

Year 2 Evaluation of the Bounce Back Loan Scheme, Coronavirus Business Interruption Loan Scheme, and Coronavirus Large Business Interruption Loan Scheme

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# List of terms

"Arrears” – A loan with missed repayments.

BBB – British Business Bank

BBLS – Bounce Back Loan Scheme

BICS – Business Insights and Conditions Survey

BEIS – Department for Business, Energy & Industrial Strategy

CBILS – Coronavirus Business Interruption Loan Scheme

CIGA – Corporate Insolvency Governance Act

CJRS – Coronavirus Job Retention Scheme

“Claimed” – The lender has submitted a claim under the guarantee for a defaulted loan. Loans sit in the claimed status while the British Business Bank awaits/processes the invoice for the claim and runs relevant checks.

CLBILS – Coronavirus Large Business Interruption Loan Scheme

Commercial lending – Facilities offered by lenders outside the Covid-19 Loan Guarantee Schemes, using their Business As Usual practices.

Covid-19 Loan Guarantee Schemes – Bounce Back Loan Scheme, Coronavirus Business Interruption Loan Scheme and Coronavirus Large Business Interruption Loan Scheme

DBT – Department for Business & Trade (formerly BEIS)

"Defaulted” – A loan where the lender has issued a formal demand to the borrower. At the time of this occurring, this is an actual balance, and not estimated.

DiD – Difference-in-Differences

EFG – Enterprise Finance Guarantee

Facility – A Covid-19 Loan Scheme facility, being either a term loan facility, a revolving credit facility, an invoice finance facility or an asset finance facility (as applicable) made available by an accredited lender to a borrower.

“Fully repaid” – The loan is considered closed as there is no further outstanding balance on the loan (the borrower has repaid the full amount).

HMT – His Majesty’s Treasury

IDBR – Inter-Departmental Business Register

ONS – Office for National Statistics

“On schedule” – The loan is being repaid as expected, including loans for which repayment is not yet due.

PAYE – Pay As You Earn

PSM – Propensity Score Matching

Schemes – Unless otherwise stated, refers to the Covid-19 Loan Guarantee Schemes

“Settled” – Once the guarantee claim is processed and payment is released, the loan is marked as settled on the scheme portal.

SME – Small and Medium-Sized Enterprises

“Suspected fraud” – Facilities which are currently flagged as suspected fraud by lenders. This flag can be added or removed by lenders at any point, and only the latest position can be provided. It should be noted that suspected fraud does not mean actual cases of fraud as the fraudulent activity has not been proven.

UK – United Kingdom

VAT – Value-Added Tax

**Note to readers**

Responding to the increasing risk of a pandemic-induced economic crisis, the UK Government introduced three loan guarantee schemes in 2020 to help businesses navigate their way through a period of significant uncertainty. The British Business Bank and Department for Business and Trade are determined to learn lessons from the design and delivery of these schemes. To support this, London Economics and Ipsos have been commissioned to independently evaluate the schemes’ effectiveness over three years.

This publication is the second of three reports (the first was published in 2022); it considers more evaluation evidence which builds on, cross-checks, and further develops the Year 1 findings.

Businesses continue to self-report that the schemes were effective in preventing their permanent closure – even two years on. Econometric analysis of secondary data suggests that the schemes prevented additional permanent closures after one year; however, the estimated impact is lower compared to self-reported Year 1 findings. The analysis also finds statistically significant positive impacts of the schemes on business turnover and employment, suggesting that access to finance helped businesses to grow or recover during the pandemic.

The processes used to deliver the schemes have been refined over the course of delivery, with improvements reported in monitoring and through modelling work to support the identification of suspected cases of fraud. There have been some challenges faced in the delivery of counter fraud enforcement work, although processes in this area are currently being revised.

It is important to contextualise the findings of each iteration of the evaluation within the wider economic landscape. Businesses continue to face multiple challenges beyond the pandemic and closure of the loan guarantee schemes. These include a sluggish post-pandemic recovery as international supply chain disruptions affected producers’ ability to scale up, Russia’s war with Ukraine, and the resultant squeeze on energy and food commodity prices driving up inflation. Business outcomes are inevitably linked to all these issues, not just the Covid-19 pandemic, making it difficult to isolate and fully evaluate the impact of the three loan guarantee schemes.

