



Institute for Fiscal Studies

IFS BN303

Isaac Delestre
Robert Joyce
Imran Rasul
Tom Waters

Income protection policy during COVID-19: evidence from bank account data

Income protection policy during COVID-19: evidence from bank account data

Isaac Delestre

Robert Joyce

Imran Rasul

Tom Waters

Copy-edited by Judith Payne

Published by

The Institute for Fiscal Studies

© The Institute for Fiscal Studies, September 2020

ISBN 978-1-912805-99-0

Standard Life Foundation has supported this project (reference 202005-GR000020) as part of its mission to contribute towards strategic change which improves financial well-being in the UK. Its focus is on tackling financial problems and improving living standards for people on low-to-middle incomes. It is an independent charitable foundation registered in Scotland. Co-funding from the UKRI under the grant ‘Supporting fiscal policy through the crisis’ (ES/V00381X/1) and from the ESRC-funded Centre for the Microeconomic Analysis of Public Policy at IFS (grant number ES/M010147/1) is also very gratefully acknowledged. The authors would like to thank the staff at Money Dashboard, including Maria Anaplioti, Ian Christie, Anthea DeSyllas, Raonull MacKinnon, Max Thomas and Daniel Weeden, for their extensive help in understanding and using the Money Dashboard data. They are also grateful to Mubin Haq for valuable comments on a draft of this briefing note.

The analysis in this briefing note has also drawn on data from Understanding Society: the UK Household Longitudinal Study and from the Survey of Personal Incomes: Public Use Tape 2016–17. These data are distributed by the UK Data Service.

Executive summary

The COVID-19 pandemic has had huge impacts on the UK labour market. To protect households from the most severe consequences of this, the government made temporary changes to the existing social security system and rapidly designed and implemented large new schemes. In this briefing note, we take three key elements of the income protection offered during the crisis – the Coronavirus Job Retention Scheme (CJRS) for furloughed employees, the Self-Employed Income Support Scheme (SEISS) and universal credit (UC) – and examine the path of financial outcomes for those who drew on these strands of support, both before and after the support was received.

The bulk of our analysis utilises anonymised user data from the Money Dashboard (MDB) budgeting app. These track the financial transactions of app users in real time. We use them to build a granular and dynamic picture of the financial well-being of users from the pre-crisis period, and then over the course of the crisis. The data we utilise cover financial transactions until the end of July 2020.

Key findings

- 1 Different forms of income protection have played very different roles. On average, new claimants of UC saw a fall in net income of about 40% during the crisis (even including UC itself). For households with a furloughed employee (whose employers did not voluntarily top up the government's support to maintain full pay), this figure is 13%. And for the self-employed receiving the SEISS grant, it was just 4% on average. That said, and particularly for the SEISS, there are people who fell through the cracks in entitlement, and the averages mask much variation in how comprehensively incomes were maintained.
- 2 Recipients of both UC and SEISS have to make a claim and wait for their support to arrive, often seeing incomes fall one or two months before receiving the funds. This really matters. During that period,

3 Income protection policy during COVID-19

these groups reduced their spending by about 11% and 13% respectively compared with similar households who had not seen an income fall, and spending increased again when the payment arrived. After they had received the grant, SEISS recipients closed the entire gap in spending relative to similar households who had seen no fall in income. For new UC claimants, two months after their first payment, around half of the gap had been closed, leaving their spending about 6% below that of otherwise-similar households without an income fall. This is consistent with the fact that, even once it arrives, UC tends not to replace all of the lost income.

- 3 The dynamics of the crisis for furloughed employees have been different. For those whose employers did not voluntarily top up their CJRS to full pay, by the end of June on average their spending had fallen by about 14% relative to otherwise-similar households whose incomes did not fall during the crisis. But because there was no period in which they were without support, there was no period in which their spending was cut to a much lower level.
- 4 Those who have mortgages (disproportionately likely to be those on middle or higher pre-crisis incomes) have had access to an important source of credit during the crisis. During the pandemic, the share of households making mortgage payments fell by around a quarter for CJRS beneficiaries and by a third for SEISS recipients. The number of new UC claimants making mortgage repayments halved. This often occurred simultaneously with or even before a fall in income, and (in the case of UC and SEISS recipients) before they received government support. We know that this will largely reflect agreed mortgage holidays with providers. After receiving the SEISS, mortgage payments bounced back among that group.
- 5 While those reliant on government support programmes saw the largest falls in mortgage payments, those groups that saw no fall in income were also less likely to make mortgage payments during the crisis. This suggests that the greater availability of mortgage holidays was taken advantage of even by those whose financial circumstances were relatively unchanged by the pandemic.

4 Income protection policy during COVID-19

- 6 In the case of UC and SEISS recipients, we find some evidence of recipient households not paying council tax bills, even after receiving the payment. Some SEISS recipients also seem to have fallen behind on rent, especially during the wait for the SEISS grant.

1. Introduction

The COVID-19 pandemic has had huge impacts on the UK labour market and economic life as a whole. This led to temporary changes to the existing social security system and the rapid design and implementation of large new schemes. In this briefing note, we take three key elements of the income protection offered during the crisis – the Coronavirus Job Retention Scheme (CJRS) for furloughed employees, the Self-Employed Income Support Scheme (SEISS) and universal credit (UC) – and examine the path of financial outcomes for those who drew on these strands of support, both before and after the support was received. The scale of these programmes has been extremely large. By June 2020, some 8.7 million UK workers had been placed on the CJRS by their employers,¹ while 2.4 million self-employed workers had made claims under the SEISS.² Since 16 March 2020, meanwhile, the Department for Work and Pensions has received 3.2 million individual declarations for UC.³

The bulk of our analysis utilises anonymised user data from the Money Dashboard (MDB) budgeting app. This tracks the financial transactions of app users in real time. We use the data to build a granular and dynamic picture of the financial well-being of users from the pre-crisis period, and then over the course of the crisis. The data we utilise cover financial transactions until the end of July 2020.

The rest of this section outlines the income protection policies that we focus on, the data and outcomes that we use to analyse them, and the academic literature to which our findings contribute. In Section 2, we explain how we identify programme recipients in the MDB data. Sections 3 to 5 examine how each group of programme recipients has been financially impacted over the course of the crisis, in terms of

¹ <https://www.gov.uk/government/collections/hmrc-coronavirus-covid-19-statistics>.

² https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/891603/SEISS_Official_Statistics_June_2020.pdf.

³ <https://www.gov.uk/government/publications/universal-credit-declarations-claims-and-advances-management-information>.

their incomes, expenditures and various markers of financial distress. Wherever possible, we compare outcomes for each group of beneficiaries relative to a ‘control group’, to better isolate the impact the programme has had on these financial outcomes. In Section 6, we bring together the findings, which also allows us to compare the relative experiences of the three groups of recipients, and draw out lessons for the future.

Income protection programmes

We restrict our attention to programmes that are directly targeted at personal incomes: the Coronavirus Job Retention Scheme (CJRS), or furlough; the Self-Employment Income Support Scheme (SEISS); and universal credit (UC). To begin with, we briefly describe each of these programmes and the type of individuals likely to be recipients.

Coronavirus Job Retention Scheme

The CJRS was launched on 20 April 2020, in response to the rapid and huge slowdown in the economy as some sectors were impacted by large falls in demand due to the uncertainty around the pandemic, and other sectors had their activities severely curtailed due to the lockdown and social distancing requirements. The scheme allows employers to furlough workers for a minimum of three weeks, with the government contributing 80% of employees' salaries, up to a cap of £2,500 per month. By 14 June 2020, more than 9 million jobs – around a third of UK employees – had been furloughed under the CJRS. Under the scheme, employers are allowed to top up salary payments, but workers were not permitted to work any hours. The scheme closed to new applications at the end of June.

Other studies provide detail on the characteristics of individuals more likely to be furloughed. For example, Adams-Prassl et al. (2020) use real-time survey evidence from a regionally representative sample in the UK, surveyed in April and May. They use this to document which workers were most likely to be furloughed and analyse differences across workers in the terms on which they were furloughed. They find that younger workers and those with varying hours of work have been

furloughed at a higher rate.⁴ We link our findings to these in Section 3 when examining the impacts on the finances of individuals who have been furloughed.

Self-Employment Income Support Scheme

The CJRS is open only to employees. As a result, self-employed workers – of which there were more than 5 million in the UK in 2019 (Office for National Statistics, 2020) – are not eligible to be furloughed. Instead, some of this group are eligible for the Self-Employment Income Support Scheme (SEISS). In some ways, this scheme mirrors the CJRS, but it is distinct in a number of ways:

- While the CJRS provides employees with a fraction (80% for those earning less than £37,500 p.a., and less for those with higher salaries) of the salary they were earning immediately prior to the onset of the COVID-19 crisis, SEISS payments are calculated on the basis of an individual's earnings from self-employment in the 2018–19 financial year.
- In a similar vein to the CJRS, the SEISS provides eligible workers with a payment worth 80% of their average monthly income from self-employment in 2018–19 (up to a maximum of £2,500). Unlike the CJRS, however, this grant is paid in instalments intended to cover three months. Recipients have therefore received a single grant up to a maximum value of £7,500, which can be broadly thought of as being designed to cover lost income in March, April and May. Eligible self-employed workers could – if still eligible – also receive a second payment (broadly designed to replace income lost in June, July and August) worth 70% of their 2018–19 self-employment income (up to a maximum of £6,570).
- To be eligible for the scheme, applicants must have had self-employed income of no more than £50,000 in 2018–19 and this income source must have constituted at least 50% of their total income for that financial year. Unlike workers furloughed under the CJRS, recipients are free to continue working while in receipt of a SEISS grant, but must declare that their livelihood has been 'adversely affected' by the COVID-19 crisis.

⁴ Gardiner and Slaughter (2020) also show that lower-paid workers are more likely to be furloughed than higher-paid ones.

Notably, a significant number of self-employed workers are not eligible for the SEISS (Adam, Miller and Waters, 2020). As we cannot in general identify self-employed workers in the MDB data we use, our analysis is restricted to those who do receive SEISS.

Official HMRC statistics⁵ show that more than two-thirds of SEISS recipients are male, and 90% are aged 25–64. Construction is by far the most common industry for SEISS recipients to work in.

Universal credit

Prior to 2013, the working-age means-tested benefit system consisted of six benefits. These are in the process of being replaced by one payment – universal credit. While many existing claimants remain on the old (‘legacy’) benefits, all new claimants to means-tested benefits are assessed under the UC system. UC is available to both in-work and out-of-work claimants, and in broad terms claimants receive a higher award the more children they have, the higher their rent is, if they are in a couple, or if they have disabilities that limit their capacity to work. They receive lower awards the higher their family earnings and the higher their savings.

While UC – unlike the other two schemes we analyse – existed pre-crisis, it was temporarily expanded in the immediate wake of the crisis. Specifically, the basic award was raised by £1,000 per year, the maximum amount that claimants could receive to help with housing costs was increased, and a rule that reduced entitlements among the low-income self-employed (the ‘minimum income floor’) was suspended. These temporary expansions are due to end in April 2021.

In this briefing note, we focus on new claimants of UC, who typically will have experienced a labour market shock that made them entitled to the benefit.

⁵ <https://www.gov.uk/government/publications/self-employment-income-support-scheme-statistics-july-2020/self-employment-income-support-scheme-statistics-july-2020>.

Data

The data we use come from the Money Dashboard (MDB) budgeting app, which provides information on (anonymised) user finances from bank accounts, detailing each transaction (credits and debits) from all linked-in financial accounts (current accounts, credit cards and savings accounts). MDB uses an algorithm to categorise (or ‘tag’) transactions, into categories such as groceries, salary, fuel and so on. Importantly for our purposes, these data contain information on all sources of income including benefit payments, as well as expenditures. The data also record exactly when transactions happen, meaning they can be located precisely relative to the timing of key developments in the crisis and in the financial circumstances of the app’s users. We use this to build a rich dynamic picture of user finances over the crisis and their responses to income support provided by the policy interventions focused on.

When a user signs up to MDB, they provide their age, gender and postcode, and can then link in their financial accounts, including current accounts, credit cards and savings accounts. They can do this for their own accounts as well as those of a partner – and indeed they generally have a strong incentive to do so, since the point of the app is to help with budgeting and financial management. A detailed description of the data is available in Bourquin et al. (2020).

Related literature

The MDB data have been previously used by researchers to study how household finances have evolved over the crisis. Specifically, this earlier body of work has focused on the impacts on the level and composition of consumer expenditures (Chronopoulos, Lukas and Wilson, 2020; Surico, Hacıoglu and Känzig, 2020), incomes (Surico, Hacıoglu and Känzig, 2020) and distributional impacts (Hacıoglu, Känzig and Surico, 2020), and our own earlier work linked changes in incomes and earnings to financial distress (Bourquin et al., 2020).

Our current analysis is the first using these real-time financial data to examine the effectiveness of three core government income support policies in maintaining incomes and expenditures and avoiding financial distress, among three different groups of vulnerable workers: those who are furloughed, the self-employed, and those who are more likely to have lost employment altogether.

Other studies of the income support policies enacted in the UK in response to the crisis have focused on the impacts of the furlough scheme. For example, Adams-Prassl et al. (2020) use real-time survey evidence from a regionally representative sample of almost 5,000 individuals, surveyed in April and May, to document which workers were most likely to be furloughed and analyse differences across workers in the terms on which they furloughed. Piyapromdee and Spittal (2020) use the UKHLS data (including the special COVID module fielded in April 2020) to study how the CJRS has enabled households to maintain consumption expenditures. Gardiner and Slaughter (2020) use data from an online survey of 6,000 individuals conducted in the UK in May 2020, documenting how being furloughed has translated into income losses and how this varies across pre-crisis incomes. They also document the extent to which self-employed workers were planning to apply for SEISS payments.

A number of US-based studies have also used similar real-time transactions data to understand the impacts of various policy stimulus packages (Chetty et al., 2020a and 2020b). However, unlike the MDB data which have a direct benefit tag, these studies have had to use more indirect approaches to try to understand the role of policy. For example, Cox et al. (2020) consider differential spending, saving and net balance responses across high- and low-income households to isolate and understand the stabilising role of income support programmes.

Outcomes: income, expenditure and non-payment of bills

For each programme discussed above, we analyse several outcomes across the course of the crisis. In doing so, we consider the data that we use to be best thought of as a measure of the finances of the ‘nuclear family’ – that is, people plus their partners. For ease, we refer to this unit as the ‘household’, but it should be noted this is a slightly loose term, as around 18% of households contain more than one family defined in that way.⁶ For example, an adult who lives with their parents would, we presume, be highly unlikely to have their parents’ accounts linked to

⁶ Authors’ calculations using the 2018–19 Family Resources Survey.

their app, and so in this case it is not the finances of the entire household that we are tracking.

Income

So long as the MDB user links in any partner's bank accounts, we should observe all income coming into the household (except any income paid in cash). This income measure is also largely net of direct tax, since employee earnings are generally taxed at source (via PAYE) – though we are unable to deduct tax for those who pay via self-assessment tax returns.

