in full the risk that their revenues grow more or less quickly than those in the rest of the UK, including for reasons outside of their control – such as a major shock with asymmetric impacts.

This combination of full equalisation and insurance at the point of devolution and, at least for the proportion of tax revenues that are devolved, no equalisation or insurance at the margin following devolution is unusual internationally.

Table 4.2. Impact on devolved government funding from a 2.5% fall in income tax or all devolved tax revenues relative to rUK revenues

	2.5% fall in income tax		2.5% fall in all devolved taxes	
	Cash terms	As a % of resource budget	Cash terms	As a % of resource budget
Scotland	£296m	0.8%	£382m	1.0%
Wales	£51m	0.3%	£85m	0.5%

Note: Estimates based on out-turn revenues and resource budgets in 2019–20, the last year of out-turn data available, and largely prior to the COVID-19 crisis.

Source: Authors' calculations using Scottish Government (2020), Welsh Government (2020) and HM Revenue and Customs (2021a, 2021b).

The scale of the risks that the devolved governments of Scotland and Wales are exposed to as a result of bearing the full marginal risk of divergences in devolved revenues varies substantially. For example, consider a shock that reduces income tax revenues relative to England and Northern Ireland by 2.5% on an ongoing basis. Table 4.2 shows the impacts on Scottish and Welsh government funding, both in per-capita and percentage terms, using data from 2019–20. It shows that the impact on Scottish government revenues would be much higher than for Wales, both in cash terms (£296 million versus £51 million) and measured as a percentage of the resource budget (0.8% versus 0.3%). This reflects the fact that substantially more income tax is raised (in aggregate and per person) in Scotland than in Wales, and a larger share of it is devolved. The table also shows the impact of a 2.5% fall in revenues from all devolved taxes, indicating that what happens to income tax matters most, especially for Scotland. In addition, it confirms that the Scottish Government is more exposed, overall, to shocks to tax revenues than the Welsh Government.

In principle, reforming the way the BGAs are indexed so that marginal changes in revenue-raising capacity are partially equalised for would provide greater risk-sharing for long-term shocks (borrowing, discussed earlier, is not a suitable response to long-term shocks). For example, if BGAs were updated to insure against 75% of the risk of any fall in tax revenue capacity below 99% of its level at the point of devolution, the Scottish Government's exposure to revenue losses would have been reduced to £96 million, or less than 0.3% of its resource budget (given trends prior to 2019–20 meant that Scottish tax capacity had already fallen below 99% of its initial level).

Providing such insurance in practice is challenging though. So that the devolved and UK governments still bear the revenue effects of their own tax policies, one would have to strip out the effects of any policy changes. This could be done by defining a benchmark tax system with which to assess each devolved government's tax revenue capacity, in turn basing updates to BGAs on these assessments. This is the approach traditionally used within each nation to assess each council's revenue-raising capacity (using a reference level of council tax) and also in many other countries (such as Australia and Canada).

Doing this becomes more difficult the more that tax systems diverge in structure – for example, if the definition of tax bases differs, there may not be the administrative data to calculate revenue capacity under a common benchmark tax system. At this stage though, that is probably a minor concern for the UK, where devolved taxes have yet to diverge significantly from their UK equivalents (and in the case of income tax, the definition of the tax base is not currently devolved).

Potentially more of an issue is the treatment of behavioural effects of tax policy decisions. In particular, if tax policies differ between different parts of the UK, to what extent is it those differences that are driving differences in revenue capacity versus other underlying factors? This matters because ideally (and under the 'economic responsibility' principle), we would want the government in question to bear the behavioural impact of its tax policies on revenues, not just the direct mechanical effects of any changes in tax rates, thresholds, etc. For example, if the Scottish or Welsh Government were to increase the tax rate paid on incomes above £150,000 (a highly responsive group of taxpayers), we would want it not only to gain revenues as a result of the higher tax rate, but also to lose as a result of behavioural responses undertaken by taxpayers to reduce their tax liability (such as reducing their work effort, engaging in greater tax avoidance or evasion, or migrating). If the devolved governments do not bear these costs, their incentives are skewed towards setting higher tax rates.

However, even after a policy is implemented, one cannot know for sure what the behavioural response to it is – one can only estimate it statistically, and such estimates are subject to both measurement error and methodological difficulties. For a tax such as income tax, even relatively small differences in estimates of the scale of behavioural response can mean differences of tens of millions of pounds in revenue. Agreeing the size of the behavioural adjustments to make to estimates of the tax revenue capacities of the devolved governments would therefore likely be politically difficult.

Any decision on whether to reform how BGAs are calculated to provide more insurance against shocks should take into account the effect this may have on the incentives the devolved governments have to change tax policies. It should also be informed by debate and discussion about the nature of the UK's fiscal union – in particular, how much equalisation and risk-sharing should there be across the UK? The answers to this question may differ between different parts of the UK, with the current Welsh Government potentially favouring more risk-sharing (and hence equalisation at the margin) than the current Scottish Government, which advocates Scottish independence (and hence no risk-sharing).

In summary, reform of the BGAs is the main way to provide greater insurance against long-term fiscal shocks and trends differentially affecting the revenues of different nations of the UK. However, providing such insurance in a way that is consistent with the Smith Commission's principle of 'economic responsibility' – the idea that the devolved governments should bear the risk and reap the rewards for their tax policies – would be challenging, not least due to the difficulty of agreeing the nature and scale of behavioural responses to tax policy. In addition, whether such insurance is desirable or not depends on one's conception of the role of the Union. We therefore recommend that decisions over whether BGA indexation should be reformed to provide greater insurance are considered as part of political reviews of the devolved fiscal frameworks, rather than considered a 'technical' issue.

5. Responding to future crises

The last chapter considered what permanent changes could be made to the devolved fiscal frameworks in order that the devolved governments are provided with greater certainty, flexibility and insurance on an ongoing basis in future, so that they are in a better position to respond to fiscal challenges and shocks as they arise. However, particularly large fiscal shocks, including a possible reintensification of the current COVID-19 pandemic, or future pandemics, could necessitate temporary changes in order to provide even greater certainty, flexibility and insurance against asymmetric shocks. This chapter discusses: which changes might be beneficial on a temporary basis; whether to set out in advance criteria for when such temporary changes should be made; the scope for using needs-based formulas for determining grant allocations during a crisis; and the role improvements in intergovernmental communication, coordination and decision-making can play in better addressing future crises.

5.1 Potential temporary changes to the devolved fiscal frameworks

We argued in Chapter 4 that the use of funding guarantees is not appropriate in 'normal' times. But as we noted in that chapter and in our previous report (Bell, Eiser and Phillips, 2021), funding guarantees to the devolved governments were a successful and important part of the fiscal response to COVID-19. In particular, by providing some 'headroom' above the funding provided by the Barnett formula, they allowed the devolved governments to develop and implement new COVID-19 policies more rapidly than if they had had to wait until policies and funding had been announced for England, as under normal arrangements. This ad hoc change therefore potentially facilitated better policy outcomes than rigidly following procedures for funding that had been established prior to the pandemic.