# Executive summary

London Economics and Ipsos were commissioned by the British Business Bank (BBB) in March 2021 to undertake a three-year evaluation of the Bounce Back Loan Scheme (BBLS), Coronavirus Business Interruption Loan Scheme (CBILS) and Coronavirus Large Business Interruption Loan Scheme (CLBILS) (hereafter referred to as the “Covid-19 Loan Guarantee Schemes” or the schemes (unless stated otherwise)).

This report provides findings from the second year of the evaluation, which includes a process evaluation, an impact evaluation focusing on the second year of the pandemic, and a secondary analysis of key results from the early impact evaluation presented in the [first year report](https://www.british-business-bank.co.uk/wp-content/uploads/2022/06/Evaluation_of_BBLS_CBILS_and_CLBILS___Yr1_Report__accessible_.pdf).

## Key findings

This is the second report of a three-year evaluation of the Covid-19 Loan Guarantee Schemes. The [first year report](https://www.british-business-bank.co.uk/wp-content/uploads/2022/06/Evaluation_of_BBLS_CBILS_and_CLBILS___Yr1_Report__accessible_.pdf) assessed the short-term impacts of the schemes on businesses and provides an initial process evaluation. The third year report will complete the process evaluation and provide estimates of the longer-term impacts of the schemes on turnover, employment and business survival. Related to turnover and employment, it will explore whether different kinds of borrowers experienced different changes in turnover and employment, and related to business survival it will also explore in more detail why scheme finance was important in preventing business closures. Additionally, it will provide an indication of the value for money of the schemes. The rest of this section provides an overview of the key findings presented in this report.

**Self-reported data**

* In the first analysis conducted for this report, borrowers were surveyed about the impact of the schemes on their survival two years on from the pandemic. Analysis of these self-reported impacts suggests that an extra 12%-42% of BBLS, and 6%-35% of CBILS/CLBILS borrowers could have permanently closed between April 2020 and December 2021 in the absence of the schemes. This compares to 10%-34% of BBLS, and 7%-28% of CBILS/CLBILS borrowers reported in the year one evaluation.

**Secondary IDBR data**

* A second analysis undertaken for this report uses a different methodology and data set to look at first-year impacts – analysing secondary data rather than surveying borrowers. This econometric analysis of the Inter Departmental Business Register (IDBR) finds that the schemes prevented closures among 5.0%-6.5% of BBLS and 4.0%-4.7% of CBILS/CLBILS borrowers between April 2020 and March 2021. These impacts are statistically significant. They are lower than businesses’ self-reported estimates from the year 1 and this year 2 evaluation, particularly for the BBLS. It is possible that business closure rates in the counterfactual group for this analysis may be artificially low due to temporary measures introduced during the pandemic which may have delayed the closure of certain businesses. Estimated impacts on business survival may therefore increase in next year’s report should these delayed closures, if any, materialise.
* For businesses that would have continued trading regardless of the schemes, econometric analysis of IDBR data found that turnover was between 9.7% and 11.5% greater for BBLS and CBILS/CLBILS borrowers respectively in the first year of the pandemic than it would have been without the schemes.
* An estimated 0.7m total extra jobs could have been lost among BBLS and CBILS/CLBILS borrowers in the first year of the pandemic without the schemes. This is due to (i) schemes preventing business closures and (ii) higher employment for those borrowers who would have continued operating even in the absence of the schemes. Related to the latter, it is estimated that BBLS and CBILS/CLBILS borrowers respectively had 5.7% and 9.0% higher employment than they would have in the absence of the schemes.