Further detail on our measurement of income, and how we distinguish between genuine income and transferring funds in from (for example) an unlinked savings account to a linked current account, can be found in Bourquin et al. (2020).

Expenditure

We create a measure of consumer spending based on MDB's system of expenditure tags. In constructing our measure of spending, we include all expenditures identified by MDB as expenditure related to consumer goods and services. Debits tagged as spending on bills or financial services (for instance, debt interest) are excluded from our measure.

Non-payment of bills

Following earlier research at IFS, we examine four categories of bills: mortgage, rent, council tax and utilities. Bourquin et al. (2020) find significant declines in the payment of the first three of these over the crisis, but not utilities – we also do not find any change in utility bill payments and so we do not discuss them in the rest of this briefing note.

Non-payment of such bills can be an indicator of financial distress, though it does not necessarily mean that the household is in arrears. The two key instances of this are in mortgages and council tax. Mortgage holidays have been made much more widely available during the crisis, allowing households to not pay down their mortgages while also not falling into arrears (though clearly still carrying forward more debt for the future than they would have done without the mortgage holiday).

It is worth noting that mortgagors generally have higher incomes than people of other tenures: 72% are in the top half of the income distribution.⁷

Similarly, non-payment of council tax bills does not necessarily indicate a missed bill: there have been council tax holidays offered by councils and, upon seeing a decline in income, some households become eligible for council tax support (CTS) – a means-tested reduction in their council tax bill – which can sometimes reduce the net council tax liability to zero. However, while in Scotland, Wales and Northern Ireland CTS leads to a 100% reduction in council tax for those on the lowest incomes, this is not usually the case in England. Of the 326 English local authorities responsible for administering council tax, only 68 (21%) offered council tax reductions of 100% as of 2018–19 (Adam, Joyce and Pope, 2019). The remaining 79% generally require even households with no income to pay *some* council tax. In our analysis, therefore, we better isolate genuine council tax arrears – rather than receipt of a 100% bill reduction through CTS – by limiting our sample to only those users located in one of the 258 English local authorities that do not offer 100% CTS. This will still be a little imperfect for two reasons. First, even among those councils that do not offer 100% CTS to most households, some do still offer it to certain protected groups. Second, some councils may have begun to offer 100% CTS, or more extensive hardship funds, as a direct response to the crisis. Unfortunately, no comprehensive database is available in real time that tracks those developments.

Other work examining similar outcomes for UK households includes Kempson et al. (2020). They report findings from survey data from 5,800 households surveyed in July and document the extent to which households are facing financial difficulty in paying bills.

⁷ Authors' calculations using the 2018–19 Family Resources Survey.

2. Identifying programme recipients

Because we are dealing with financial transactions data rather than, for example, direct surveys of people or households, recipients of the income protection policies we examine here are not directly labelled as such – instead, we have to infer receipt from the transactions coming into their bank accounts. For each of the three policy areas analysed, we construct a different sample designed to provide us with insights into the group’s finances. In this section, we describe how we do this.

In addition to the policy-specific methodologies described below, certain restrictions are applied to all samples. First, to be admitted into any of the samples described below, a user must appear in the data in every month analysed, as well as the months following and prior to that period. This guards against the possibility of including partial months, where we might observe – for instance – only transactions that occurred in the first half of the month. In addition, we impose a series of restrictions (which we describe in detail in the appendix) to ensure that, for all users in our sample, we observe all of their accounts over the analysed period. These restrictions guard against cases where a bank account ceases to be linked to MDB, leaving us with only a partial picture of a user’s finances.

The CJRS for furloughed employees

Since furloughed workers receive their pay via their employer, the salary transaction in their bank account (and hence the MDB data) looks very much like the salary they would have received before. We proceed by focusing on the amounts of salary being received, looking for those whose gross salary payments appear to have fallen by 20% following the crisis. Specifically, we begin by calculating gross earnings from the net-of-tax earnings observed with each salary receipt in MDB, using the known parameters of the employee National Insurance

and income tax systems. We then focus on those users whose salary payments before and after the crisis are ‘steady’, in the sense that they are paid regularly and are of regular amounts – but allow for that level to differ pre- and post-crisis. We further restrict our attention to salaries that before the crisis were between 16 hours per week at the National Living Wage and £37,500.⁸

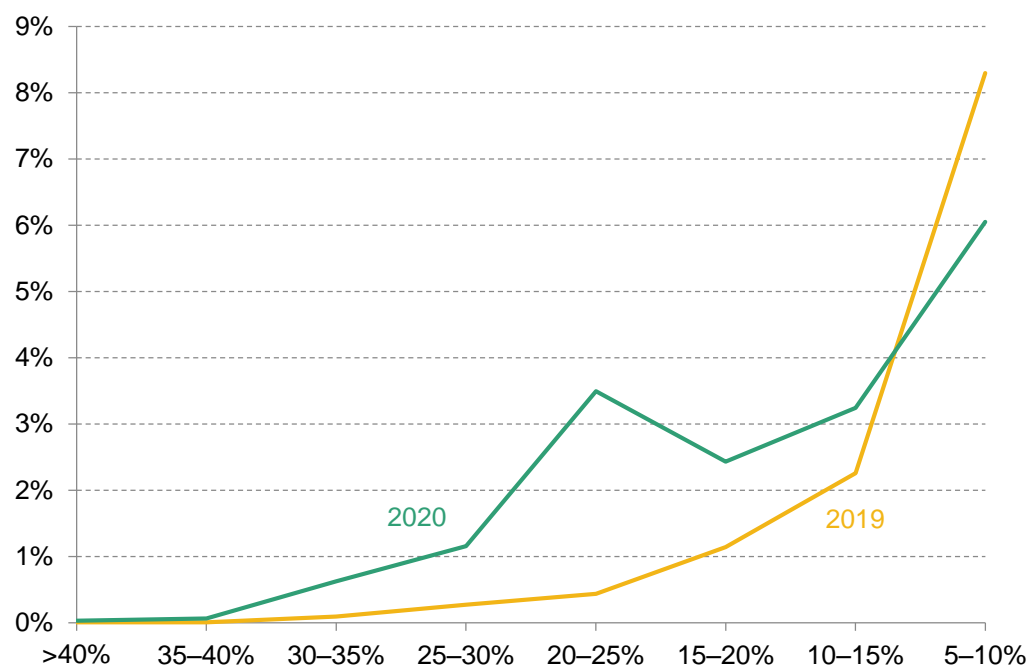
We first establish that, in a normal year, rapid falls in salary for these users are rare. For instance, in 2019, only 1.4% of such users experienced a decline of 20% or more between March and June. So we are not simply picking up a minority of users who always have this unusual seasonal pattern to their earnings. While this subgroup of ‘steady salaries’ has the advantage of allowing us to identify furloughed workers with greater confidence, it comes at the cost of excluding workers with irregular salaries from our sample.

Figure 2.1 compares the share of ‘steady salaries’ that experienced declines between March and June in 2019 and in 2020. While 1.9% of all steady salaries fell to between 70–85% of their previous level (in estimated pre-tax terms⁹) between March and June 2019, that figure was 7.1% in 2020. This near fourfold increase is strong evidence that a large majority of the 7.1% of salaries that experienced this reduction in 2020 are those of furloughed workers. These salaries belong to 168 distinct users, and they make up our CJRS analysis sample.

⁸ The CJRS is capped at £2,500 per month. Therefore, those with earnings in excess of £37,500 per year will, if furloughed without employer top-up, experience an income fall in excess of 20%. We exclude salaries below 16 hours per week at the National Living Wage because few workers work under 16 hours per week, suggesting that salaries that appear to be below that level may be mismeasured.

⁹ While pre-tax earnings can be well approximated by our calculation from post-tax earnings, there is necessarily a degree of imprecision in this calculation. Such imprecision may occur either if individuals have multiple sources of taxable income that are not accounted for in our tax calculation, or if individuals make contributions to a workplace pension. For this reason, relatively few users have a decline in salary of exactly 20%. In general, if pension contributions do not change following furloughing, the apparent decline in earnings will be larger.

Figure 2.1. Distribution of declines in salaries between March and June



Note: Declines shown are for 'steady' salaries only (as defined in the text).

Source: Authors' calculations using Money Dashboard data available on 7 August 2020.

It should be borne in mind, however, that the MDB users who earn these salaries are likely to be a minority of the MDB users who were furloughed during the COVID-19 period. This is because, while the government has committed to meet 80% of the pre-COVID-19 salaries of furloughed workers, employers are free to top up these government furlough payments, and many have chosen to do so.¹⁰ Our analysis thus focuses on those furloughed workers whose employer has not chosen to top up their salary on the CJRS, and who earned a steady salary pre- and post-crisis. Workers who have had their salary fully topped up by their employer are indistinguishable in our data from those who are still working with no change in pay.

¹⁰ Adams-Prassl et al. (2020) document that women were less likely to have their salary topped up beyond the 80% subsidy paid for by the government.

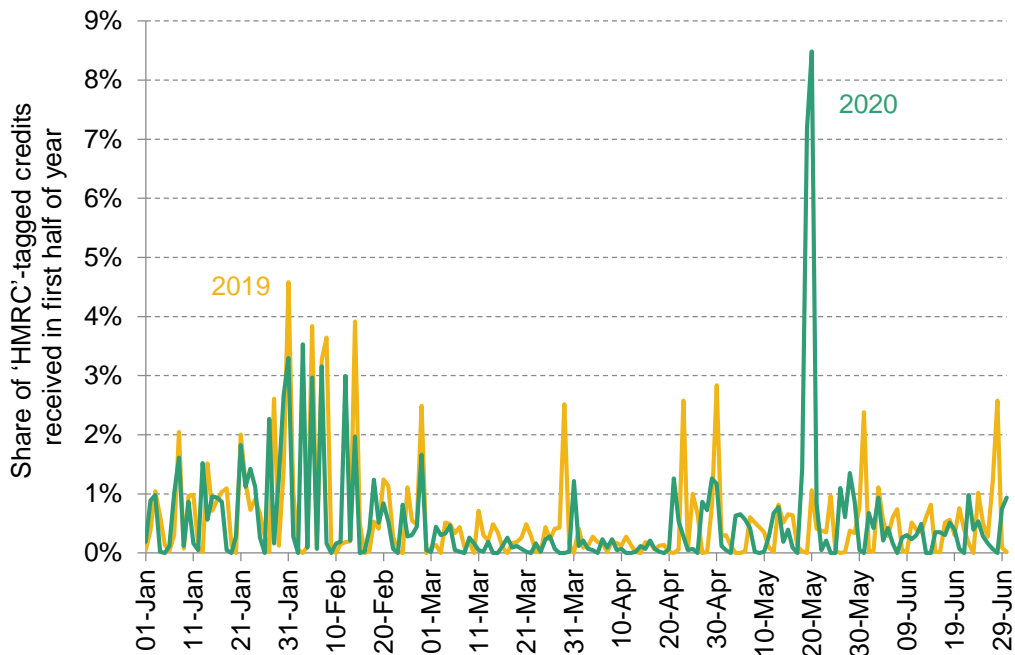
We use the UK Household Longitudinal Study (UKHLS) – specifically, its April 2020 COVID-19 survey – to better understand how many of our sample are in fact furloughed, and how representative they are. As in MDB, we take those whose pre-crisis annualised earnings were between 16 hours per week at the National Living Wage and £37,500, and then use reported net earnings to estimate gross earnings. We find that, of those whose earnings post-crisis fell by 15–30% compared with pre-crisis, 22% were not furloughed (and presumably saw earnings declines for other reasons). Of those who have seen a 15–30% earnings fall in the MDB sample, we cannot directly observe how many are in fact furloughed or saw a decline for other reasons. We can approximate the latter statistic using the number of employees who saw such a fall between March and June 2019 (when, of course, there was no furlough scheme). On this assumption, 27% of employees with a 15–30% fall in earnings in the 2020 MDB sample were not in fact furloughed – very close to the figure in UKHLS. We take from this that about three-quarters of our furlough analysis sample are in fact furloughed.

We also check the distributions of pre-crisis earnings among our furlough analysis sample and among furloughed workers in UKHLS. The MDB sample appears to have been a little more highly paid pre-crisis: the average earnings of furloughed employees in UKHLS is £19,250, whereas in MDB it is £24,500 (see Figure A.1 in the appendix for the full distribution).

SEISS

As discussed in Section 1, there have been two SEISS payments for self-employed individuals. In this briefing note, we focus on the first. Applications for this payment opened on 13 May, and payments were made within six working days of successful applications.

While SEISS recipients are also not directly identified in the MDB data, MDB assigns a ‘merchant’ to each payment made by its users. These merchant labels allow us to identify payments to or from large companies or public bodies. One such merchant label is HMRC (Her Majesty’s Revenue and Customs), the government body responsible for the administration of SEISS grants. Transactions bearing this label are generally tax payments or rebates.

Figure 2.2. Distribution over time of bank account credits paid by HMRC

Note: For each year, the figure depicts the share of bank account credits in the MDB data tagged as originating from HMRC in the first half of that year that were made on a given day.

Source: Authors' calculations using Money Dashboard data available on 7 August 2020.

Figure 2.2 shows the distribution of payments bearing the HMRC label across the year in 2019 and 2020. Relative to the previous year, 2020 sees a remarkable spike in payments from HMRC between 18 and 20 May – coinciding with when we would have expected the first SEISS payments to be made. This spike in transactions is driven entirely by payments made by HMRC of less than £7,500 (the maximum grant available under the SEISS). Furthermore, these dates also see a spike in HMRC-labelled payments of exactly £7,500. In fact, the 42 payments of this amount between 18 and 20 May are the only HMRC payments of this exact amount in these two years of MDB data.

We take the above as strong evidence that HMRC-labelled payments made between 18 and 20 May are SEISS grants and construct our sample accordingly. This provides us with a user sample of 423 SEISS grant recipients.

The design of the SEISS also makes it possible to calculate each recipient's implied 2018–19 self-employment income, by virtue of the fact that the grant is equal to 80% of that value. If we do this calculation then, reassuringly, the implied 2018–19

self-employment income distribution of our sample matches very closely the actual distribution of self-employment incomes from SEISS-eligible¹¹ individuals in 2016–17 (the most recent year for which the relevant tax data are available) – see Figure A.2 in the appendix for details. This suggests that the sample of SEISS recipients we have is very representative in terms of their level of profits.

Universal credit

Benefits are a ‘tagged’ credit in the MDB data, although there is little distinction between the *type* of benefit being received. Over the period we analyse, almost all new working-age benefit claims are to UC, child benefit, personal independence payments, ‘new-style’ jobseeker’s allowance or ‘new-style’ employment and support allowance. With the exception of UC, the amounts of these benefits received can take one of a small number of specific values (for example, payments of child benefit vary simply according to the number of children the recipient household has). Thus, we can easily identify each of these non-UC payments in the MDB data. Consequently, by exception we can also quite reliably identify new claims to UC – assuming that any new tagged benefit claim not identified as one of the other benefits listed above is a new claim to UC.