If a similar rapidly moving crisis occurs, the reintroduction of temporary funding guarantees for the devolved governments could again be beneficial. However, it is worth noting that the provision of enhanced borrowing powers would also give the devolved governments the ability to spend in advance of policies and funding being confirmed for England and the resulting Barnett consequentials being made available. In this sense, funding guarantees and enhanced borrowing are to some extent substitutes.

We noted in Chapter 3 that several countries, including Germany and Spain, responded to the COVID-19 pandemic by relaxing borrowing limits for subnational governments. Why the UK government chose not to increase devolved government borrowing limits is unclear. It may reflect its traditional concern about loss of control of the fiscal aggregates, combined with the lack of institutional experience in managing devolved government borrowing: McCann (2021) points out that the UK has one of the lowest levels of subnational government borrowing relative to GDP among developed nations.

However, funding guarantees and enhanced borrowing powers are not perfect substitutes and have their own advantages and disadvantages.

For example, the funding guarantees allowed the UK government to continue its direct control over UK borrowing and debt, and also keep devolved government debt relatively low. From the perspective of the devolved governments, the headroom provided by the guarantees comes at no cost to them, whereas the headroom provided by borrowing may require repayment in subsequent years, if additional Barnett consequentials are not forthcoming allowing them to unwind the borrowing.

On the other hand, from a UK-wide equity perspective, granting enhanced borrowing powers instead would have meant that there was no risk that the UK government was providing the devolved governments with a higher-than-population share of the funding to address the shock, whereas such a risk did exist under the funding guarantees.[7] Enhanced borrowing powers would also give the devolved

[7] However, if the devolved governments still chose to borrow on top of their Barnett consequentials even once the latter had been confirmed, the amount they could spend in the short term would be higher than their population share of what is being spent in England. They would be funding this additional expenditure themselves, but as discussed in Chapter 4, access to additional borrowing that is not available to England could still be considered unfair.

governments greater flexibility to decide how much extra they need to spend, potentially providing greater flexibility to address asymmetric impacts of a shock.

Funding guarantees and enhanced borrowing powers therefore differ in the extent to which they provide certainty to the UK and devolved governments, and the degree of both flexibility and responsibility they provide to the devolved governments. Thus, if a similar shock arises in future, the choice or balance between funding guarantees and enhanced borrowing powers should depend on the importance placed on these different objectives. To the extent that certainty over funding and borrowing levels is valued highly by the UK and/or devolved governments, provision of most of the funding headroom deemed necessary via funding guarantees is likely to be more attractive. But if greater flexibility and/or responsibility for the devolved governments is seen as desirable, and/or the risk of the shock impacting asymmetrically across the nations of the UK considered likely, greater reliance on enhanced borrowing powers will be more attractive.

Arguably, the fact that decisions on the introduction and size of the guarantees were taken by the UK government alone in 2020–21 contributed to a feeling of grievance among the devolved governments. Publicly raising concerns about the amount of funding made available and lack of borrowing powers was also more attractive to the devolved governments in this context.

Providing the devolved governments with a choice between funding guarantees and enhanced borrowing powers would not only give them greater flexibility, but also mean that they are forced to consider the sorts of policy trade-offs that the UK government currently has to bear full responsibility for, potentially enhancing their financial accountability.[8] And at the very least, the UK government should decide the balance between funding guarantees and enhanced borrowing following consultation with the devolved governments.

Some combination of relaxed borrowing rules and funding guarantees should be rapidly introduced in a future major fiscal shock where spending decisions are likely to need to be taken quickly and on a rolling basis. The choice or balance between these two options should be informed by the weight placed on

8 For further discussion of the potential impact of providing the devolved governments with greater influence in determining their own funding arrangements, see Bell, Sas and Houston (2021).

certainty, flexibility and responsibility. There may be benefits to accountability for the UK government to decide the most appropriate option in conjunction with the devolved governments.

5.2 Pre-emptively defining the conditions that trigger discretionary powers

The question that then arises is what conditions should trigger the availability of enhanced borrowing powers or funding guarantees?

Qualitatively, it is when spending needs are evolving rapidly and the UK government is likely to make frequent fiscal announcements that impact devolved government funding; and, in the case of borrowing powers, when there is a risk of asymmetric changes in spending needs (or perceived needs) across the nations of the UK.

However, in our view, it is not feasible to pre-emptively define, quantitatively, the conditions when enhanced borrowing or funding guarantees should apply. Indeed, while the IMF and OECD recommend setting out formal criteria for when the economic situation should warrant a relaxation of the rules (as with the definition of a Scotland-specific economic shock, for example), they recognise that this is not possible for all fiscal shocks, including natural disasters and pandemics.

For the same reasons, it is unlikely to be possible to set out, in advance, quantitative criteria for determining whether a shock is affecting one or more UK nations asymmetrically. And similarly, it is infeasible to set out in advance exactly what sort of fiscal response would be most appropriate to any given fiscal shock. In short, it seems likely that a future unforeseen shock, by its nature, will require an adaptive and somewhat ad hoc response. The nature of the response, and the conditions that trigger it, cannot be quantified in advance. Moreover, the UK's traditional approach of muddling through crises arguably sufficed in relation to the devolved governments' funding arrangements during the COVID-19 pandemic.

Blindly trusting that an ad hoc approach will work well in future does not feel like a particularly robust approach to risk management though. In Section 5.4, we consider whether the necessarily ad hoc nature of the response to a future shock can at least be made more robust and effective by being underpinned by a more robust set of decision-making processes that involve input from the devolved governments.

We recognise that decisions on the fiscal response to a future fiscal shock will necessarily be made on an ad hoc basis, rather than on the basis of a pre-defined set of quantitative rules.

5.3 Allocating temporary funding using needs-based formulas

While enhanced borrowing powers would provide the devolved governments with the flexibility to respond to an asymmetric shock, they would not provide insurance against that risk: the devolved governments would still ultimately bear the cost of any ‘excess’ impact on their territory at a later date as they repay their borrowing. This raises the question of whether the UK government should allocate temporary additional funding on the basis of a needs-based formula to pre-empt the risk of a shock impacting asymmetrically across the UK.

The aim of such an approach would be to ensure that each nation of the UK received sufficient funding – and in particular that the devolved governments would not receive insufficient or overgenerous funding if the shock was of a different scale for them than for England. However, in practice, it may be both technically and politically difficult to fine-tune funding allocations in this way. First, it seems unlikely that spending needs will vary in line with any pre-existing general spending needs formulas. Second, just how spending needs will evolve in the different nations may be highly uncertain. Third, the decisions made are likely to be very politically contentious.