**Process Evaluation**

* **Monitoring:** Lenders and stakeholders felt an appropriate level of information about the portfolio of lending for the schemes was shared between accredited lenders and the British Business Bank in order for the Bank and DBT to monitor the overall size and scale of the programmes. DBT have published a selection of data about the performance of the Covid-19 Loan Guarantee Schemes to increase the transparency of the schemes, and both accredited lenders and stakeholders reported a concern about how the data would be interpreted and used by the public. The lender audit was seen as an appropriate and proportionate mechanism for a publicly supported scheme of this size. Most accredited lenders received a positive outcome as a result of their audit in all years of the scheme.
* **Repayments:** The British Business Bank’s management data (as of 30th June 2023, published in September 2023) suggests that 22% of the Covid-19 Loan Guarantee Schemes portfolio value has been fully repaid. This represents £17 billion of repayments made. A further 40% (£31 billion) is on schedule to be repaid (although this could fall into arrears or default). The value of facilities that have defaulted (including facilities that have been settled and claimed) or are in arrears in the Covid-19 Loan Guarantee Schemes are (as of 30th June 2023): 22% of the value of BBLS (£10.4 billion); 4% of the value of CBILS (£1.1 billion) and 1% of the value of CLBILS (£46 million). The default rates are above the arrears and default rate for SMEs in commercial lending both before and after the Covid-19 pandemic (around 2%[[1]](#footnote-2)). However, the higher rate of arrears observed in the BBLS was anticipated at the scheme design stage, which was accepted by Ministers.
* **Counter fraud work:** Around £1.7 billion of Covid-19 Loan Guarantee Schemes lending has been flagged as suspected cases of fraud by accredited lenders, or 2.2% of total lending. The vast majority of suspected cases of fraud are in the BBLS portfolio (3.5% of the lending through the BBLS). However, the current estimated level of suspected fraud is lower than previous estimates from the British Business Bank (of 11% and 7% for the BBLS). Both stakeholders and accredited lenders reported that the additional suspected fraud modelling work undertaken by BBB, DBT and the Cabinet Office was beneficial in supporting a stringent assessment of suspected fraud activity, and added value in that the accredited lenders themselves could not have completed the analysis due to resource and data access issues.
* Enforcement activities undertaken by the Insolvency Service have overcome some initial resource and administrative challenges and are reported to be delivering in line with expectations.

## Context

In mid-March 2020, the potential scale of the Covid-19 pandemic became clearer as public health measures designed to combat the pandemic and behaviour change among the UK population had a noticeable impact on businesses.

Given the wide-ranging business impacts already felt and the uncertainty over the financial challenges ahead, the UK government moved quickly to design and launch a series of three loan guarantee schemes targeted at businesses of different sizes, namely, the Bounce Back Loan Scheme (BBLS), Coronavirus Business Interruption Loan Scheme (CBILS) and Coronavirus Large Business Interruption Loan Scheme (CLBILS).

In March 2021, the British Business Bank (BBB) commissioned London Economics and Ipsos to undertake a multi-year evaluation of the three Covid-19 Loan Guarantee Schemes. This evaluation aims to assess whether the objectives of the Covid-19 Loan Guarantee Schemes were met. Key research questions are divided into process, impact, and economic questions.

* The process evaluation focuses on scheme design, scheme delivery, debt recovery and fraud processes, and variations in processes.
* The impact evaluation focuses on the extent to which the Covid-19 Loan Guarantee Schemes affected business outcomes – for instance, whether having received funds under the Covid-19 Loan Guarantee Schemes was associated with a higher likelihood of business survival, or greater turnover or employment.
* The economic evaluation focuses on the value for money of the Covid-19 Loan Guarantee Schemes, taking into account both its costs and benefits.

The Year 1 report focused on the first year of the pandemic and presented the findings from the first phase of the analysis (hereafter referred to as the Year 1 analysis, Year 1 impact evaluation or early impact evaluation), namely the process evaluation and early impact assessment of the Covid-19 Loan Guarantee Schemes based on survey data and a number of secondary datasets including BBB management information.

In this second phase (hereafter referred to as the Year 2 analysis or Year 2 impact evaluation), the impact evaluation has focused on using survey data collected in 2022 to assess the impact of the Covid-19 Loan Guarantee Schemes on business outcomes in the second year of the pandemic. Analysis related to the first-year impacts of the schemes has also been conducted using secondary data sources (such as the Inter-Departmental Business Register). A process evaluation focused on monitoring, repayment and counter fraud processes has been undertaken, drawing on scheme management information, wider data and a series of qualitative interviews with key stakeholders and accredited lenders.