By default, new claimants to UC receive their first UC payment five weeks after application (the so-called ‘five-week wait’). In that intervening period, they can optionally receive an ‘advance’, roughly the same size as their first regular payment, which they pay back over the following 12 months (in the form of lower UC awards). We use the first date at which a user receives any UC payment – regular or advance – as their first payment date.

Our UC sample comprises MDB users who: (i) received no benefit income other than child benefit in January and February 2020; (ii) began a UC claim in March 2020 or later; (iii) have updated their MDB account more than two months after

¹¹ By ‘SEISS-eligible’, we mean that the taxpayer would have met the financial eligibility requirements of the SEISS had the scheme been based on tax returns from the 2016–17 financial year: having made a tax return on a self-employment income of no more than £50,000 which constitutes at least 50% of their income for 2016–17. An additional requirement to receive SEISS is that the worker must state that their business has been ‘adversely affected’ by the COVID-19 crisis. Obviously we cannot observe this in the 2016–17 tax data.

making their first UC claim; (iv) had an average non-benefit income in May and June 2020 at least 20% lower than in January and February.

The final restriction relates to the fact that UC entitlement is calculated at the household (as opposed to individual) level. If a user's income is little changed before their UC claim begins, it is possible that they have a partner who has seen a fall in income (making the household entitled to UC), but the user has not linked in their partner's bank account(s). With this restriction, we focus attention on users where we observe the income fall that precipitated household UC eligibility.

These selection criteria give us a sample of 155 new UC claimants. We also examine a subsample of this group (105 users) for whom data are available for at least three months following their first UC claim, to further trace out a fuller time path of financial outcomes.

3. The CJRS for furloughed employees

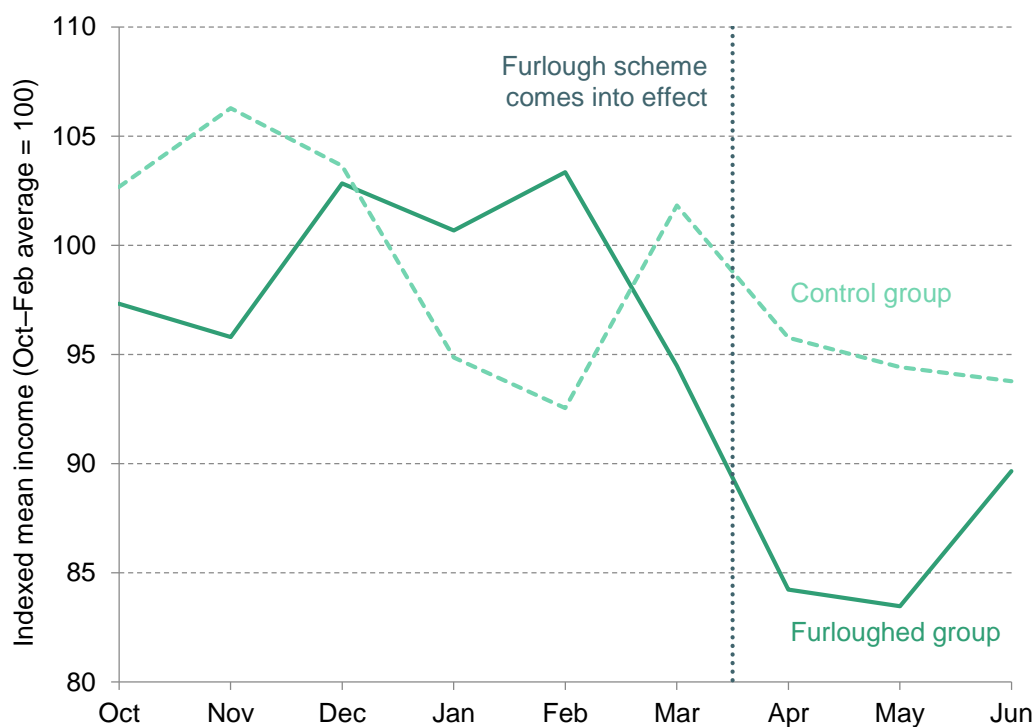
We begin by analysing those who have been furloughed under the CJRS – a group who are disproportionately likely to be low earners (Gardiner and Slaughter, 2020) – and who have not had their earnings topped up by their employer. In order to help distinguish the more general impacts of the COVID-19 crisis on incomes and spending from the impacts specifically on furloughed employees, we draw on a ‘control group’. This control group is drawn from MDB users with both ‘steady salaries’ and ‘steady household incomes’, defined in both cases as the change between March and June 2020 not exceeding 5%. Each member of the control group is matched to a furloughed worker on the basis of age, geography, number of current accounts and average pre-crisis income, earnings and spending. The path of the control group can be indicative of the path that the financial outcomes of furloughed users might have taken had they not been furloughed (or, perhaps more accurately, had they been in a different economic sector or occupation that was less vulnerable to the impacts of social distancing requirements). Indeed, we show that before the crisis, the paths of the two groups were very similar.

Income

Figure 3.1 shows income over time for furloughed users and the control group of users. In this figure, we index income to the average for the group in October 2019 to February 2020, allowing us to examine differences in trends over time. We see that from October 2019 to February 2020, the two groups have broadly similar incomes across time. The furloughed group then experiences an income fall of about 19% between February and April. By construction, our control group of non-furloughed workers sees little change in income as the crisis hits. Over the April to June period, the income of the furloughed group is relatively stable and on average

14% below that of the pre-crisis level. There is some evidence of a recovery in June, though it is too soon to put too much weight on this.

Figure 3.1. Mean user income



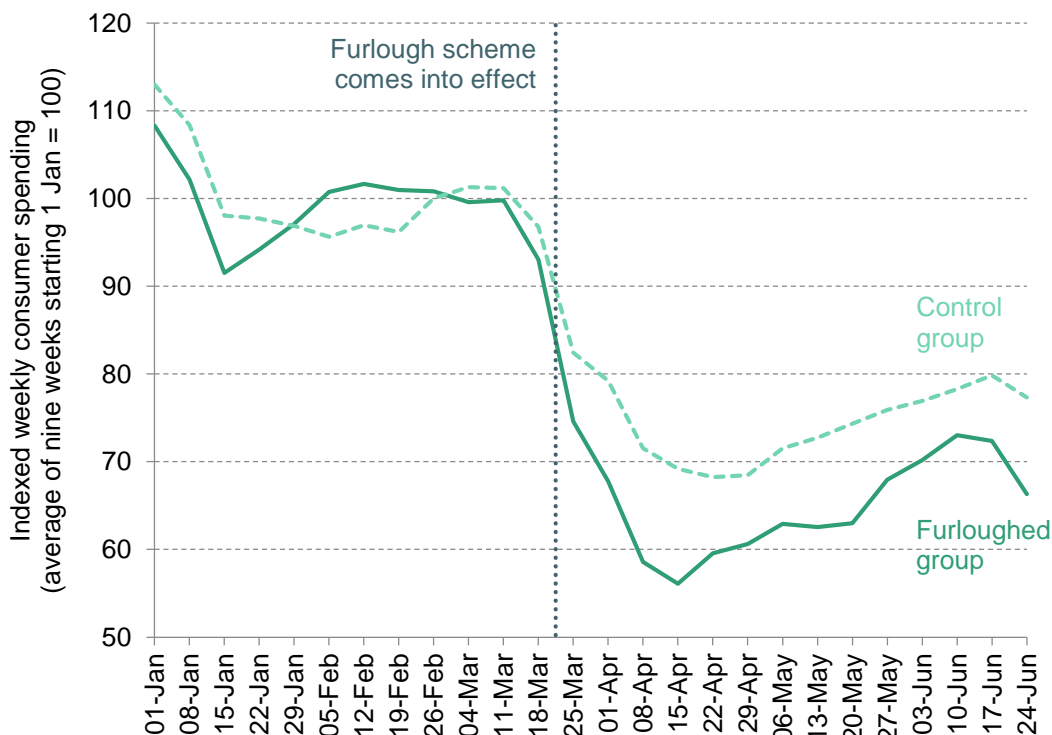
Note: Income is defined as total credits to current accounts, plus savings interest to savings accounts, excluding non-income credit transactions such as transfers from another account or refunded purchases (see appendix A of Bourquin et al. (2020) for a detailed discussion of how we identify transfers between accounts of the same user). We assume that any credit transaction tagged with an expenditure tag (for example, clothing) is a refunded purchase. We also exclude untagged transactions that are exact multiples of £100, as these are unlikely to be genuine income and may instead be a transfer from an unlinked account. The top 5% of incomes in each month are trimmed from our sample.

Source: Authors' calculations using Money Dashboard data available on 7 August 2020.

Expenditure

We next examine how these changes in income translate to impacts on expenditure, using the measure of consumer spending described in Section 1. Figure 3.2 shows a four-week rolling average of spending, to smooth spending spikes coinciding with particular times in the month.

Figure 3.2. Mean weekly consumer spending (indexed four-week rolling average)



Note: Weeks shown on the horizontal axis refer to the final week included in the rolling average. For instance, week beginning 18 March refers to the average spending in the three previous weeks and the week beginning 18 March. Consumer spending includes all spending tagged by MDB with the exception of household bills and financial products (such as insurance and interest spending). Averages are trimmed at the 95th percentile in all weeks.

Source: Authors' calculations using Money Dashboard data available on 7 August 2020.

Not surprisingly, spending fell precipitously in the immediate wake of the crisis as many retail outlets and shops closed down. Notably, however, this fall in spending was greater for furloughed workers than for the control group. While average weekly consumer spending for the control group was 26% lower in the eight weeks beginning 1 April than in the eight weeks beginning 1 January, that figure was 37% for the furloughed group.

There are several potential explanations for this divergence. The simplest is that, despite the 80% government subsidy in the CJRS, the fall in income experienced by furloughed workers has forced them to reduce their level of spending further than they would otherwise have chosen to do. Another possibility is that uncertainty about the prospects for continued employment after the CJRS ends have led

furloughed workers to reduce their spending in order to build up precautionary savings for the future.

Importantly – and in contrast to the other programmes we evaluate later – the gap in spending between furloughed and control group workers is relatively steady over the period we examine.¹² This likely relates to the fact that there was no delay in getting the payments: furloughed workers continued to receive their (albeit lower) salary as usual, and so did not have to very sharply cut spending while they waited for support to arrive.

Non-payment of bills

We have seen that furloughed workers have experienced declines in income and spending. In light of this, it is natural to ask whether they have been able to keep up with regular bill payments. We examine mortgage and council tax bills; we are unable to examine rent for this group because of sample size limitations.¹³ We reiterate that non-payment of these bills does not necessarily indicate arrears, because of the availability of permitted delays, such as mortgage holidays.

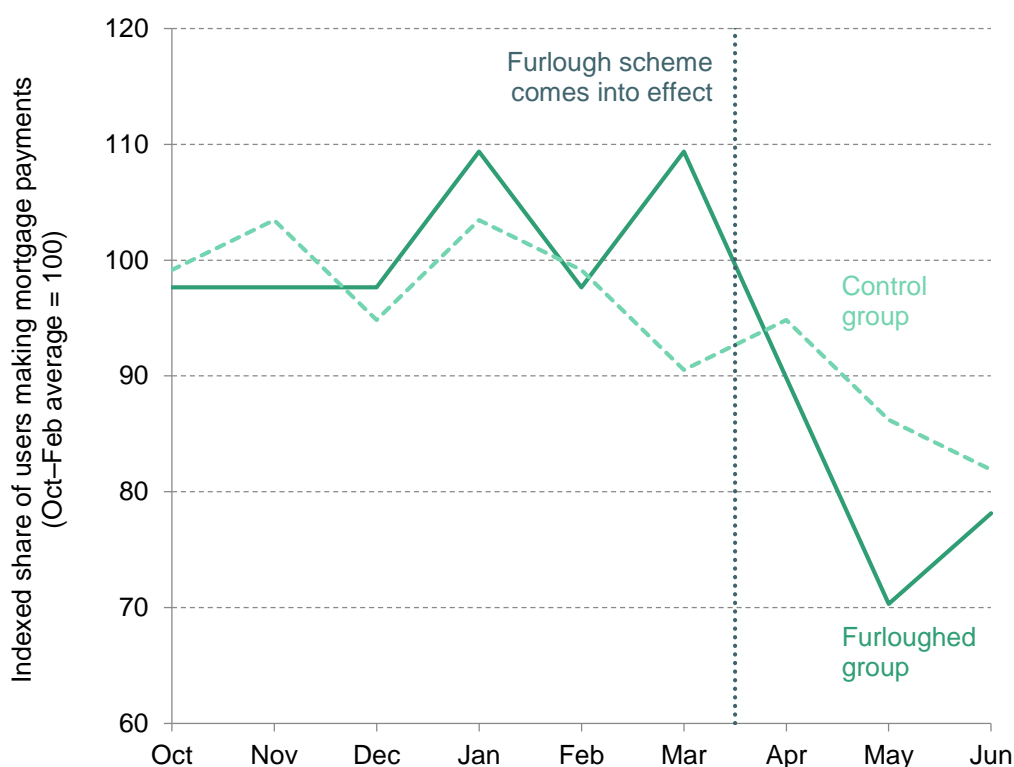
Figure 3.3 shows that there was a large decline in the payment of mortgages among furloughed workers. The share of users in the furloughed group making mortgage payments falls by around 26% in May and June 2020 compared to the pre-crisis period from October 2019 to February 2020 (though with a bit of an uptick in June – consistent with the increase in income seen in the same period). The decline in the control group is also large, at 16%. This suggests that mortgage holidays represented an easily accessible form of liquidity for furloughed workers, but were also used by some workers whose incomes were unaffected by the crisis. The fact that a large proportion of even those mortgagors who saw no fall in income stopped

¹² There appears to be a bit of a recovery in furloughed group spending in the first part of June, which is then reversed in the last week. This is essentially entirely due to the week commencing 27 May where furlough group spending is very high (above that of the control group). By the end of June, this single week has dropped out of the four-week rolling average, and so the gap between the two groups returns to 14%. Moreover, when we examine trends among our smaller subsample that we can follow for a longer period, we see that the gap in July is little changed from that at the end of June. This suggests that the high spending in late May was a temporary blip.

¹³ We see no clear trends in payment of utility bills for furloughed workers or other groups we examine.

paying their mortgage (presumably on a mortgage holiday) may suggest that these households had a pre-existing desire to access greater liquidity, which the increased availability of holidays during the crisis facilitated.