Here, experience of allocating funding to local government during the COVID-19 pandemic may be informative. Initially, the UK government allocated funding to English councils largely on the basis of historical assessments of their adult social care spending needs – on the assumption that this service would represent the bulk of additional spending needs. As evidence of wider financial impacts – not least falls in income from sales, fees and charges – emerged, the second allocation was based on population and allocated more to lower-tier shire district councils. Finally, the government introduced a new COVID-19 spending needs formula, based on the relationship between councils’ forecasts for COVID-related spending and their population and deprivation levels, and introduced a scheme partially compensating for the actual losses in income estimated by councils. The Welsh Government, on the other hand, relied on such a compensation scheme (although it provided full rather than partial compensation) for both income losses and spending increases.

In England, at least, the scheme had to evolve over time as the impacts of the COVID-19 crisis became clearer. The UK government was eventually able to estimate an (albeit rough) specific needs formula, but this used data from around 150 councils operating under the same national framework for COVID-19 policy responses; the same approach to developing a spending needs formula would not be possible for the three devolved nations. The development and use of any specific needs-based formula would also likely prove politically contentious given that decisions on what indicators to include and what weights to assign them are, to at least some extent, subjective, and subject to 'zero sum' bargaining. Quickly developing a spending needs formula that can be used in a crisis and that avoids potentially distracting political arguments is therefore likely to be difficult.

What about more direct compensation schemes? The UK government only compensated partially for losses of income so that councils still had an incentive to generate what income they could. Most councils were able to address any remaining shortfall by drawing down their often sizeable reserves – something the devolved governments lack. The Welsh Government's full compensation of stated financial impacts, on the other hand, meant councils had little financial incentive to control expenditure and generate income. To address this, claims have been subject to vetting and only those costs and income losses 'necessarily incurred' are allowable. Given that the devolved governments were responsible for setting policy and determining spending on a far wider range of areas than local government, there would also be more scope for them to take different views of the funding necessary to address a particular shock. The perception (and potential reality) that one or more of the nations received more than it really needed or, alternatively, the UK government disallowing part of a claim (which, all else equal, would mean the devolved government in question having to cut other expenditures) could cause significant political tension. Therefore, ex post compensation on the basis of 'expense' claims is not an easy option.

That does not mean the UK government should blindly use the Barnett formula – or any formula that replaces it in future – in all circumstances: the UK government is able and should be willing to bypass the Barnett formula (both to provide more or less funding than for England) when it is obvious that a shock is having or will have very different impacts in different parts of the country. For example, if the COVID-19 pandemic were to reintensify and particularly affect one or more of the devolved nations differently from England, clearly necessitating different public health restrictions or scales of health service response, the UK government could engage with the affected devolved government(s) and/or local public service delivery bodies in England (e.g. councils and/or NHS trusts) to agree additional funding on top of that provided to the rest of the UK. And if there was significant damage to infrastructure and a need for business support following a major public disaster in one of the nations of the UK, it would be desirable to bypass the Barnett formula entirely and provide funding only to that nation. To ensure fairness across the UK though, such arrangements should be symmetric, with not only the possibility of additional funding for the devolved nations on top of the allocations provided by the Barnett formula, but also the possibility of additional funding for England without generating Barnett consequentials for the devolved nations.

In summary therefore, we are not persuaded that it is feasible to rapidly develop bespoke formulas to allocate funding on a needs basis in response to asymmetric shocks. However, the UK government can and should bypass the Barnett formula (or any replacement formula) if, during the course of forecasting and monitoring the impact of a fiscal shock, it becomes clear it is having disproportionate impacts on one or more of the UK nations.

As we discuss below, consultation with the devolved governments in advance of such decisions may have practical and political benefits.

5.4 Improving intergovernmental communication, coordination and decision-making

In particular, there are two key reasons for believing that the fiscal response to a future shock might be more effective if it was informed by meaningful consultation and deliberation between the UK and devolved governments:

- First, the devolved governments are likely to have better information on how a shock is affecting their territories, and both the fiscal impacts and constraints they are likely to face, than the UK government.

- Second, decisions on the nature of a response may have greater legitimacy if the devolved governments have informed and been able to influence them.

In short, whilst the response to an unexpected shock will necessarily be adaptive and ad hoc, an agreed process – whereby the UK and devolved governments can share information, deliberate, and seek consensus on the scale and nature of a shock (e.g. whether it is asymmetric) and the most appropriate response – could lead to more effective and equitable outcomes than if the response is planned entirely unilaterally by the UK government.

However, evidence suggests that a more formal role for the devolved governments in determining the appropriate fiscal response to a crisis may not necessarily lead to a more effective or timelier response. As the analysis in Chapter 3 showed, it has been argued that the response to the second wave of COVID-19 in Switzerland in 2020 was delayed by the requirement to seek agreement about health restrictions across the cantons, whereas the response to the first wave was timelier given that it was unilaterally declared at federal level. Similarly, the requirement in Germany to seek agreement across Länder has been argued to have resulted in delays in setting health restrictions – and a weakening in the level at which restrictions are set.

Nonetheless, a more consensual approach to planning the fiscal response to a future crisis could provide greater legitimacy to the response. As such, a more cooperative and consensual approach would not just be advantageous to the devolved governments. After all, a future shock could feasibly affect part of England disproportionately. If the UK government were to unilaterally suspend normal funding arrangements in order to allocate additional resources to the NHS for example in parts of England whilst bypassing the Barnett formula, this would be likely to create major frictions between the governments. Of course, consultation would not remove the risk of confrontation – the devolved governments may feel they have a political incentive to publicly raise concerns about such arrangements. But a shared and consensual approach may provide legitimacy to such decisions where they can genuinely be justified.

Improved intergovernmental communication, and a focus on deliberation and seeking consensus, may help the UK and devolved governments to identify the scale and nature of future shocks, and determine the most appropriate fiscal policy response to such shocks. Relative to decisions taken unilaterally, without consultation, by the UK government, it would also provide enhanced

legitimacy. However, a requirement for formal agreement between the UK and devolved governments could slow down policymaking.

Improving intergovernmental relations mechanisms

How might existing intergovernmental relations mechanisms be improved to enable a bigger role for the devolved governments in developing the temporary changes required to the fiscal frameworks during a crisis?

Existing intergovernmental relations involve both official-level and political-level mechanisms. Both are informal and ad hoc rather than formal and regular, and are consultative rather than fora for joint decision-making. This reflects the broader UK constitution, which is informal and involves a clear hierarchy between a sovereign UK parliament and subsidiary devolved legislatures.