In the third phase, the impact evaluation will focus on using survey data (collected in 2024 to assess the impact of the Covid-19 Loan Guarantee Schemes on business outcomes in the third year since the pandemic. Additionally, the Year 2 results will be assessed using secondary data sources. The economic evaluation component will assess the value for money of the Covid-19 Loan Guarantee Schemes. A further stage of process evaluation will be undertaken, which will focus on some of the processes that could not be fully assessed in Year 2 (for example recovery pilots, the effect of the introduction of a formal counter fraud strategy and further analysis of counter fraud activity).

## Approach

The evaluation uses a mixed methods approach combining both qualitative and quantitative, and primary and secondary evidence.

The Year 2 impact evaluation relies on a primary data collection exercise, as well as a number of secondary datasets including BBB management information. Survey fieldwork undertaken by Ipsos resulted in 961 businesses completing a mixed mode survey (online and telephone) between August 2022 and October 2022, of which 242 interviews were with BBLS borrowers, 189 interviews were with CBILS borrowers, and 9 interviews were with CLBILS borrowers. The remaining 521 interviews were with non-borrowers. Non-borrowers were selected to be similar to borrowing businesses in the key respect that they have all faced challenges or opportunities because of the Covid-19 pandemic, thereby increasing the likelihood that both groups of businesses have faced similar financial and operational issues during the reference period of the evaluation.

In addition to the Year 2 impact evaluation, this report presents a secondary analysis of the Year 1 early impact evaluation. The analysis assesses the same business outcomes in the first year of the pandemic as in the Year 1 report (for example business survival, turnover and employment) but uses a different methodology based on secondary data rather than primary survey data. In particular, the secondary analysis does not rely on self-reported impacts as in the Year 1 report and is therefore less prone to biases related to poor recall (for example businesses may be overly pessimistic about their chances of surviving the pandemic without access to the schemes). This exercise is based on secondary data sources such as the Inter-Departmental Business Register (IDBR) and the Business Insights and Conditions Survey (BICS).

The time periods referenced across both the Year 1 and Year 2 evaluation reports can vary depending on the analytical methods employed and underlying data sources. Business survival impacts are measured up to December 2020 in the Year 1 survey, and up to December 2021 in the Year 2 survey (i.e., the Year 2 survival impacts encompass both 2020 and 2021). Business survival impacts from the IDBR secondary analysis of Year 1 findings are measured from 1 April 2020 to 31 March 2021.

For turnover and employment impacts, the exact reference period varies across businesses. In the survey, the reference periods for the Year 1 and Year 2 analysis are individual businesses’ first and second financial years since the beginning of the pandemic, but businesses may have different financial year end months. For businesses with a financial year ending in March, the reference periods for the Year 1 and Year 2 analyses would respectively be April 2020-March 2021 and April 2021-March 2022.

In the case of the secondary analysis of Year 1 impacts, the reference period for the turnover and employment analysis can also vary across businesses due to differing data sources. The most common reference period for the turnover impact is the calendar year 2020, and the most common reference periods for the employment impact are between July 2020 and June 2021.