Figure 3.3. Indexed share of users making mortgage payments



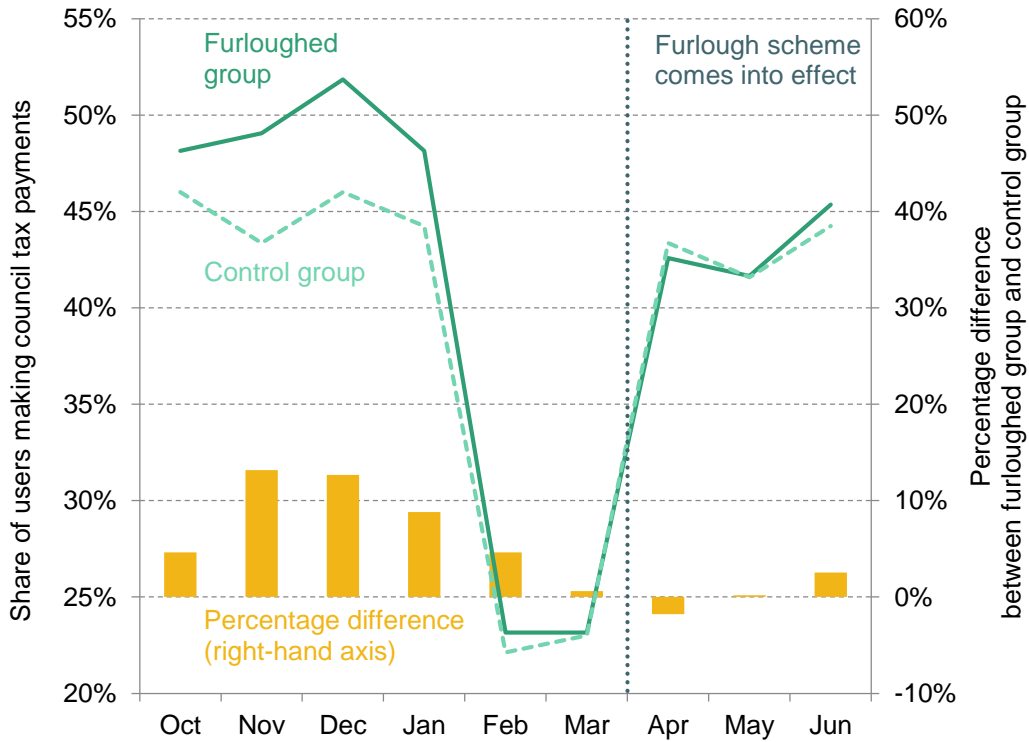
Note: We define mortgage payments as any payment tagged as 'mortgage payment' or 'mortgage or rent'. The latter is included on the basis of previous research (Bourquin et al., 2020) showing that 97% of 'mortgage or rent'-tagged transactions in the MDB data contained some mention of a mortgage in their transaction description, while none contained a mention of rent.

Source: Authors' calculations using Money Dashboard data available on 7 August 2020.

We next turn to non-payment of council tax. As discussed in Section 1, non-payment of council tax bills does not necessarily indicate arrears. Councils have offered council tax holidays, and households may become eligible for full council tax support so their council tax liability is zero. In this part of the analysis, we limit our sample to users whose registered postcode is within one of the 79% of English local authorities that in 2018–19 did not generally offer 100% reductions of council tax. In these local authorities, those in receipt of council tax support are offered a reduction to their bill, but generally still required to make *some* payment, so if

households in these areas stop paying council tax it is much more likely to reflect a genuine missed payment.

Figure 3.4. Share of users making council tax payments



Note: While some council tax payers make monthly payments to their local council, the majority of council tax payers make payments for 10 months of the year and make no payment in either February or March. The sample underpinning the figure is limited to English local authorities that do not offer 100% council tax support.

Source: Authors' calculations using Money Dashboard data available on 7 August 2020.

Figure 3.4 shows the share of users in these local authorities making council tax payments each month, as well as the percentage difference between the shares for the furloughed group and the control group. It is this difference that we focus on, as this strips out trends common to both groups. Council tax is typically paid in 10 months of the year, with households usually not making payments in February or March, so one should focus on the left- and right-hand sides of the figure. The share of users making council tax payments fell only slightly among the control group, but considerably more among the furloughed group. This suggests that the income loss that households with furloughed workers experienced resulted in fewer making council tax payments.

4. SEISS

We now move on to analysing the SEISS, the income protection policy targeted at the self-employed.

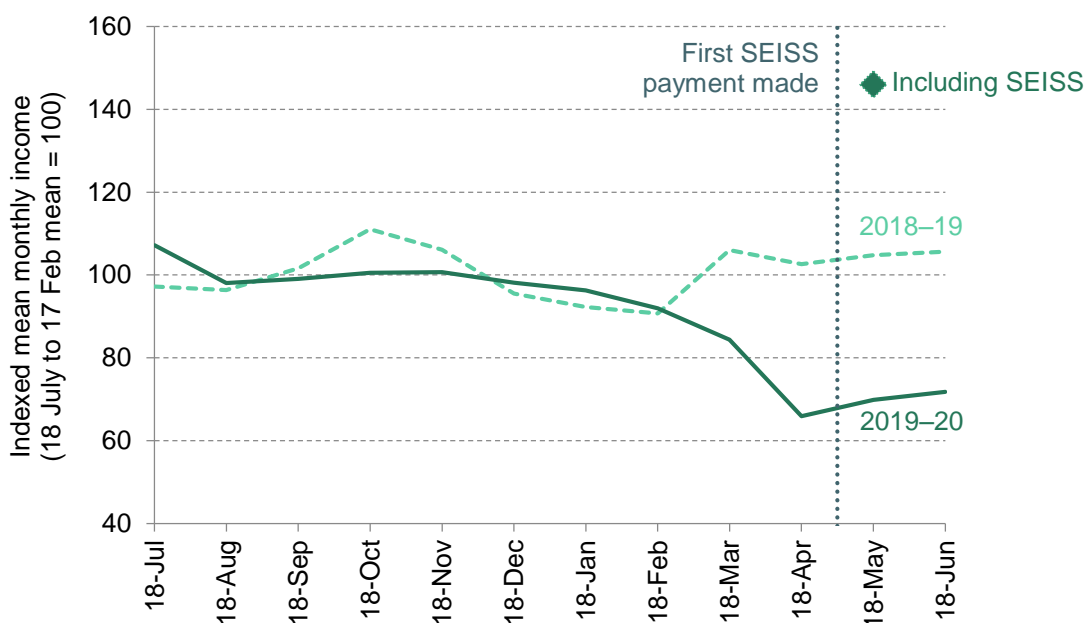
The specific features of the SEISS raise important policy questions. First, recipients of SEISS payments whose incomes are adversely impacted by COVID-19 potentially face much longer waits for cash support than furloughed employees: as discussed above, SEISS grants were generally paid out in mid May. How such a potentially long period of reduced income impacted self-employed workers is a relevant metric for assessing the success or otherwise of the policy.

Second, the fact that the sizes of SEISS payments were relatively loosely connected to the actual impact of the crisis on the worker (see Section 1 for details) means that there are important questions about how well targeted the support was.

Income

We first document the time path of income for SEISS recipients. There are two challenges we face here. First, ideally we would measure the profits of the self-employed. But we are unable to robustly measure costs, and so our measurement of income is likely to be closer to revenue than it is to profit. It should be noted, therefore, that if the costs associated with self-employment have fallen during the pandemic (a plausible hypothesis given reduced economic activity) then profits may have increased by more than the change in income that we measure here. Second, there is no plausible control group of self-employed workers that we can use for incomes (since we cannot reliably identify a representative group of self-employed workers in the data). Hence we proceed by comparing the incomes of SEISS recipients in 2019–20 with the same group's incomes in 2018–19 (with both being normalised to 100 for the period 18 July to 17 February in each year). This comparison is shown in Figure 4.1. We measure income over months beginning on the 18th, because the SEISS payments that we examine were all received between 18 and 20 May.

Figure 4.1. Mean monthly income of SEISS recipients

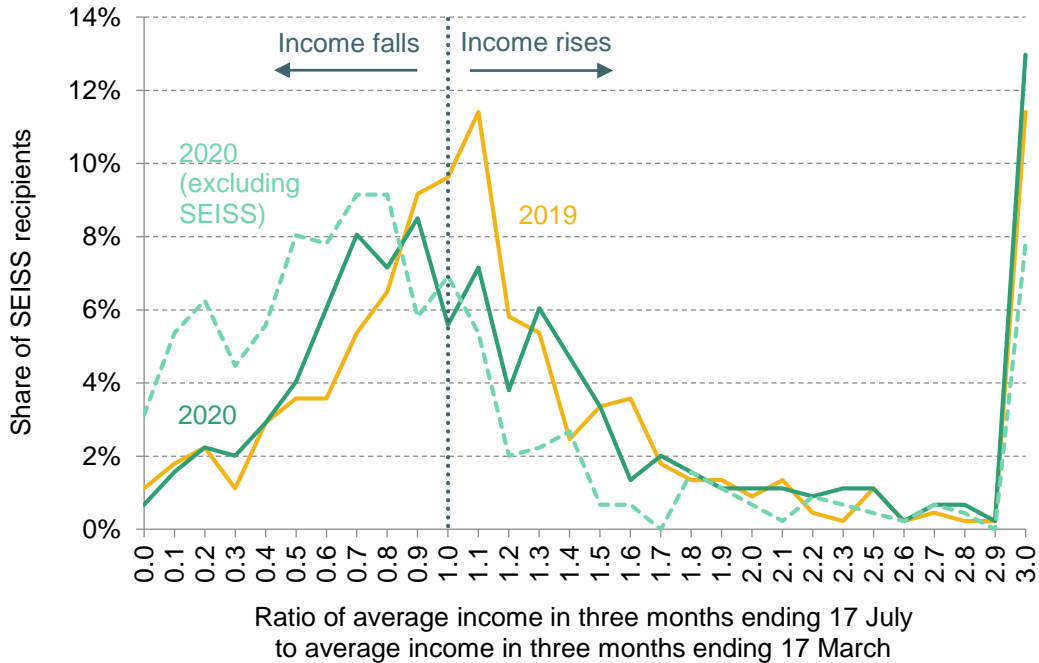


Note: Income is defined as total credits to current accounts, plus savings interest to savings accounts, excluding non-income credit transactions such as transfers from another account or refunded purchases (see appendix A of Bourquin et al. (2020) for a detailed discussion of how we identify transfers between accounts of the same user). We assume that any credit transaction tagged with an expenditure tag (for example, clothing) is a refunded purchase. We also exclude untagged transactions that are exact multiples of £100, as these are unlikely to be genuine income and may instead be a transfer from an unlinked account. The top 5% of incomes in each month are trimmed from our sample.

Source: Authors' calculations using Money Dashboard data available on 7 August 2020.

We see clear evidence of the COVID-19 crisis adversely impacting the incomes of SEISS recipients relative to the previous year. Excluding income from SEISS payments, average income of the self-employed in the three months from 18 March was roughly a third lower than what we might have expected given the 2018–19 trends. However, when the SEISS payment is taken into account (around £3,000 on average), self-employed incomes – averaged over this three-month period – were only 5% below their expected level. In other words, on average, SEISS payments came close to fully compensating recipients for the effects of the crisis – and they appear to have done so to a greater extent than the furlough scheme did for employees (except where employers voluntarily topped up the CJRS payments).

Figure 4.2. Distribution of ratio of income in the three months ending 17 July to income in the three months ending 17 March, SEISS recipients



Note: Ratios greater than 3 are grouped into the 3.0 value. The cumulative distribution of changes can be found in Figure A.3 of the appendix.

Source: Authors' calculations using Money Dashboard data available on 7 August 2020.

We can examine not only how the SEISS affected incomes on average, but also the distribution of its effects. In Figure 4.2, we calculate the ratio of income in the three months ending 17 July to income in the three months ending 17 March, in 2019, 2020, and 2020 excluding the SEISS payment. This shows how incomes grew or fell over these periods. Excluding the SEISS, income falls in 2020 are clearly much more prevalent than in 2019, as we would expect – the distribution of changes in income is shifted significantly to the left. However, once SEISS payments are included, the distribution for 2020 looks much more similar to that seen in 2019. This suggests that the SEISS programme did not create an unusually large number of people with significant income growth, and nor did it leave an unusually large number with income falls (among those who did receive the support). That said, while the SEISS was successful in returning the distribution of income changes to what we might normally see, there will doubtless be many *individual* cases where the SEISS either does not replace nearly as much income as the individual lost

because of the crisis,¹⁴ or gives a large payment to workers whose business income was barely affected by the pandemic. Moreover, other self-employed workers who are ineligible for SEISS will of course not have been compensated for any losses from the pandemic that they faced. For instance, Adam, Miller and Waters (2020) estimate that roughly 2 million people with some self-employment income (representing 38% of the total) were ineligible for the SEISS.

Expenditure

Figure 4.3 charts the evolution of expenditures for the SEISS group, showing how these changed during 2019–20 and in the previous year (each is normalised to be relative to the average in the January to February period). We see a large fall in expenditures among SEISS recipients, corresponding to around 40% of the pre-crisis level in 2019–20. Given that their incomes fall by a smaller percentage, this suggests this group have increased their savings over the crisis.

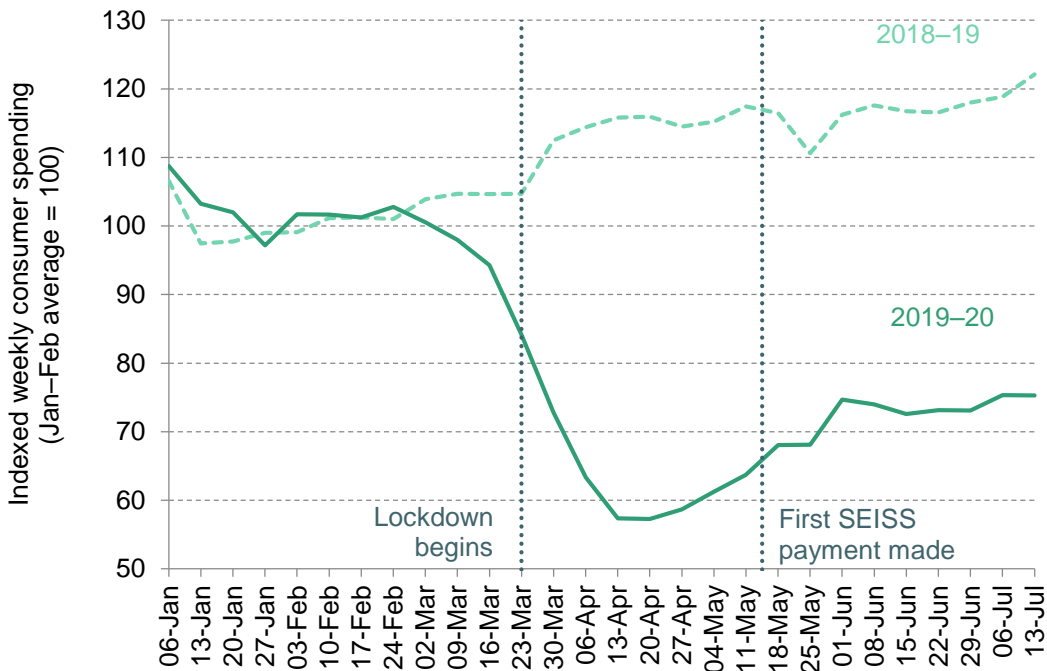
While Figure 4.3 documents how expenditures of SEISS recipients have changed over the crisis, we now consider the impacts SEISS payments have had on expenditures during the crisis. To measure these, we create two ‘control groups’ with which to compare SEISS recipients:

- **Basic control group:** This is a group of users who had the same level of spending as SEISS recipients before the crisis. More precisely, we match SEISS recipients to non-SEISS recipients based purely on their average consumer expenditure across January and February 2020. We do not impose any restrictions on their pre-crisis income or the change in their income.
- **Steady-income control group:** This is a group of users who had the same level of spending as SEISS recipients before the crisis *and* did not see a significant change in income during the crisis. Specifically, we first draw users whose average monthly income in May and June was within 5% of their average monthly income in January and February. We then match each SEISS recipient to one of those users based on their average consumer expenditure in January

¹⁴ This is particularly likely to be the case in fast-growing businesses, where 2018–19 profits, on which the SEISS payment is based, are substantially below what 2020–21 profits would have been in the absence of the crisis.

and February 2020. The idea is that the spending path of the steady-income group post-crisis can illustrate the likely spending path that SEISS users would have followed had their income not been much affected by the pandemic.