The limitations of the current system include the ad hoc nature of intergovernmental meetings and their consultative rather than decision-making character (McEwen et al., 2020). Existing systems of intergovernmental relations neglect questions of how policy interdependency can be managed, or power shared across administrations.

Having said that, there was some evidence of improved intergovernmental communication and coordination during the early stages of the pandemic. For example:

- The UK-wide action plan published on 3 March 2020 was jointly produced by the UK and devolved governments.
- The Coronavirus Act 2020, which received Royal Assent on 25 March 2020, was preceded by consultation and joint working with devolved governments.
- The devolved governments attended the Civil Contingencies Committee (COBR) and five ministerial implementation groups (MIGs) that were established to consider policy for specific aspects of the pandemic response.
- Expert scientific advisory groups (such as NERVTAG, SPI-M and SAGE) operated on a UK-wide basis, providing advice to both the UK and devolved governments directly.

Both the devolved governments and the UK government have informed us that there was also more frequent discussion on potential changes to funding and economic support policy during the early months of the COVID-19 crisis. However, later in the pandemic, there was a reversion to more normal intergovernmental relations – sporadic, ad hoc and limited.

The main political vehicle for coordination in ‘normal’ times is the Joint Ministerial Committee (JMC) – which is actually a set of committees that comprise ministers from the UK and devolved governments. The most important is the plenary committee, chaired by the UK Prime Minister and involving, among others, the heads of the devolved governments. Its remit is to consider and discuss non-devolved matters that affect the competences of the devolved governments (and vice versa), consider disputes between the various governments, and review arrangements for coordination between the governments if required.

It is beyond the scope of this paper to make detailed recommendations for the enhancement of existing intergovernmental relations. However, we broadly support the ideas proposed by McEwen et al. (2020).

These proposals include improving the functioning of the JMC through: greater transparency about discussions at the JMC, via the publication of meaningful summaries of discussions and disputes; agreeing a schedule of meetings in advance rather than holding them on a purely ad hoc basis; a greater range of subject-specific subcommittees involving relevant ministers other than the Prime and First Ministers, focusing on areas with the greatest policy interdependencies such as economic development or public health; rotating the chairing and location of meetings between the UK government and devolved governments; and mediation by an independent mediator in the case of disputes.

We also agree with suggestions for a permanent intergovernmental relations secretariat with staff drawn from each of the governments, to support the JMC and official-level communication and coordination activities, as provisionally agreed as part of a joint UK–devolved government review of intergovernmental relations (HM Government, 2021).[9] Taken together, these changes would enable the JMC to play a stronger coordinating role, and at least partially address the devolved governments’ concerns that the UK government

9 It has also been agreed that there would be three levels of political coordination: subject-level Interministerial Groups (IMGs), akin to those recommended by McEwen et al. (2020); a cross-cutting Interministerial Standing Committee (ISC) to consider broader issues that cut across multiple ministerial portfolios; and a top-level grouping involving the Prime Minister and First Ministers, although the name and remit of this have yet to be agreed.

overly dominates the JMC. However, they would not change the fundamental way in which the UK is governed (with the UK parliament and government still taking precedence over the devolved governments and legislatures), which more radical suggestions for reform (such as formal requirements for joint decision-making) would require.

Improving policy coordination in a pandemic-like shock

Addressing major crises such as the COVID-19 pandemic or a major economic shock requires more than communication and consultation on the broad fiscal response. It also requires coordination on a range of policies, either through a process of deliberation and potentially decision-making or by assigning powers to governmental tiers in such a way that the scope for overlapping or interacting competences is minimised.

As highlighted above, after initial substantially enhanced policy coordination, differences reasserted themselves during the summer and autumn of 2020 as public health restrictions were first loosened and then tightened. And the fact that public health restrictions have been decided by the devolved governments, but funding and many of the major economic support measures such as the furlough scheme and the Self-Employment Income Support Scheme (SEISS) have been determined by the UK government, almost led to a coordination breakdown.

As discussed in Bell, Eiser and Phillips (2021), the Welsh Government in particular favoured a temporary ‘circuit breaker’ lockdown to slow and hopefully reverse the increase in COVID-19 cases in October 2020, but felt constrained to keep this to no more than two weeks given the planned ending of the furlough scheme by the UK government at the end of that month. Even this would have resulted in a period of a few days of lockdown under the less generous Job Support Scheme (the planned replacement to the furlough scheme), which was only avoided when the UK government announced a four-week lockdown in England and an extension of the full furlough scheme.

Would better coordination have allowed this situation to have been avoided? In principle, yes. It may have been difficult to bridge the clear differences in policy preferences between the devolved and UK governments at this time. But it may have been possible to agree to extend economic support measures in the devolved nations if they were paid for by the devolved governments – although in the absence of more extensive borrowing powers, the duration of any such extension would likely be limited. The Welsh Government suggested this but the UK government refused, saying it would not be feasible at short notice, given the added administration and compliance costs associated with restricting eligibility based on the location of employment.

The unwillingness of the UK government to consider how (reserved) economic support policy could be coordinated with (devolved) public health policy placed significant restraints on the latter. It would not have been appropriate for the UK government to commit to offering to fund economic support measures whenever a devolved government implemented public health restrictions: the fact that the devolved governments would not bear a large part of the fiscal costs of their decisions could encourage them to implement more stringent restrictions than if they did. On the other hand, however, by disallowing the possibility that economic support through furlough would be provided in one specific part of the UK if the devolved government deemed restrictions necessary, this could have had negative spillover effects for the whole of the UK, if the devolved government was dissuaded from setting an appropriate level of health restrictions in the context of the evolution of the virus in that territory.

Our view is that in a similar crisis to the COVID-19 pandemic, the UK government should carefully consider whether reserved policy could be more responsive to devolved government needs and preferences.

In relation to the COVID-19 pandemic and the issues around the availability of furlough, for example, a number of options were (and are) in principle possible:

- The first is the Welsh Government's suggestion of allowing devolved governments to pay for a period of enhanced economic support from their own resources.
- The second is the suggestion by the then First Minister of Northern Ireland that 'reserved' economic support could be made available in the nations and regions of the UK if COVID-19 infections or hospitalisations exceeded particular agreed thresholds.

Both have advantages and disadvantages. For example, the first option would provide devolved governments with greater ability to exercise their subjective judgements on when public health restrictions are needed. On the other hand, with relatively limited fiscal powers, the devolved governments may lack the resources to fund economic support measures themselves. The second option would provide a degree of insurance to the devolved governments in case their objective situation differs from the rest of the country: the UK government would fund economic support in such circumstances. However, agreeing what thresholds should trigger the availability of support would be difficult, and the use of fixed thresholds could prevent the devolved governments from exercising their own judgement.