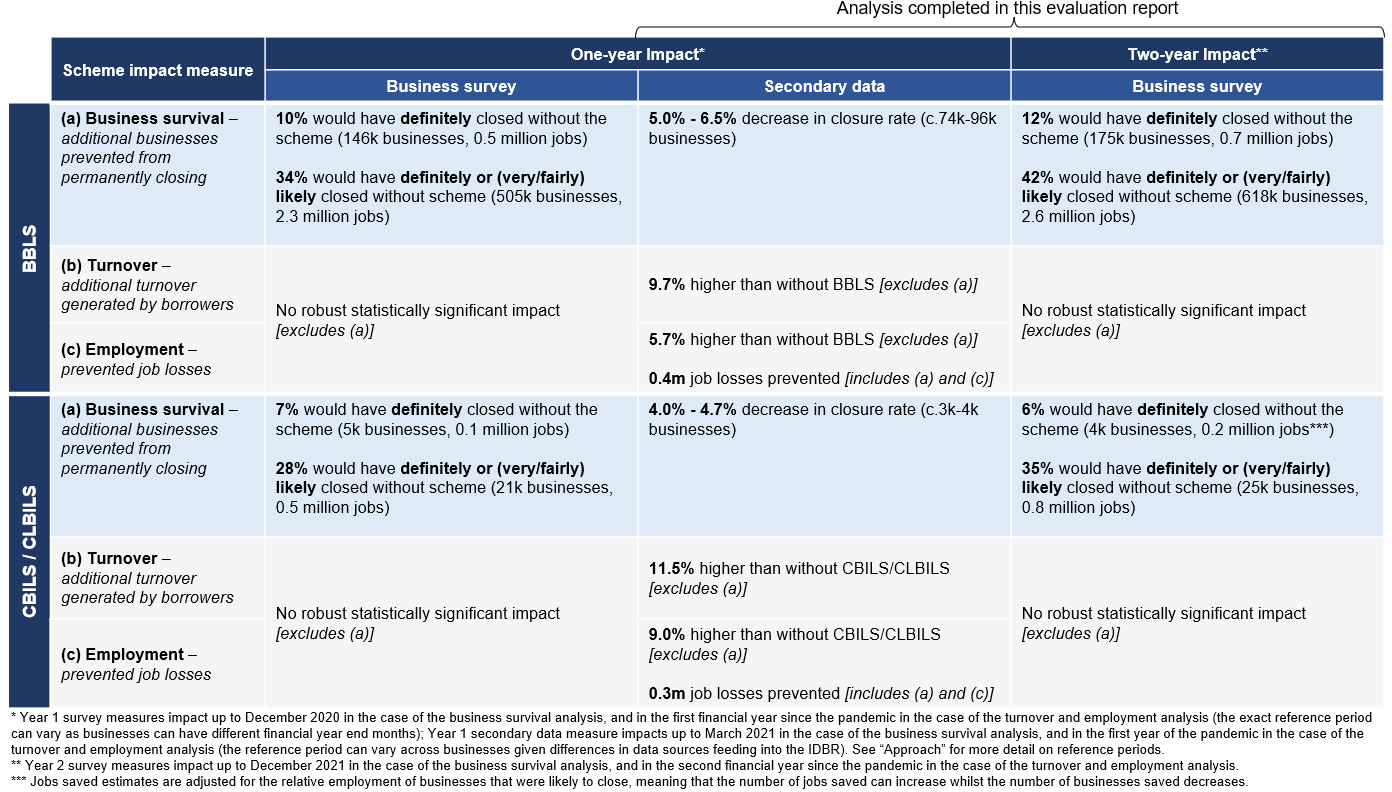
This report will refer to the ‘first (second) year of the pandemic’ when referring to turnover and employment impacts. In the case of the secondary analysis, when there is only one year since the pandemic, the terms ‘post-pandemic’, ‘post-treatment’ or ‘post-intervention’ will also be used to refer to the first year of the pandemic.

## Summary of findings

An overarching summary of findings from the Year 2 Impact Evaluation report is presented in the paragraphs below. Impacts on outcomes across both the previous Year 1 and this Year 2 report are presented in Table 1.