Figure 4.3. Mean weekly consumer spending of SEISS recipients (indexed four-week rolling average)

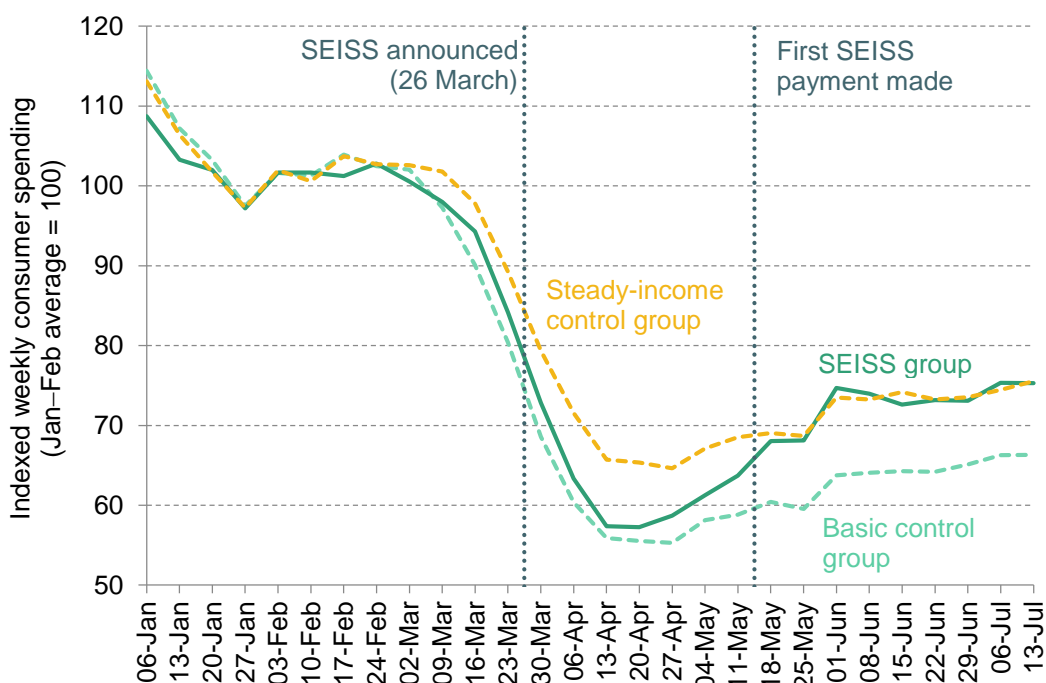


Note: Weeks shown on the horizontal axis refer to the final week included in the rolling average. For instance, week beginning 11 May refers to the average spending in the three previous weeks and the week beginning 11 May. Consumer spending includes all spending tagged by MDB with the exception of household bills and financial products (such as insurance and interest spending). Averages are trimmed at the 95th percentile in all weeks.

Source: Authors' calculations using Money Dashboard data available on 7 August 2020.

The SEISS group is compared with both control groups in Figure 4.4. We see that the SEISS group and the basic control group saw similar declines in spending in the wake of the crisis (broadly the period spanning from the beginning of March to mid April), but larger declines than those seen among the steady-income control group, presumably reflecting the SEISS group seeing a decline in income. However, in the weeks that follow we see SEISS group spending depart from basic control group spending, until around the time of the SEISS payment, when it converges almost exactly with that of the steady-income group.

Figure 4.4. Mean weekly consumer expenditure (indexed four-week rolling average)



Note: Each control group is propensity matched to the SEISS recipient group using a k-nearest-neighbour propensity match where $k = 1$ without replacement. The match makes use of average weekly consumer expenditure across January and February 2020 as its only variable.

Source: Authors' calculations using Money Dashboard data available on 7 August 2020.

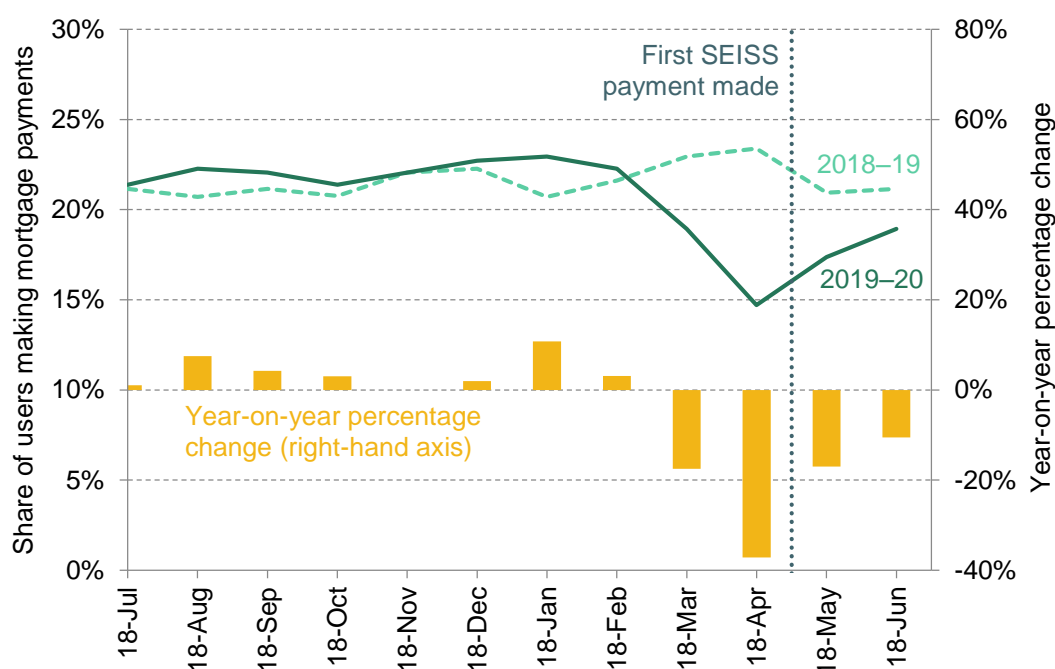
The precise timings of these changes are slightly difficult to interpret because the figure shows a four-week rolling average (and the equivalent week-by-week figure is noisier, partly reflecting the fact that spending on particular things tends to ebb and flow at specific times each month). But what these results suggest is that the self-employed eligible for SEISS initially responded to the crisis by cutting spending as their incomes were hit. Following the announcement of the SEISS on 26 March, however, eligible self-employed workers began to increase their spending in anticipation of the SEISS payment; and when that payment arrived, they had fully caught up with where we might have expected their spending to be had their incomes been unaffected by the crisis (at the week-by-week level, we see a spike in spending the week before SEISS receipt – when the application would have been made – and the week of receipt itself). There are two lessons to take from this. First, the delay in the SEISS grant led to lower consumption for these households while they waited for the payment. Second, once the SEISS had been

paid, it was successful in offsetting the consumption falls precipitated by SEISS recipients' income declines.

Non-payment of bills

As with furloughed workers, for SEISS workers we examine payments of mortgages and council tax, and we also look at rent. Following our approach for incomes, we do so by considering payments over time for the same group of SEISS recipients, and making a comparison with the previous year.

Figure 4.5. Share of SEISS recipients making mortgage payments



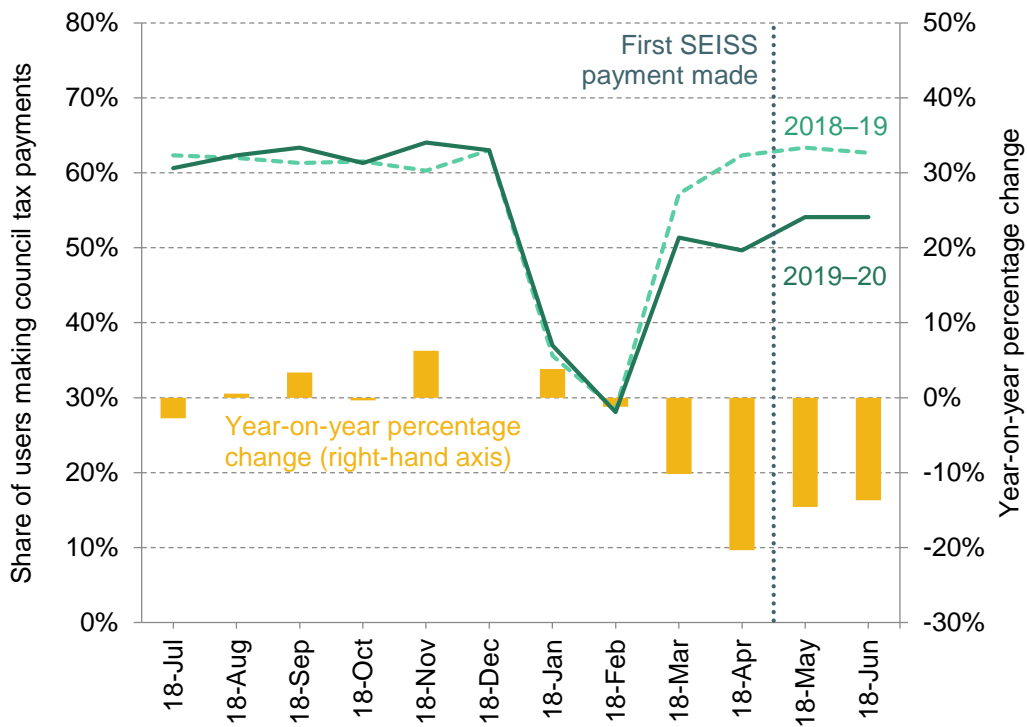
Note: We define mortgage payments as any payment tagged as 'mortgage payment' or 'mortgage or rent'. The latter is included on the basis of previous research (Bourquin et al., 2020) showing that 97% of 'mortgage or rent'-tagged transactions in the MDB data contained some mention of a mortgage in their transaction description, while none contained a mention of rent.

Source: Authors' calculations using Money Dashboard data available on 7 August 2020.

On mortgage payments, in Figure 4.5 we observe large falls (down around a third relative to the previous year) in the share of SEISS recipients making mortgage payments in the month preceding the first SEISS payment. However, following receipt of SEISS, we see evidence of a sustained recovery in mortgage payments in

May and June. This suggests that some members of this group accessed additional liquidity via mortgage holidays in the long waiting period between the start of lockdown on 23 March and the first SEISS payment on 18 May; and once they received the SEISS, they returned to making mortgage payments.

Figure 4.6. Share of SEISS recipients making council tax payments



Note: While some council tax payers make monthly payments to their local council, the majority of council tax payers make payments for 10 months of the year and make no payment in either February or March. The sample underpinning the figure is limited to English local authorities that do not offer 100% council tax support.

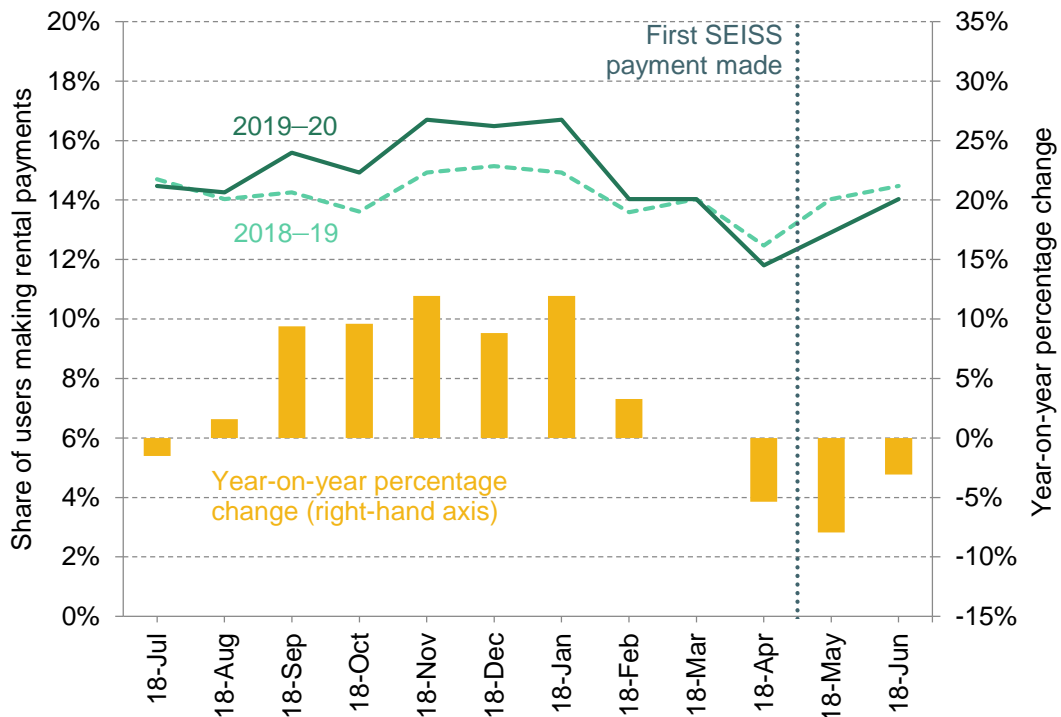
Source: Authors' calculations using Money Dashboard data available on 7 August 2020.

On council tax payments, in Figure 4.6 we see significant falls in the number of council tax payers relative to the pre-crisis period. In the month beginning 18 March (two months prior to when the SEISS payment was made), the share of households making council tax payments fell to 10% below the levels seen in the previous year. This fall became more acute still in the month immediately preceding the payment of SEISS, with the share of households making council tax payments experiencing a 20% year-on-year decline. Following the SEISS payment,

the share of households making council tax payments appears to have stabilised, but has remained at around 15% below levels seen in the previous year.

Finally, on rental payments, in Figure 4.7 we also see evidence of reduced payment of such bills in 2019–20 relative to how many individuals were paying them in 2018–19. March 2020 marked the first month that the likelihood of making a rental payment was lower than in the same month in the previous year, and this gap continued to increase into May, before contracting somewhat in June. This suggests that, especially in the immediate aftermath of the crisis, the incidence of missed rental payments increased among SEISS recipients.