Given that devolved governments cannot really exercise full control over health policy in the absence of appropriate economic support measures, a feasibility study into making furlough-type support available on a geographical basis should be urgently undertaken and published. If it is feasible, there would be benefits from making two types of support available. First, in order to enable the devolved governments to exercise their subjective judgements on when public health restrictions are appropriate, they should be able to pay for 'reserved' economic support to be provided in their territory, including by making use of their borrowing powers. Second, in order to provide insurance and risk-sharing against asymmetric shocks, criteria should be agreed (e.g. thresholds based on cases or hospitalisations) for the UK government to pay for economic support in particular geographic areas.

Is there scope to centralise or decentralise powers to address coordination problems?

An alternative way to reduce the scope for problematic policy interactions would be to centralise or decentralise competences. For example, public health restrictions could be determined centrally by the UK government under the Civil Contingencies Act 2004. Alternatively, economic support measures could have been devolved to the devolved nations.

The former (centralising competences over the setting of health restrictions) was indeed discussed at the outset of the pandemic (and, as discussed in Chapter 3, was an approach implemented in Switzerland and Spain). However, it was decided to rely on public health legislation, the purview of the devolved governments. And since they took different decisions from those of the UK government (especially from Summer 2020 onwards), it has almost certainly not been politically possible to centralise powers in this way.

Devolving the powers to determine economic support policy instead would likely require a major expansion in the borrowing powers of the devolved governments. This is because UK government funding may either mean inappropriate funding levels (if it was based on application of the Barnett formula to spending on comparable support policies in England) or an incentive for the devolved governments to offer very generous support (if funding was based on demand). As discussed in Chapter 4, the UK government is reluctant to significantly increase the devolved governments' borrowing powers. Moreover, requiring the devolved governments to borrow to help address a common shock facing the UK as a whole, such as the COVID-19 pandemic, would violate one of the principles of the Smith Commission.

In our view, it is therefore unlikely to be possible to address the coordination issues that may arise in major shocks through the centralisation or decentralisation of major policy competences. Instead, improved communication and coordination between the UK and devolved governments is likely to have to do the heavy lifting.

6. Conclusions

At the start of the COVID-19 pandemic, there were legitimate reasons to be concerned about the ability of the devolved fiscal frameworks to cope adequately with the scale and nature of the shock. In the end, however, no significant devolved government funding crises occurred. We previously identified three key factors that were material in this outcome: the fact that the pandemic had largely symmetric fiscal impacts across the UK nations; the huge level of resources allocated by the UK government to tackle the crisis; and the important temporary adoption of 'funding guarantees' to reduce the uncertainty associated with resources allocated in the usual way.

In fact, in many other countries where subnational governments have significant policy autonomy, funding crises were similarly avoided. A willingness on the part of national governments to make temporary changes to normal subnational government finance rules, and a willingness to borrow heavily at national level, were common factors across these countries. In this broad sense, the messages from the UK's experience of devolved government funding issues during the pandemic are not dissimilar from those of the other countries that we considered.

If major devolved government funding crises were averted during the pandemic's peak in the 2020–21 financial year, it might be assumed that there is a limited case to be made for reforms of the devolved government fiscal frameworks as they have largely passed the challenging test of the pandemic. However, at the start of the pandemic, the devolved governments faced challenging levels of uncertainty which it was difficult for them to respond to. In some cases, funding crises were only narrowly averted. And it is possible that future crises may be experienced much more asymmetrically across the UK nations.

There is therefore a strong case for considering how the devolved fiscal frameworks can be made more resilient to future shocks, including a reintensification of the COVID-19 pandemic during winter 2021–22 – a prospect that seems much more likely than just a few weeks ago given the emergence of the Omicron variant. In this report, we have restricted ourselves to consider reforms to the existing fiscal frameworks that could improve the resilience of the devolved budgets to future fiscal shocks, but we do not consider the case for a fundamental change to devolved policy competences, since this is a strongly political question.

We have considered reforms of two broad types: first, the scope for permanent changes to the devolved fiscal frameworks which would make the devolved budgets more resilient to future shocks when they occur; and second, the sort of temporary changes to the funding frameworks that should be introduced if a major shock were to occur in future – and the processes through which those temporary changes should be 'triggered'.

In terms of the permanent changes to the fiscal frameworks to make devolved budgets more resilient to future shocks, we do not consider there is a case for using funding guarantees on a permanent basis – the uncertainties the devolved governments face in 'normal' times are not sufficient to justify the risk that funding guarantees could lead to inequitable funding allocations across the UK. However, we do argue that, in cases where devolved governments' block grants are reduced in-year, the devolved governments should have the ability, on a formal and permanent basis, to defer those reductions to future years, rather than requiring the express permission of HM Treasury.

We also believe that there is a good case for enhancing the devolved governments' ability to flex their budgets. Allowing the devolved governments the ability to undertake borrowing to fund discretionary resource spending would provide additional flexibility to respond to unforeseen events and plan for uncertainties. Limits set at a modest level, such as 1% of devolved resource budgets, would provide useful flexibility at the margin, without posing any meaningful risk to the UK fiscal aggregates, nor significantly threatening notions of territorial equity. Risks could be minimised further by capping the total debt that could be incurred, requiring devolved governments to borrow by issuing their own bonds, and mandating that devolved borrowing be subject to debate in the relevant devolved parliament or assembly.

In addition, there is a good case for extending the annual drawdown limits on the Scotland and Wales Reserves, again on a permanent basis. Additionally, the cap on funds held in the reserve should not be fixed in cash terms, but indexed over time, probably to some measure of the size of the overall budget. These changes would provide further flexibility, again without any significant threat to UK fiscal aggregates or notions of pan-UK equity.

A case can also be made for allowing the devolved governments some ability to transfer a small proportion of their capital funding to their resource budgets, especially given some arbitrariness in categorising capital and resource spending. However, assuming that flexibilities on resource borrowing and reserve drawdowns were implemented, capital–resource budget switches would be a lower priority for reform.

In addition, there is a reasonably good case for extending Scotland's existing forecast error borrowing limit. An extended limit would likely not be used very frequently, and does not improve the Scottish Government's budget flexibility as such. But such an extension is likely to be required for the Scottish Government to be able to manage the impacts of forecast errors in exceptional years – a risk that is completely outwith its own control. We recommend that the current temporary limit of £600 million (compared with £300 million normally) is made permanent. This limit and the equivalent Welsh Government limit should then be appropriately indexed over time.

The final permanent changes we consider are to how funding is allocated and is adjusted to account for tax devolution, in order to provide greater insurance against long-term fiscal shocks or trends having asymmetric impacts across the UK. There are good reasons to replace or at least reform the Barnett formula. And the current system of block grant adjustments is unusual internationally, given that it provides full insurance for differences in revenue-raising capacity at the point of devolution, but no insurance against any subsequent changes in revenue-raising capacity. However, there are significant practical and political challenges in reforming how funding is allocated across the UK, and the appropriate degree of redistribution and insurance across the UK is an inherently subjective question. We therefore recommend such issues be considered as part of more fundamental political reviews of the UK's subnational funding regime.