* Evidence from both this report and the first year report suggests that the short-term objectives of the schemes were achieved – namely to unlock finance at scale and pace such that businesses disrupted as a result of the Covid-19 pandemic still have access to finance, and to offer businesses access to finance schemes complementing other government support and incentives.
* Findings also suggest that one of the schemes’ two medium-term objectives was achieved – namely to give businesses maximum opportunity to maintain liquidity until lockdown measures were lifted. The remaining medium-term objective and long-term objectives will be assessed in the Year 3 report.
* Based on businesses’ survey responses this Year 2 report suggests that, by the second year of the pandemic, the Covid-19 Loan Guarantee Schemes prevented business closures among borrowers. There is no evidence of further impacts on borrowers’ turnover or employment in addition to the survival impacts; however, this will be further assessed in the Year 3 report.
* Secondary analysis of Inter-Departmental Business Register (IDBR) data was undertaken to assess the findings from the Year 1 early impact evaluation that were based on self-reported data collected through a business survey (and presented in the Year 1 report). This new analysis reaffirms the Year 1 findings that, in the first year of the pandemic, the Covid-19 Loan Guarantee Schemes prevented business closures among borrowers. The survival impacts from this secondary analysis are estimated to be lower than the initial Year 1 survey-based results. Factors that may be driving differences between the Year 1 survey-based results and those based on secondary data are discussed throughout the report (see, for instance, the box “Interpreting differences between Year 1 survey-based analysis and secondary analysis presented in Year 2”).
* The secondary analysis of Year 1 impacts found that the schemes had a positive impact on borrowers’ turnover and employment. It should be noted that this is in addition to survival impacts. This is unlike the Year 1 early impact evaluation which was unable to identify an impact based on survey analysis.
* The analysis described above aims to isolate the impacts of the Covid-19 Loan Guarantee Schemes from other factors also affecting the outcomes of interest (for example other business support schemes). However, results should be interpreted within the context of other economic shocks (such as the energy crisis) which presented significant and varied challenges to businesses. There were also many different support schemes available to businesses across this period. Hence, the impacts of the Covid-19 Loan Guarantee Schemes are difficult to disentangle from these other factors. Furthermore, the impact of the schemes may take time to materialise – for instance certain business closures may be held back due to temporary insolvency measures or fraud investigations.

##### Table 1 : Year 1 and Year 2 Impact Evaluation report key findings



## Process evaluation findings

The key findings from the process evaluation, drawing on an assessment of scheme Management Information, wider literature and a series of qualitative interviews with key stakeholders and accredited lenders, is set out below.

Monitoring

Lenders and stakeholders felt an appropriate level of information about the portfolio of lending for the schemes was shared between accredited lenders and the British Business Bank in order for the Bank and Department for Business and Trade (DBT, formerly BEIS) to monitor the overall size and scale of the programmes and to ensure that accredited lenders were providing facilities in line with the signed lender agreements. No significant issues were reported about the quality or timeliness of data being reported to the Bank.

DBT have published data about the performance of the Covid-19 Loan Guarantee Schemes to increase the transparency of the schemes. While accredited lenders did not report having any issues with the publication of scheme data, both accredited lenders and stakeholders reported a concern about how the data would be interpreted and used by the public. Therefore, the publication of data was accompanied by explanatory text to mitigate this risk.

Stakeholders reported that the introduction of a relationship manager role for the BBLS had a positive impact on the implementation of the schemes, for example supporting engagement with processes and forming a consensus with accredited lenders during challenging discussions. For CBILS and CLBILS the relationship manager role existed from the beginning of the schemes. However, accredited lenders were more neutral about the relationship manager role (across all schemes), with many reporting that they still used multiple communication routes into the British Business Bank for different topics. While they felt their relationship manager was good to have some consistency, they did not think it had added much to the previous communication processes.

The lender audit was seen as an appropriate and proportionate mechanism for a publicly supported scheme of this size. Most accredited lenders received a positive outcome as a result of their audit in all years of the scheme. The main challenge with the audit programme reported by stakeholders was the level of engagement from accredited lenders in the initial audit and follow up conversations – with stakeholders reporting that the relationship manager role had a positive effect on engagement.

It has not been possible to access more detailed data about the audit outcomes due to the commercial sensitivity of the audit information and, therefore, objectively analyse how effective the audits have been in driving compliance with the scheme rules.

Repayments

The British Business Bank’s management data available for this report suggests that 22% of the Covid-19 Loan Guarantee Schemes portfolio value has been fully repaid (data as of 30th June 2023 and previously published in September 2023). This represents £17 billion of repayments made. This does not include partial repayments for facilities where full payment has not yet been provided. A further 40% (£31 billion) is on schedule to be repaid (although this could fall into arrears or default).

The value of facilities that have defaulted (including facilities that have been settled and claimed) or are in arrears in the Covid-19 Loan Guarantee Schemes are (as of June 2023):

* 22% of the value of BBLS (£10.4 billion)
* 4% of the value of CBILS (£1.1 billion)
* 1% of the value of CLBILS (£46 million)

The arrears and default rates are above the arrears rate for SMEs in commercial lending both before and after the Covid-19 pandemic (around 2%[[2]](#footnote-3)). However, the higher rate of arrears observed in the BBLS was anticipated at the scheme design stage, which was accepted by Ministers. The Bank had modelled multiple scenarios, including a 25% default rate for BBLS while the scheme was being designed (potentially anticipating an arrears rate at this level), and the current rate is below this scenario. Lenders reported that the approaches used to secure repayments were in line with their BAU models and were not the reason for the higher than usual arrears / defaults in the schemes.