Figure 4.7. Share of SEISS recipients making rental payments



Source: Authors' calculations using Money Dashboard data available on 7 August 2020.

5. Universal credit

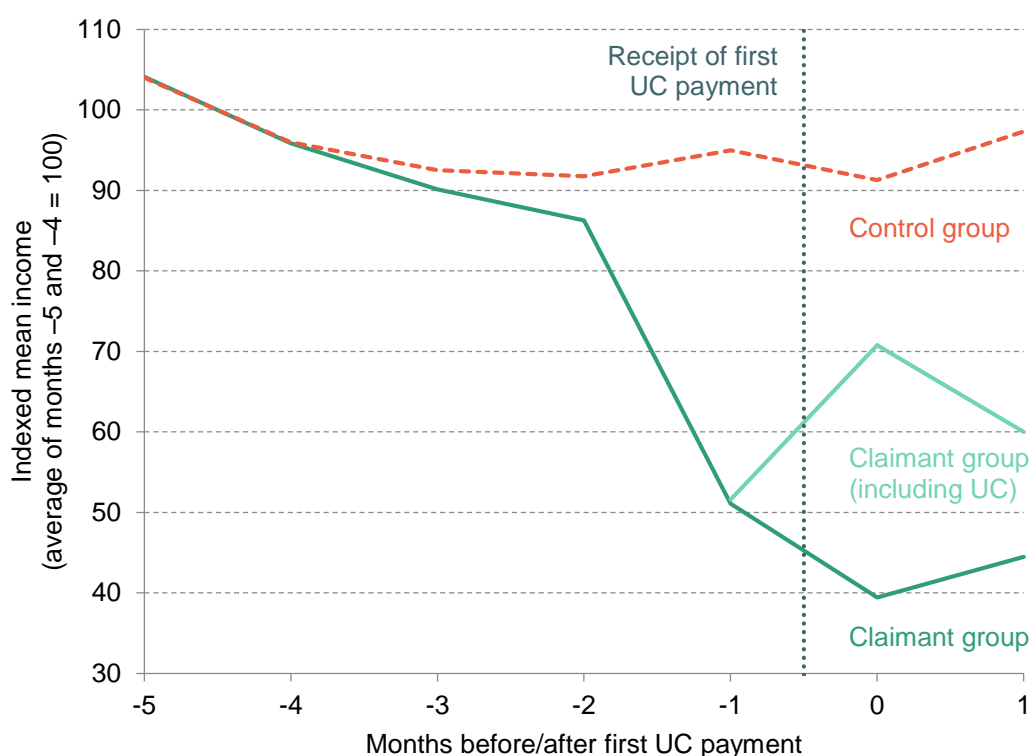
We now analyse the finances of those who started claiming universal credit (UC) sometime from the beginning of March 2020. These MDB users include those who have lost work altogether and are among the most vulnerable to the income shocks caused by the crisis. As in the previous two sections of this briefing note, because the pandemic was simultaneously affecting many aspects of economic life, we compare these new UC recipients with a control group in order to better understand the impact that the receipt of UC has on financial outcomes.

Our control group comprises users who have similar observable characteristics (age, region, number of current accounts and pre-crisis income, earnings and spending) to the claimant group in the pre-crisis period but whose average incomes across May and June 2020 are steady, in that they are no more than 5% higher or lower than their average incomes across January and February 2020. The control group is drawn from a pool of users who receive no benefit income (other than child benefit) during the COVID-19 crisis. This group can be thought of as broadly illustrating how our claimant group might have looked had its members not experienced the fall in income that led them to claim UC.

Income

Figure 5.1 shows the evolution of average incomes for the claimant group and for the control group over the course of the crisis. The months measured on the horizontal axis are defined in relation to the user's first UC payment – month '0' thus begins on the day the payment is received. On average, the first UC payment for these new claimants was on 6 May 2020. (By construction, individuals in the control group do not receive UC payments during the COVID-19 period; they are simply assigned the payment date of the UC recipient with whom they are matched.) The two groups exhibit fairly similar trends between five and three months prior to the receipt of UC (roughly December 2019 to February 2020).

Figure 5.1. Mean user income



Note: Income is defined as total credits to current accounts, plus savings interest to savings accounts, excluding non-income credit transactions such as transfers from another account or refunded purchases (see appendix A of Bourquin et al. (2020) for a detailed discussion of how we identify transfers between accounts of the same user). We assume that any credit transaction tagged with an expenditure tag (for example, clothing) is a refunded purchase. We also exclude untagged transactions that are exact multiples of £100, as these are unlikely to be genuine income and may instead be a transfer from an unlinked account. The top 5% of incomes in each month are trimmed from our sample.

Source: Authors' calculations using Money Dashboard data available on 7 August 2020.

Three points are of note. First, the decline in income the claimant group experiences occurs a month *before* their first payment of UC. On average, in the month prior to claiming UC, net income for the group was already £1,000 lower than it was three months earlier. Indeed, one in three members of the claimant group had seen their incomes fall to just a third of their pre-crisis level by this point. This is despite the availability of 'advances' that claimants can receive shortly after making their application. The decline in income prior to first UC receipt may be because some do not claim the advance (and so are subject to the so-called 'five-week wait'), or because they do not make an application to UC for some time after having seen an income fall, or because of some delay in the administrative process – though other

work has suggested that, in most cases, the administrative machinery of the Department for Work and Pensions worked fairly well in processing the huge number of new claims on time (Brewer and Handscomb, 2020).

Second, benefit receipt is about twice as large in the month of first receipt as it is in the month following (£750 versus £380). When we use the smaller subsample that we can follow for longer over the crisis, we find that benefit income two months after first receipt is similar to that seen one month after. The larger receipt at the start is likely due to the month containing both the (optional) advance payment and the first regular payment. That benefit receipt in the first month is about double that in the second suggests that a large fraction of the sample took the advance.

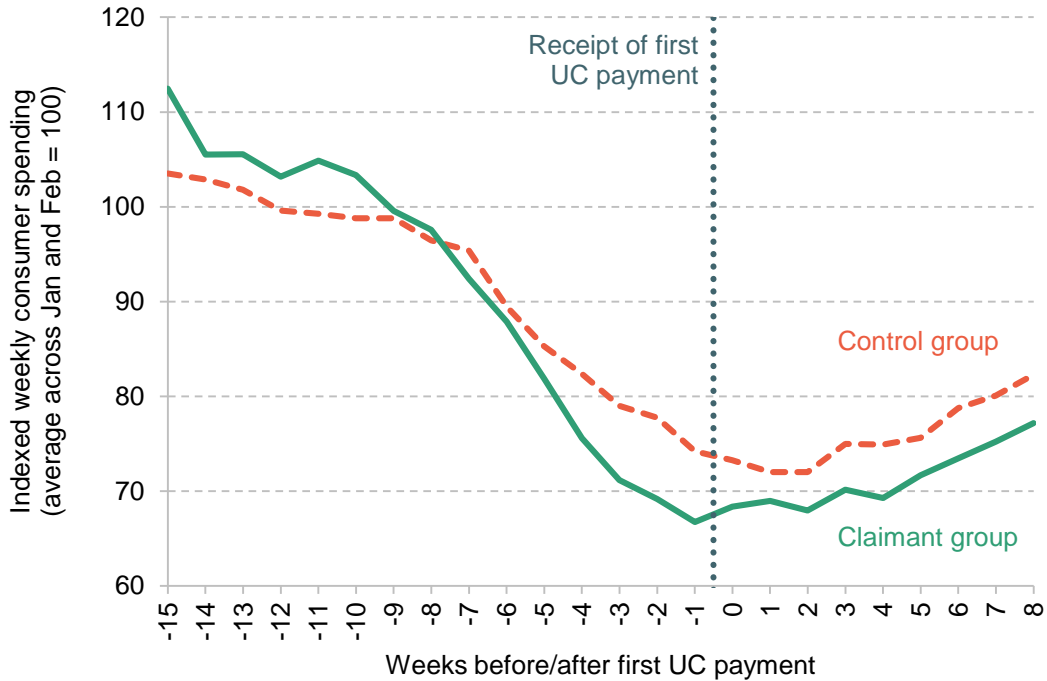
Third, non-benefit income on average falls again by about £300 in the month that UC is received. This suggests that the income fall that precipitates the claims of the users in our sample occurs primarily in the month prior to payment being received, with a smaller share of users seeing income fall in the same month as UC is received. In the month after the first UC payment is received, the average user had non-benefit income about 55% lower than before the crisis. UC replaced, on average, roughly a quarter of the lost income for that group.

Expenditure

We now turn to examine how these declines in income filter through to changes in expenditures. As in the previous sections, we use a four-week rolling average.

As we have seen repeatedly in this briefing note, there is a large decline in spending for both groups over the course of the crisis (see Figure 5.2), not least due to the fact that the shutdown of large parts of the economy rendered many forms of consumer expenditure impossible. As expected, given the substantial fall in incomes experienced by the claimant group, new UC claimants reduce their spending by considerably more than the control group. Two weeks before the first UC payment (at week 0), average consumer expenditure in the claimant group had fallen by 31% relative to its pre-crisis level, compared with just 22% for the control group. Put another way, spending among the claimant group was 11% below where it would have been had it taken the same path as for the control group. This suggests that, even given the much more limited scope for expenditure in the crisis period, UC claimants reduced their spending by considerably more than they would have done had they not experienced a decline in income.

Figure 5.2. Mean weekly consumer spending (indexed four-week rolling average)



Note: Weeks shown on the horizontal axis refer to the final week included in the rolling average. For instance, week '0' refers to the average spending in weeks -3, -2, -1 and 0. Consumer spending includes all spending tagged by MDB with the exception of household bills and financial products (such as insurance and interest spending). Averages are trimmed at the 95th percentile in all weeks.

Source: Authors' calculations using Money Dashboard data available on 7 August 2020.

Strikingly, we see that the relative decline in expenditures for UC claimants begins some weeks before the first UC payment. For some users, this decline might even start before the decline in income, which occurs one month prior to the first UC payment. The claimant group may therefore begin to cut spending when they anticipate their income falling in the near future – but before the actual income fall occurs. For example, they could be told they have lost their job or their hours will be cut, but they still get their full pay *in that month*.

The gap between claimant and control group spending continues to increase until the week before the first UC payment arrives. It becomes narrower when the first payment is received. This is consistent with the patterns seen in spending around the SEISS payment: a delay between the decline in income and the receipt of the support seems to cause households to reduce their spending until the funds arrive.

Even after the payment is received, though, the expenditures of the UC group do not recover all of their lost ground relative to the control group – eight weeks after first UC receipt, spending in the claimant group was 6% below where it would have been had it followed the path of the control group. This is to be expected given that their incomes remain substantially different at this point.

Non-payment of bills

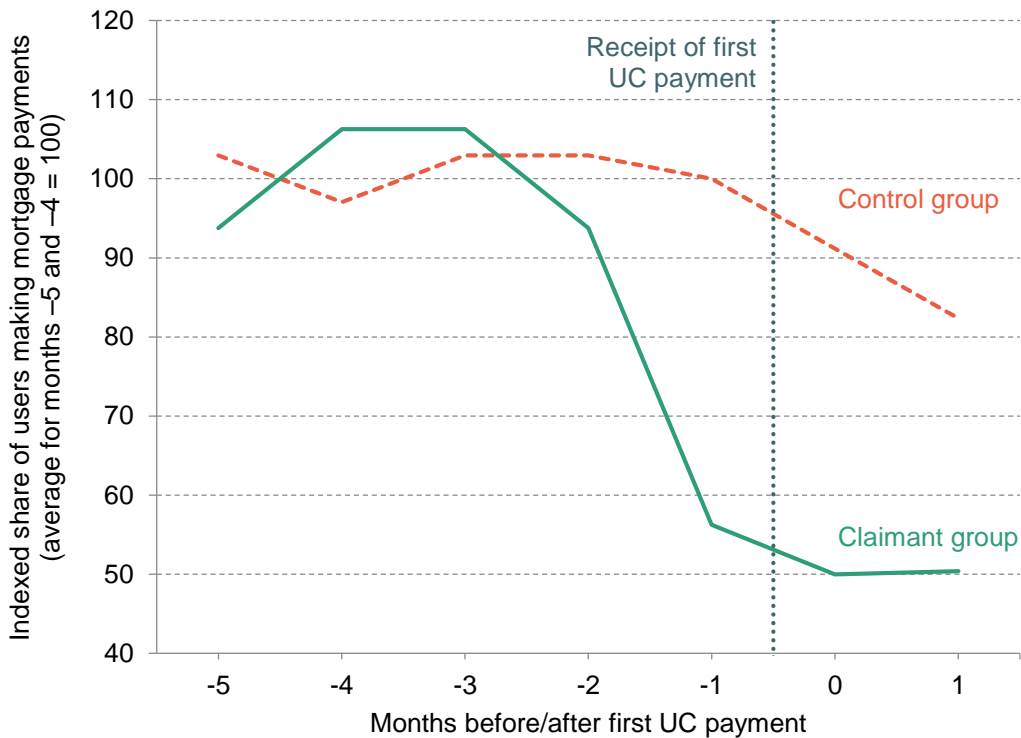
Given the decline in income that the UC claimant group have seen even after receiving the benefit, it is natural to ask whether they have been able to keep up with regular bill payments. Because of limitations in sample size, we do not examine rent payments here, and we focus on mortgage and council tax; in so far as we are able to detect trends in rent, it looks as if UC recipients fall behind on rent payments relative to the control group.

Figure 5.3 shows that mortgage payments decline for both the claimant group and the control group who see no substantial change in income, reiterating the extent to which homeowners have taken advantage of the offer of mortgage holidays during the crisis. This suggests that for some of these MDB users (who make up a minority of new UC recipients), mortgage holidays are an opportunity for (relatively low-interest) additional borrowing.

However, the decline in mortgage payments is considerably larger for the UC claimant group than for the control group. In the month of UC receipt, the share of those in the claimant group making mortgage payments had fallen to half its pre-crisis level. The decline levels off after that, with little change one month after first UC receipt or (for the smaller subsample that we can follow for longer) two months after. This suggests that the receipt of UC is not sufficient to get these households paying their mortgage again. This is not surprising behaviour if they expect to see their incomes increase in the future (since not paying the mortgage amounts to borrowing), but it does raise the question of what might happen to these households when mortgage holidays end.

As with falls in expenditure documented earlier, what is noticeable about the timing of the decline in mortgage payments is that it also begins prior to UC receipt – indeed, almost all of the decline in mortgage payments occurs before the household first receives UC. This suggests two things.

Figure 5.3. Indexed share of users making mortgage payments



Note: We define mortgage payments as any payment tagged as 'mortgage payment' or 'mortgage or rent'. The latter is included on the basis of previous research (Bourquin et al., 2020) showing that 97% of 'mortgage or rent'-tagged transactions in the MDB data contained some mention of a mortgage in their transaction description, while none contained a mention of rent.