What temporary changes would it be prudent to make if a major fiscal shock occurs in future?

The use of funding guarantees was an important part of the fiscal policy response to the pandemic in 2020, providing some fiscal 'headroom' to the devolved governments, enabling them to make and fund policy without having to wait for policy and funding to be announced for England in a rapidly moving environment. Such headroom should be provided again if a similar set of circumstances arises, either by reintroducing temporary funding guarantees and/or through the provision of enhanced borrowing powers. These options have different pros and cons, and the choice or balance between them should depend on how the UK government and devolved governments weigh these up. It is also worth considering whether the devolved governments should be able to influence the choice of funding mechanism, which would implicitly require them to decide how far they wished to share risk with the UK government, a decision for which they would have to take responsibility.

A future fiscal crisis could potentially have significantly asymmetric effects across the UK nations. It is prudent to consider in advance how the devolved governments' funding settlements could and should evolve in such a circumstance. However, making very concrete proposals about what should happen is made challenging by the fact that the nature of a potential shock in future is very difficult to foresee. It therefore does not seem realistic to think that it will be possible to specify, in advance, some set of objective criteria that can be monitored to determine whether and when an asymmetric fiscal shock is occurring. Furthermore, even if it becomes clear at some future point that the UK as a whole is experiencing a fiscal shock, it is likely to be very difficult to determine in 'real time' whether the shock is impacting asymmetrically, given the availability of timely and consistent data. And even where there is some evidence to suggest that a shock is asymmetric, it is unlikely to be possible to determine quantitatively (e.g. via needs assessment) what the fiscal response should be.

This implies that the response to a major future shock, particularly one that has asymmetric effects, will by necessity rely on an adaptive and somewhat ad hoc approach. In such circumstances, the approach should be informed by the joint analysis and deliberations of the UK and devolved governments working together. A more collaborative approach is arguably likely to lead to a more rapid identification of an emergent shock, identification of appropriate, proportionate and effective solutions, and greater legitimacy for any temporary changes to the usual rules that are made.

Implicitly, what this requires is both strengthened formal mechanisms for intergovernmental communication and coordination, and cultural change, with a commitment to genuine joint deliberation and consensus-building on the part of both the UK and devolved governments. An improved system of intergovernmental communication would also enable better functioning of devolved financing and policymaking in 'normal' times, by enhancing policy coordination – the need for which is becoming increasingly important as devolved and reserved policy competences become more entwined and overlapping.

We are certainly not the first people to call for enhancements in intergovernmental decision-making. In practice, realising the ambition will be challenging, especially given party political incongruence across the governments, divergent visions of the UK constitution, and the Westminster Government's view of itself as sovereign.

But intergovernmental communication, coordination and decision-making are of growing importance in 'normal' times, and will be particularly important in planning the response to future shocks. Precisely how the aspiration is realised is open to debate. We would not argue that policy decisions should be made on the basis of majority voting between the four governments – evidence from Germany and Switzerland suggests this sometimes makes policymaking slower and less effective, and such an approach would represent a fundamental change to the UK constitution. But a more consensual and deliberative approach to intergovernmental relations offers the hope that the response to future fiscal shocks can be made on the basis of a shared understanding of the challenges, risks and costs facing all of those involved.

Appendix. Estimating reconciliations

The size of devolved governments' budgets is contingent on forecasts of both tax revenues and welfare benefits (the latter only in the case of Scotland). They also depend on forecasts of the offsetting effects of adjustments made to the HM Treasury block grant (BGAs) for these same taxes and benefits. Errors in both types of forecast lead to subsequent reconciliations, which in turn force subsequent budget adjustments. These reconciliations can thus disrupt the budget process.

This appendix investigates the size of reconciliations using Scotland as an example. We do this first for the forecasts associated with a single tax and associated BGA. We then extend this to the case of a tax and a welfare benefit, referring to each as a 'fiscal instrument'.

The size of reconciliations is driven by the forecast error of the fiscal instrument itself and that of its corresponding BGA. In the case of two instruments, the cross-correlations between forecast errors on these instruments and between their associated BGAs are also relevant.

We make a number of simplifying assumptions to make these calculations tractable. First, we assume that all forecast errors are normally distributed. This both simplifies the calculations and allows us to calibrate the standard deviations of the errors. The forecasts themselves are generally based on an assumption of normality in the distribution of errors.

The correlation matrix of forecast errors, $\sum$, is given in triangular form below:

$$\Sigma = \begin{pmatrix} \rho_{TT} & & & \\ \rho_{BT} & \rho_{BB} & & \\ \rho_{WT} & \rho_{WB} & \rho_{WW} & \\ \rho_{CT} & \rho_{CB} & \rho_{CW} & \rho_{CC} \end{pmatrix} \tag{1}$$

where the subscripts T, B, W and C refer to the forecast errors on tax revenues, the BGA for tax revenues, welfare spending and the BGA for welfare spending, respectively.

As exemplars, we focus on forecasts of income tax and of personal independence payment (PIP) / disability living allowance (DLA) since these are the largest elements of the tax and the welfare side of the Scottish budget, respectively. Assume that adverse forecast errors of greater than 5% in terms of revenue/spending on these instruments occur with frequency of less than 1 in 40. Then, with a normal distribution, such large errors translate to approximately two standard deviations in the relevant error distribution.

For income tax, 5% of revenue is approximately £600 million, implying a standard deviation in the forecast error distribution of £300 million. Similar calculations lead to a forecast error distribution on PIP/DLA of around £62.5 million. We assume that the forecast error distributions of the tax/welfare instrument and equivalent BGA are identical. With the limited data currently available, there is no evidence that the Scottish Fiscal Commission’s record in forecasting actual tax revenues and/or welfare spending is better or worse than the Office for Budget Responsibility’s forecast of the corresponding BGA.

These assumptions allow us to model the likelihood of different levels of reconciliation that the Scottish Government might face. We use a Monte Carlo approach, counting the proportion of reconciliations drawn from 10,000 observations where their value exceeds a pre-specified level. We use the Cholesky decomposition to simulate the distribution, i.e. we find the matrix A which satisfies the equation:

$$AA' = \Sigma \tag{2}$$

and then use this matrix to generate the appropriate linear combination of independent standard normal variables whose correlation matrix is given by Σ.