Source: Authors' calculations using Money Dashboard data available on 7 August 2020.

First – as with spending – this group may stop paying their mortgage (probably through mortgage holidays) when they anticipate an upcoming income fall but before that fall actually occurs. Second, non-payment of mortgages represents a form of liquidity that those in financial distress can quickly access – and in many cases they access this before claiming UC, perhaps reflecting the relative ease of getting a mortgage holiday compared with completing a UC application.

We now turn to non-payment of council tax, making use once again of a subsample of users who are resident in one of the 79% of English local authorities that in 2018–19 did not generally offer 100% council tax support. In order to avoid periods including February and March – when council tax is typically not paid – we

examine the share of users that paid council tax five months before receiving UC and the share that paid it the month of or the month after their first UC payment.

In the first month of UC receipt, the number of council tax payments fell by 18% in the claimant group, relative to the five months before receipt. This decrease rises to 21% in the following month. For the control group, there is no change in the share making council tax payments. The decline seen for the claimant group is a sizeable one, and suggests that receipt of UC is not sufficient to stop many households falling behind on council tax payments.

6. Conclusions

We have examined three important elements of the UK's effort to mitigate the impacts of the COVID-19 pandemic on households: the Coronavirus Job Retention Scheme, the Self-Employed Income Support Scheme and universal credit. As highlighted at the outset, these three policies target different groups of workers – those who are furloughed, the self-employed, and those who are more likely to have lost employment altogether or found themselves with especially low incomes. We now draw together the analysis across these three very different groups and compare how the policies have worked in each case. As these workers have very different pre-crisis incomes and other characteristics, when making these cross-policy comparisons we normalise outcomes for each group to be 100 in the pre-crisis period.

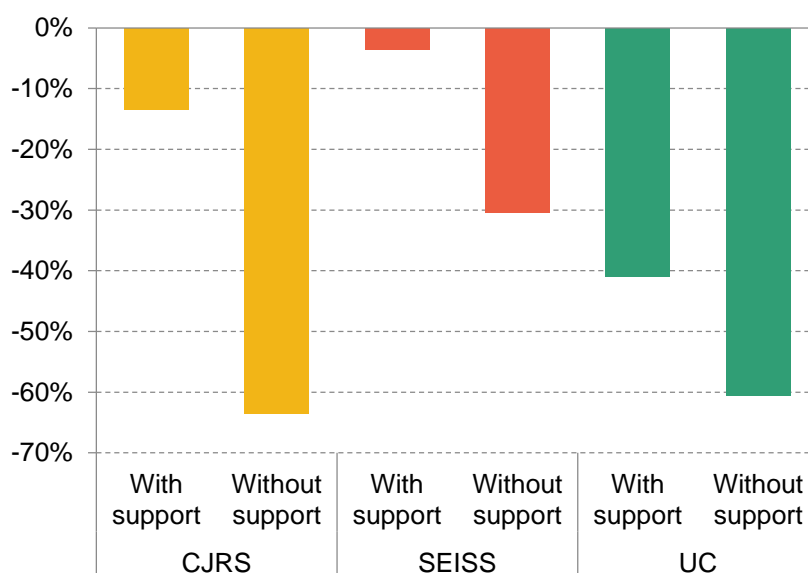
Income

To begin with, Figure 6.1 shows how incomes have been impacted for each group – with and without income protection from the programmes we examined. We see that, without the government contribution to these people's incomes, the furloughed group would have experienced the largest net income falls (around two-thirds), closely followed by the UC group. Those in receipt of SEISS payments had the smallest proportionate falls in non-programme income, of around 30% on average. Once we include payments from these income support programmes, we see drastic differences in the level of protection. While SEISS recipients have their average income returned almost to what it would have been without the crisis, furloughed workers have seen a 13% decline and UC recipients a 41% decline.

In comparing the income changes experienced by these three groups, it is worth re-emphasising that there are particular challenges associated with measuring the income of the self-employed workers in receipt of the SEISS. Because we do not observe self-employment-related costs, our measure of income for the SEISS group should be seen as more closely approximating revenue than profit. If costs have fallen during the pandemic (as one might expect given depressed economic

activity), self-employment incomes based on profits will look more positive than what we show here.

Figure 6.1. Change in income between October–February and May–June with and without income protection policies



Note: In all cases, the change shown is between average monthly income in January and February and the average monthly income in May and June. For the UC group, 'without support' means without payments identified as UC. For the CJRS group, 'without support' means without furloughed salary payments. For the SEISS group, 'without support' means without SEISS payments. Note, however, that we subtract only two-thirds of total SEISS income from SEISS recipients as the payment is designed to cover a three-month period.

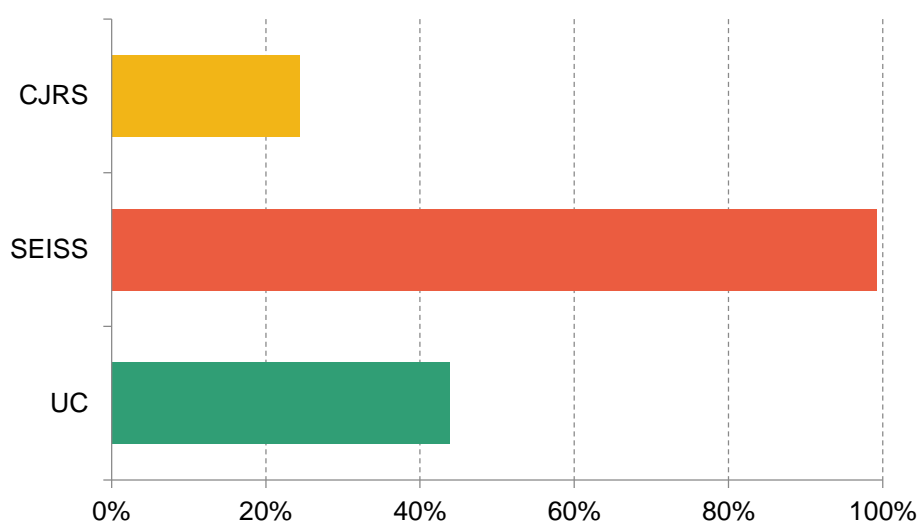
Source: Authors' calculations using Money Dashboard data available on 7 August 2020.

Expenditure

In the case of all three groups analysed in this briefing note, consumer spending responded to the onset of the COVID-19 crisis by falling below the level of comparable individuals with steady incomes (as captured by our various control groups). Figure 6.2 seeks to compare the degree to which the policies implemented by government succeeded in allowing those in receipt of support to close this gap. To do this, we first identify the week in which the spending gap between our CJRS, SEISS and UC groups and their respective control groups was largest. This represents the point at which the spending of the group fell furthest behind the path

we would have expected it to follow had their incomes been unaffected. Next we calculate the share of this spending gap that had been eliminated 10 weeks later.

Figure 6.2. Share of spending gap closed



Note: The spending gap is defined as the ratio of the indexed consumer spending of the recipient group to that of the control group. In all cases, spending is indexed to average spending across January and February. The spending gap is measured as the maximum difference (in four-week rolling-average spending) between the recipient group and the steady-income control group. The share closed is measured 10 weeks after that point.

Source: Authors' calculations using Money Dashboard data available on 7 August 2020.

Recipients of SEISS initially saw their consumer spending fall by around 13% below the level of a control group with steady income. But as can be seen in Figure 6.2, that gap had been almost entirely eliminated 10 weeks later. For UC recipients, 44% of the spending gap was closed. And among CJRS recipients, only a quarter of the gap in spending between themselves and otherwise-similar workers who experienced no fall in income was eliminated over that period.

These results show that waiting periods matter. Both UC and SEISS recipients had to wait for support to arrive, and in the meantime make do with (on average) lower income. During that period, they cut spending – but when the support arrived, they were able to increase it again. CJRS recipients, by contrast, had no waiting period and so, while their spending fell relative to those with a steady income (consistent with their income falls), it did so in a relatively smooth manner and little of the gap was later undone. But these results also show that the magnitude of support also

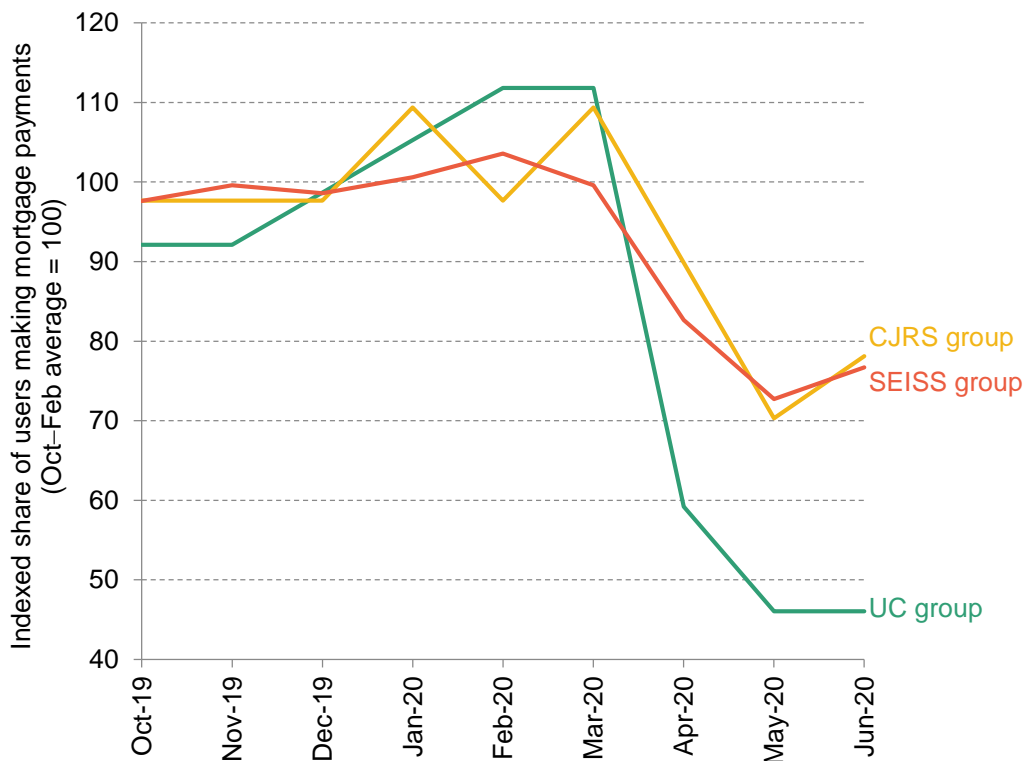
matters. As shown in Figure 6.1, SEISS recipients had essentially all of their lost income replaced – and it appears that was sufficient to return their spending back to where it might have been without the original income loss. Conversely, UC and CJRS recipients' incomes remained below those of households without an income fall and so, not surprisingly, only part of their decline in spending was later undone.

Non-payment of bills

We examine the two bills where we have sufficient sample across all three programmes: mortgage and council tax payments.

While all groups have seen a decline in mortgage payments (in line with the pattern of results on building financial stress for households reported in Kempson et al. (2020)), the decline is largest among the UC group by some distance.

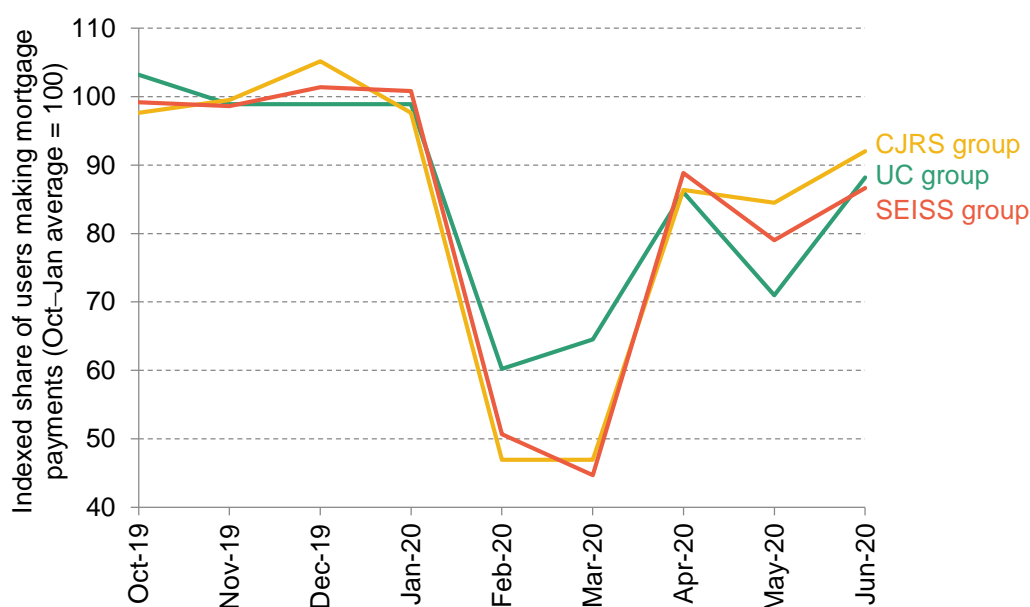
Figure 6.3. Share of users making mortgage payments



Source: Authors' calculations using Money Dashboard data available on 7 August 2020.

Furloughed workers are the least likely to have missed council tax payments since the crisis – though, as we showed above, were nonetheless more likely to have missed them than a group of otherwise-similar users who were not furloughed. Non-payment of council tax is somewhat more common among the SEISS group, and more common still among UC recipients (despite the fact that a disproportionate number of those, being on low incomes, are likely to qualify for council tax support – we have excluded those living in areas of the country where low-income households get a 100% reduction in their council tax bill).

Figure 6.4. Share of users making council tax payments



Note: Sample underpinning the figure is limited to English local authorities that do not offer 100% council tax support. Note that the majority of council tax payers make payments in only 10 months of the year, with no payments in February or March.

Source: Authors' calculations using Money Dashboard data available on 7 August 2020.

Discussion

The UK is now in the midst of one of the deepest recessions in its recorded history. There has been much discussion among policymakers and academics about the shape and speed of the recovery (Haldane, 2020; Tenreyro, 2020). These will depend to a significant extent on government policies, including the income support programmes we have studied.

Households face great uncertainty over the future, including in terms of the income support available. On current plans, the furlough scheme, and the requirement for banks to grant three-month mortgage holidays, will finish at the end of October; there will be no more SEISS payments; and the temporary increase in levels of UC will end in April. If there is a second wave of viral infection and some of these programmes are extended, reintroduced or replaced, policymakers can learn from the experiences of the first implementation which we analyse here. Our analysis provides rare hard evidence that, for example, even relatively short delays in getting payments to people can matter because people hold back their spending while waiting and then increase it once they get the money. In the case of UC, this research cannot distinguish whether waiting periods are due to claimants not making claims as quickly as they might, or due to administrative processing time, but policymakers would be well advised to think about both of these factors. In the case of SEISS, now that the government has a system for disbursing these monies set up, it may be that it can make payments more quickly in similar future scenarios, and this would be a sensible priority.