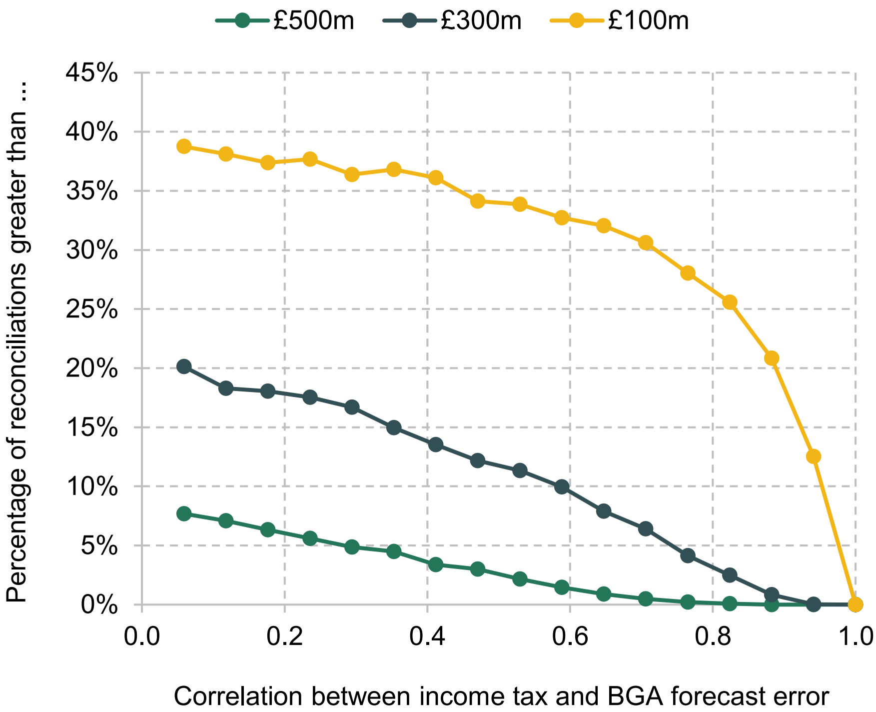
We define a ‘reconciliation’ as the sum of the differences between forecast errors of fiscal instruments (tax revenues or welfare spending) and the corresponding BGA forecast error. We only consider reconciliations where the outcome is adverse for the Scottish Government.

We begin with a single fiscal instrument, namely income tax, and consider how the reconciliation varies with the correlation between the forecast errors on the tax revenue itself and the corresponding BGA. Figure A.1 shows how the proportion of reconciliations whose value exceeds £100 million, £300 million and £500 million varies with the correlation between the forecast error of income tax revenue and the

BGA forecast error. These amounts are centred around the £300 million standard deviation for the income tax forecast error distribution discussed above.

Several points emerge from this analysis. First, when the tax and BGA forecast errors are perfectly correlated (i.e. their correlation equals 1), there is no net reconciliation since each tax forecast error is offset exactly by a BGA forecast error of the same size. Second, the proportion of reconciliations greater than each of the specified amounts declines as the correlation between the tax and BGA forecast errors increases. This follows from a similar argument to that for the case of perfect correlation. Third, the proportion of reconciliations above a given amount is inversely related to the size of that amount. Thus, almost 40% of reconciliations are above £100 million when the correlation is 0.06, whereas only 20% of these exceed £300 million, and 8% exceed £500 million at the same correlation.

Figure A.1. Proportion of reconciliations greater than £100m, £300m and £500m



Source: Authors' calculations.

The second analysis uses two fiscal instruments, income tax and DLA/PIP. There are six correlations to consider – those between the forecasts and their equivalent BGAs, that between the forecasts of the fiscal instruments themselves, that between the equivalent BGA forecasts and finally those between the forecast for one instrument and that for the BGA on the other. These correspond to the off-diagonal elements of Σ in equation 1.

Clearly, with so many correlations, a great many permutations are possible. We only consider two of these. Again, we use these exercises to predict the proportion of Scottish Government reconciliations that would exceed a fixed limit, in this case £300 million. Following our earlier arguments on the relative scales of the income tax and PIP/DLA fiscal instruments, we set the standard deviation of both the income tax and income tax BGA forecast errors to £300 million and the standard deviation of the PIP/DLA forecasts and the corresponding BGA to £62.5 million.

In the first experiment, we continue with correlation between each fiscal instrument and its corresponding BGA. We also include (negative) correlation between the forecast of income tax revenues and the forecast of PIP/DLA, thus allowing for the possibility of a recession which decreases tax revenues and increases spending on benefits. We do not, however, assume any direct correlation between the forecast BGAs for income tax and PIP/DLA. Results are shown in Table A.1 where the cell entries show the proportion of simulations where the reconciliation (evaluated over both the forecast tax and welfare revenues and their corresponding BGAs) resulted in an outcome adverse to the Scottish Government of more than £300 million.

The similarity between the results in Table A.1 and the income tax case portrayed in Figure A.1 where the maximum reconciliation is also set at £300 million is evident by inspection of the columns of Table A.1, where the share of reconciliations exceeding £300 million drops sharply as the correlation between the forecast errors on the fiscal instruments and their corresponding BGAs increases. On the other hand, considering the rows of Table A.1 shows a slight increase in the share of reconciliations exceeding £300 million as the correlation between the forecasts of the fiscal instruments increases. The larger the correlation of forecast errors on income tax and PIP/DLA, the greater the likelihood that the resulting reconciliation will be higher than £300 million. However, this likelihood does not increase substantially as this correlation increases from 0.08 to 0.92, probably due to the much smaller magnitude of PIP/DLA expenditure compared with income tax revenue.

Table A.1. Proportion of aggregate reconciliations of more than £300m where there is correlation between fiscal instrument and corresponding BGA, and between fiscal instruments, but no direct correlation between BGAs

	Cross-correlation between forecast tax and welfare instruments											
Correlation between forecast error on tax / welfare revenue and corresponding BGA	0.08	0.15	0.23	0.31	0.38	0.46	0.54	0.62	0.69	0.77	0.85	0.92
0.06	0.241	0.244	0.249	0.252	0.254	0.254	0.259	0.264	0.263	0.266	0.272	0.271
0.12	0.235	0.238	0.241	0.246	0.251	0.249	0.254	0.257	0.260	0.264	0.266	
0.18	0.228	0.229	0.237	0.241	0.240	0.246	0.248	0.252	0.257	0.255		
0.24	0.219	0.224	0.225	0.229	0.233	0.239	0.240	0.246	0.251			
0.29	0.212	0.212	0.219	0.224	0.229	0.230	0.235	0.237	0.244			
0.35	0.198	0.208	0.209	0.215	0.221	0.222	0.229	0.230				
0.41	0.192	0.195	0.201	0.206	0.212	0.216	0.220					
0.47	0.177	0.185	0.193	0.197	0.202	0.205						
0.53	0.165	0.171	0.179	0.184	0.189	0.198						
0.59	0.149	0.157	0.164	0.172	0.181							
0.65	0.130	0.141	0.149	0.158								
0.71	0.112	0.123	0.133									
0.76	0.090	0.101	0.113									

Source: Authors' calculations.

Table A.2. Proportion of aggregate reconciliations of more than £300m where there is correlation between fiscal instrument and corresponding BGA, between fiscal instruments and between BGAs

	Cross-correlation between forecast tax and welfare instruments and between corresponding BGAs											
Correlation between forecast error on tax / welfare revenue and corresponding BGA	0.08	0.15	0.23	0.31	0.38	0.46	0.54	0.62	0.69	0.77	0.85	0.92
0.06	0.238	0.239	0.244	0.245	0.247	0.246	0.248	0.251	0.253	0.255	0.256	0.256
0.12	0.233	0.233	0.234	0.240	0.240	0.241	0.243	0.246	0.246	0.248	0.251	0.252
0.18	0.225	0.226	0.229	0.229	0.234	0.234	0.235	0.238	0.241	0.240	0.243	0.245
0.24	0.216	0.219	0.221	0.222	0.224	0.226	0.230	0.232	0.233	0.232	0.236	0.239
0.29	0.206	0.209	0.210	0.213	0.216	0.218	0.220	0.225	0.227	0.228	0.231	
0.35	0.198	0.201	0.202	0.205	0.208	0.210	0.214	0.216	0.218	0.219	0.225	
0.41	0.187	0.190	0.192	0.193	0.199	0.202	0.203	0.207	0.208	0.208		
0.47	0.174	0.177	0.180	0.184	0.186	0.191	0.193	0.195	0.198	0.200		
0.53	0.160	0.165	0.169	0.172	0.174	0.179	0.181	0.184	0.186			
0.59	0.143	0.147	0.156	0.156	0.163	0.165	0.168	0.172				
0.65	0.126	0.132	0.136	0.141	0.146	0.151	0.151					
0.71	0.108	0.113	0.117	0.123	0.128	0.132						
0.76	0.082	0.091	0.097	0.101	0.108							

Source: Authors' calculations.

Table A.2 replicates the simulations shown in Table A.1 except that a further correlation – that between the BGA forecast errors – is introduced. It is set at the same level as that between the forecast errors on income tax and DLA/PIP – the fiscal instruments. There is a complex interaction of correlations in these circumstances. Having a low correlation between the fiscal instruments and their corresponding BGAs, alongside a high correlation between the fiscal instruments on the one hand and between their BGAs on the other, appears to increase the probability of large reconciliations – as indicated by the top right corner of Table A.2.

It is important to realise that the results shown in Figure A.1 and Tables A.1 and A.2 are intended to illustrate the complex issues underlying the determination of budgetary reconciliations rather than to make definitive predictions about the size of annual reconciliations. The results are dependent on the underlying assumptions and parameter selections. Those presented here are intended only to be illustrative of the general tendencies associated with the feasible set of interactions between forecasts of devolved taxes/benefits and their corresponding BGAs. However, it is clear that magnitudes do matter: for Scotland, in the short to medium term, the size of reconciliation is likely to be largely determined by errors associated with income tax. There is also a timing issue – reconciliations occur after different intervals following the end of the relevant tax year. We will consider these in our final report.

References

Bell, D., Eiser, D. and Phillips, D. (2016), 'Scotland's fiscal framework: assessing the agreement', Institute for Fiscal Studies, Working Paper W16/05.

Bell, D., Eiser, D. and Phillips, D. (2021), 'Designing and funding the devolved nations' policy responses to COVID-19', Fraser of Allander Institute, Report.

Bell, D., Sas, W. and Houston, J. (2021), 'Starting from scratch? A new approach to subnational public finance', *Regional Studies*, 55(4), 617–29.

Blochliger, H. and Kantorowicz, J. (2015), 'Fiscal constitutions: an empirical assessment', OECD Economics Department, Working Paper 1248.

Emmerson, C. and Stockton, I. (2021), 'Rewriting the fiscal rules', in C. Emmerson, P. Johnson and B. Zaranko (eds), *The IFS Green Budget: October 2021*.

Eyraud, L., Hodge, A., Ralyea, J. and Reynaud, J. (2020), 'How to design subnational fiscal rules: a primer', IMF Fiscal Affairs Department, How To Note 20/01.

Forbes, K. (2020), letter from Kate Forbes to Chief Secretary to the Treasury, 24 June, https://www.gov.scot/publications/coronavirus-covid-19---funding-and-fiscal-flexibilities-letter-from-cabinet-secretary-for-finance-to-chief-secretary-to-the-treasury/.

Harris, T. and Phillips, D. (2018), 'The Fair Funding Review: is a fair assessment of councils' spending needs feasible?', Institute for Fiscal Studies, Report 148.

HM Government and Scottish Government (2016), 'The agreement between the Scottish government and the United Kingdom government on the Scottish government's fiscal framework'.

HM Government (2021), 'Progress update on the review of intergovernmental relations'.

HM Revenue and Customs (2021a), 'Scottish income tax outturn statistics: 2019 to 2020'.

HM Revenue and Customs (2021b), 'Welsh income tax outturn statistics: 2019 to 2020'.

HM Treasury (2021), 'Block grant transparency'.

Independent Commission on Funding & Finance for Wales (2010), 'Fairness and accountability: a new funding settlement for Wales'.

Ifan, G. (2020), 'Covid-19 and the Welsh Government Budget: update no. 1', Wales Fiscal Analysis Briefing.

McCann, P. (2021), 'The fiscal implications of "levelling up" and UK governance devolution', Productivity Institute, Working Paper 008.

McEwen, N., Kenny, M., Sheldon, J. and Brown Swan, C. (2020), 'Intergovernmental relations in the UK: time for a radical overhaul', *Political Quarterly*, 91(3), 632–40.

OECD (2020), 'The territorial impact of COVID-19: managing the crisis across levels of government'.

OECD (2021), 'The territorial impact of COVID-19: managing the crisis and recovery across levels of government'.

Phillips, D. (2020), 'Devolved governments need more flexible funding and greater borrowing powers to tackle coronavirus effectively', IFS Observation.

Scottish Government (2020), 'Spring Budget revision 2019-20'.

Scottish Government (2021), 'Scotland's fiscal outlook: the Scottish Government's medium-term financial strategy, January 2021'.

Scottish Fiscal Commission (2021), 'Economic and fiscal forecasts, January 2021'.

Smith Commission (2014), 'Report of the Smith Commission for further devolution of powers to the Scottish Parliament'.

Vammalle, C. and Bambalaite, I. (2021), 'Fiscal rules for subnational governments: the devil's in the details', OECD, Working Paper on Fiscal Federalism 35.

Welsh Government (2020), '2nd Supplementary Budget 2019 to 2020'.