An additional concern is that workers who were originally furloughed or in receipt of SEISS will lose employment income altogether (and in many cases would then transition to UC). Such uncertainty seems to be affecting behaviour now. As Adams-Prassl et al. (2020) document, compared with otherwise-similar non-furloughed employees, furloughed workers are significantly more pessimistic about keeping their job in the short to medium run and are significantly more likely to be actively searching for a new job.

A final element of concern is those workers not covered by these schemes. As documented by Kempson et al. (2020), at the end of July, a significant share of households had experienced income losses but were left unsupported by these schemes. They find that around half of unsupported households include a member who had suffered a total loss of earnings through redundancy, a temporary lay-off or ceasing to trade (either temporarily or permanently). Many of these householders were found to be self-employed or working in the gig economy. Understanding whether and how to extend support for these vulnerable groups remains key to speeding the economic recovery.

Appendix

Bank account attrition

While all three of the main analyses presented in this briefing note rely on a balanced panel of MDB users, the nature of the MDB data presents the risk that these balanced panels of users will not represent a balanced panel of bank accounts. This can occur because some bank accounts require the user to provide regular permission for the MDB app to access the user's data. If not all accounts are updated by the user, linked bank accounts will attrit over time and a downward secular trend may be introduced for key variables such as income and expenditure. In order to avoid this risk, we eliminate users with either a current account or a credit card that was last updated less than 60 days after the event of interest occurred. A number of exceptions are permitted to this restriction:

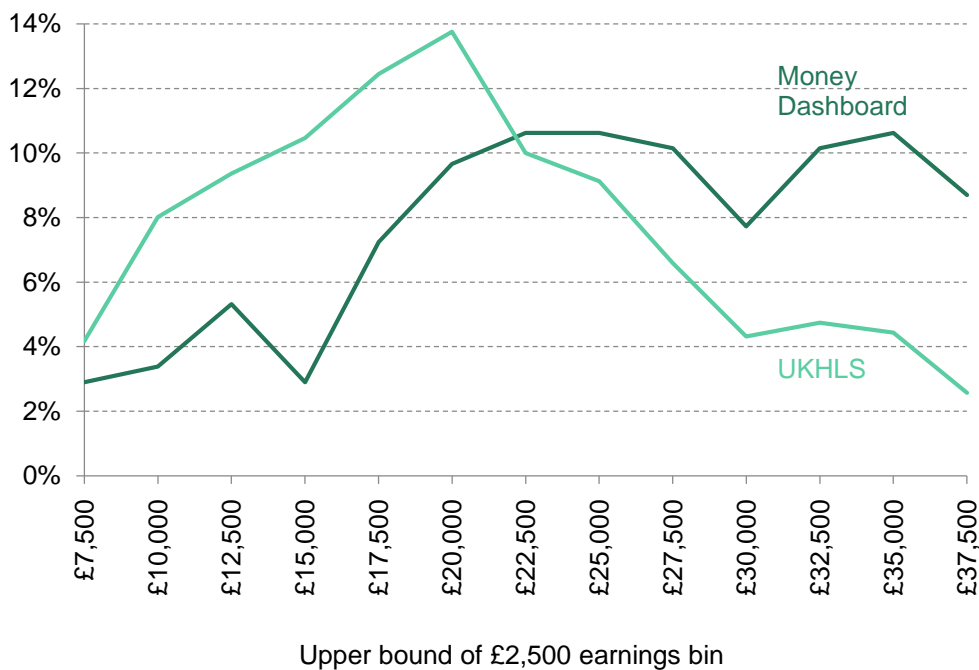
- 'Revolut' cards – used for currency exchange and therefore likely to be used sporadically to coincide with foreign travel – are not considered.
- If an account is used in only one month between January and July 2020, it is not considered to constitute sufficient evidence of attrition.
- If an account is not used in the month prior to the date on which data from that account were last refreshed, we take this to be evidence that the account has become defunct (as opposed to simply being no longer observed). Such accounts are therefore not considered for the purposes of identifying attrition.
- We ignore current accounts for the purpose of determining attrition if the account makes up less than 5% of both a user's credits and debits in every month that it is observed between January and July 2020. For credit cards, we require only that the card make up less than 5% of a user's debits in every month of this period.
- If credit cards have no debits in the month prior to the date on which their data were last refreshed, this is taken as an indication that the credit card has become defunct. It is therefore not considered for the purposes of identifying attrition.

Representativeness

For our samples of users identified as being in receipt of SEISS and CJRS support, we carry out a brief analysis of representativeness in the dimension of earnings.

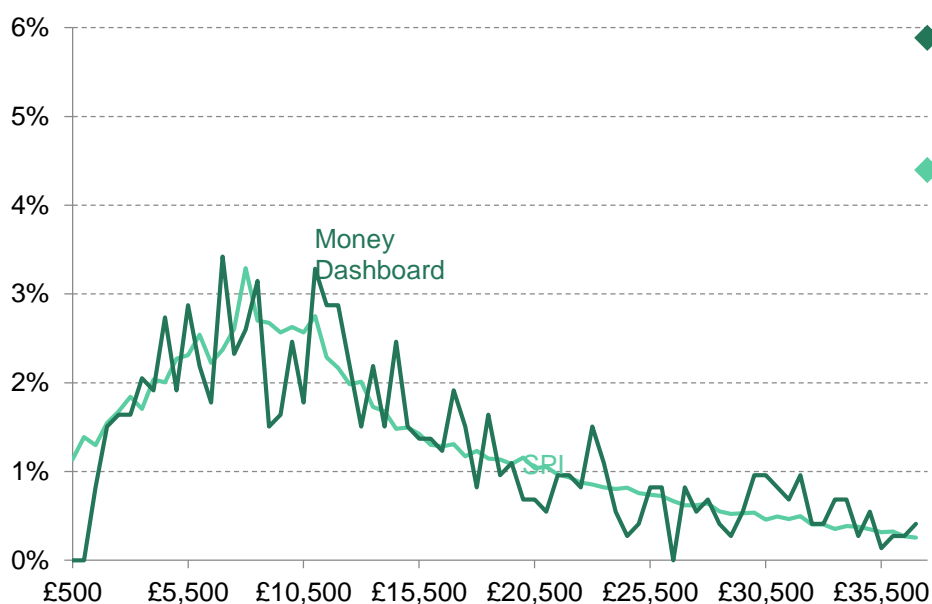
Figure A.1 compares the distribution of furloughed salaries identified for the purposes of our analysis with the earnings distribution of individuals self-identifying as furloughed in the Understanding Society: the UK Household Longitudinal Study (UKHLS) who earned less than £37,500 prior to the crisis. As can be clearly seen, the Money Dashboard data are somewhat more skewed towards higher salaries than UKHLS.

Figure A.1. Earnings distribution of furloughed jobs



Source: Authors' calculations using Money Dashboard data available on 7 August 2020 and the UKHLS April 2020 COVID-19 survey.

Figure A.2. Self-employed profits distribution of SEISS recipients



Note: The diamonds in the top right of the graph show the share of self-employed workers earning between £37,500 and £50,000 in self-employment profits.

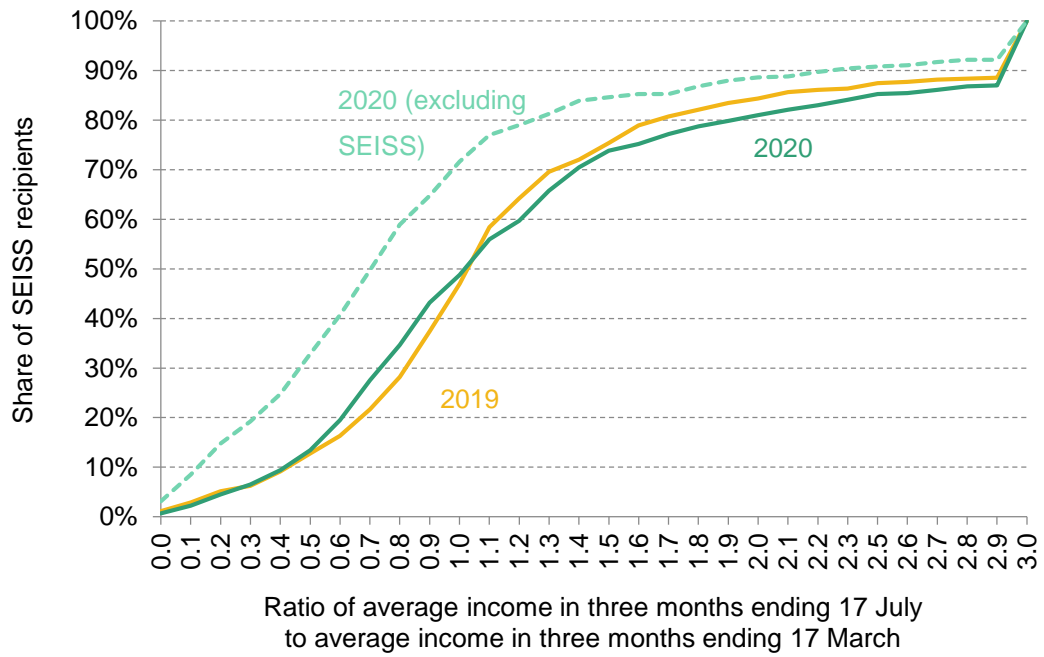
Source: Authors' calculations using Money Dashboard data available on 7 August 2020 and Survey of Personal Incomes public use tape 2016–17.

Figure A.2 compares the distribution of 2018–19 self-employment profits implied by the SEISS payments observed in the MDB data¹⁵ with the 2016–17 (the latest year available) distribution of self-employment profits of workers who would have been eligible for the SEISS payment on the basis of that year. The latter is calculated using the HMRC tax data from the Survey of Personal Incomes (SPI) public use tape. As can be seen, the distributions match remarkably well, suggesting that the SEISS recipients captured in the MDB data are closely representative (at least in terms of earnings) of the broader SEISS-eligible self-employed population. The diamonds in the top right of the graph show the share of self-employed workers earning between £37,500 and £50,000 in self-employment profits.

¹⁵ SEISS recipients receive 80% of their average monthly self-employment profits from the 2018–19 financial year up to a maximum of £2,500 a month. This allows us to straightforwardly back out the 2018–19 incomes of recipients. Those receiving exactly £7,500 for the three-month period March–May 2020 have trading profits between £37,500 and £50,000 in 2018–19.

Supplementary chart

Figure A.3. Cumulative distribution of ratio of income in the three months ending 17 July to income in the three months ending 17 March, SEISS recipients



Note: Ratios greater than 3 are grouped into the 3.0 value.

Source: Authors' calculations using Money Dashboard data available on 7 August 2020.

References

- Adam, S., Joyce, R. and Pope, T. (2019), ‘The impacts of localised council tax support schemes’, Institute for Fiscal Studies (IFS), Briefing Note BN153, <https://www.ifs.org.uk/publications/13827>.
- Adam, S., Miller, H. and Waters, T. (2020), ‘Income protection for the self-employed and employees during the coronavirus crisis’, Institute for Fiscal Studies (IFS), Briefing Note BN277, <https://www.ifs.org.uk/publications/14786>.
- Adams-Prassl, A., Boneva, T., Golin, M. and Rauh, C. (2020), ‘Furloughing’, *Fiscal Studies*, forthcoming.
- Bourquin, P., Delestre, I., Joyce, R., Rasul, I. and Waters, T. (2020), ‘The effects of coronavirus on household finances and financial distress’, Institute for Fiscal Studies (IFS), Briefing Note BN298, <https://www.ifs.org.uk/publications/14908>.
- Brewer, M. and Handscomb, K. (2020), ‘This time is different – Universal Credit’s first recession: assessing the welfare system and its effect on living standards during the coronavirus epidemic’, Resolution Foundation, <https://www.resolutionfoundation.org/publications/this-time-is-different-universal-credits-first-recession/>.
- Chetty, R., Friedman, J., Hendren, N., Stepner, M. and the Opportunity Insights Team (2020a), ‘How did COVID-19 and stabilization policies affect spending and employment? A new real-time economic tracker based on private sector data’, Harvard University, mimeo.
- Chetty, R., Friedman, J., Hendren, N., Stepner, M. and the Opportunity Insights Team (2020b), ‘Real-time economics: a new public platform to analyze the impacts of COVID-19 and macroeconomic policies using private sector data’, Harvard University, mimeo.
- Chronopoulos, D. K., Lukas, M. and Wilson, J. O. S. (2020), ‘Consumer spending responses to the COVID-19 pandemic: an assessment of Great Britain’, University of St. Andrews, CRBF Working Paper 20-012, https://www.st-andrews.ac.uk/business/rbf/workingpapers/RBF20_012.pdf.

- Cox, N., Ganong, P., Noel, P., Vavra, J., Wong, A., Farrell, D. and Greig, F. (2020), ‘Initial impacts of the pandemic on consumer behavior: evidence from linked income, spending, and savings data’, *Brookings Papers on Economic Activity*, <https://www.brookings.edu/bpea-articles/initial-impacts-of-the-pandemic-on-consumer-behavior/>.
- Gardiner, L. and Slaughter, H. (2020), ‘The effects of the coronavirus crisis on workers: flash findings from the Resolution Foundation’s coronavirus survey’, <https://www.resolutionfoundation.org/publications/the-effects-of-the-coronavirus-crisis-on-workers/>.
- Hacioglu, S., Känzig, D. and Surico, P. (2020), ‘The distributional impact of the pandemic’, Centre for Economic Policy Research (CEPR), Discussion Paper 15101, https://cepr.org/active/publications/discussion_papers/dp.php?dpno=15101.
- Haldane, A. (2020), ‘The second quarter’, speech, Bank of England, 30 June, <https://www.bankofengland.co.uk/speech/2020/andy-haldane-the-second-quarter-webinar>.
- Kempson, E., Collings, D., Poppe, C. and Evans, J. (2020), ‘Emerging from lockdown: key findings from the 3rd Coronavirus Financial Impact Tracker Survey’, Standard Life Foundation, <https://www.standardlifefoundation.org.uk/our-work/financial-tracker/coronavirus-financial-tracker/emerging-from-lockdown>.
- Office for National Statistics (2020), ‘Labour market overview, UK: August 2020’, <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployee-types/bulletins/uklabourmarket/august2020>.
- Piyapromdee, S. and Spittal, P. (2020), ‘The income and consumption effects of Covid-19 and the role of public policy’, UCL, mimeo.
- Surico, P., Hacioglu, S. and Känzig, D. (2020), ‘Consumption in the time of Covid-19: evidence from UK transaction data’, Centre for Economic Policy Research (CEPR), Discussion Paper 14733, https://cepr.org/active/publications/discussion_papers/dp.php?dpno=14733.
- Tenreyro, S. (2020), ‘COVID-19 and the economy: what are the lessons so far?’, speech, London School of Economics, 15 July, <https://www.lse.ac.uk/Events/2020/07/202007150900/economy>.