The process to remove any ineligible facilities was reported to be working efficiently, in both identifying ineligible facilities and removing these from the scheme portfolios. The relationship manager role was reported to play an important part in the effective functioning of this process. However, none of the lenders consulted reported having to go through this process, so did not provide views on the effectiveness of the process.

Counter fraud work and enforcement

Around £1.7 billion of Covid-19 Loan Guarantee Schemes lending has been flagged as suspected cases of fraud by accredited lenders, or 2.2% of total lending. The vast majority of suspected cases of fraud are in the BBLS portfolio (3.5% of the lending through the BBLS, 0.2% for CBILS and 0% in CLBILS as at 30th June 2023). The risks of fraud in BBLS in particular was highlighted at the scheme design stage and were accepted by Ministers. However, the current estimated level of suspected fraud is lower than previous estimates from the British Business Bank (of 11% and 7% for the BBLS). The current estimates of suspected fraud are reported to be more robust than the previous estimates as lenders and the British Business Bank have more information about businesses that have used the schemes.

The British Business Bank, DBT and the Cabinet Office have undertaken data modelling exercises to identify indicators of suspected cases of fraud, which is a separate exercise to the lenders’ BAU monitoring processes. Both stakeholders and accredited lenders reported that this activity was beneficial in supporting a stringent assessment of suspected fraud activity, and added value in that the accredited lenders themselves could not have completed the analysis due to resource and data access issues. The analysis undertaken by the Cabinet Office led to a sharing of 6,478 instances of indications of suspected fraud, and of these accredited lenders accepted that 2,817 met their definitions of suspected fraud (43%).

There were some potential issues with lenders using the data provided from these modelling activities (both regulatory and legal challenges that were identified by the accredited lenders interviewed and accredited lenders’ appetite and desire to make use of data), which presents a challenge to the effectiveness of this work.

Enforcement activities undertaken by the Insolvency Service have overcome some initial resource and administrative challenges (such as not having sufficient capacity initially to respond to the additional cases created by the schemes) and are reported to be delivering investigations and enforcement activity in line with expectations. The Insolvency Service has not had to introduce new ways of working to undertake enforcement activity for the Covid-19 Loan Guarantee Schemes.

## Year 2 impact evaluation

The aim of the Year 2 impact evaluation was to quantify the impacts of the three Covid-19 Loan Guarantee Schemes on business-level economic outcomes of borrowers in the second year after the onset of the pandemic,[[3]](#footnote-4) as well as any wider impacts of the schemes (including on non-borrowers). The Year 2 impact evaluation relied on a combination of survey-based self-reported impacts, secondary data, and econometric analysis of survey data. The figure below illustrates the timing of the Year 1 and Year 2 survey-based survival estimates.

##### Figure : Timeline of self-reported business survival analysis

CBILS, CLBILS and BBLS were launched in March, April and May 2020 respectively, all closing in April 2021. The Year 1 business survival impact estimate covers the period up to the end of December 2020 and the Year 2 business survival estimate covers the period up to the end of December 2021.

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Impact on business survival

Between 12% and 42%[[4]](#footnote-5) of BBLS borrowers would have permanently closed by December 2021 if they had not had access to the Covid-19 Loan Guarantee Schemes, compared to between 6% and 35% of CBILS/CLBILS borrowers. These figures are based on self-reported data, collected during a survey of BBLS and CBILS/CLBILS borrowers to the Covid-19 Loan Guarantee Schemes,[[5]](#footnote-6) as well as BBB Management Information and Portal Data. It is estimated that an additional 175,000 to 618,000 BBLS borrowers and 4,000 to 25,000 CBILS/CLBILS borrowers may have permanently closed by December 2021 (i.e., in 2020 or 2021) without access to the Covid-19 Loan Guarantee Schemes, accounting for approximately 0.9 million to 3.4 million jobs.

While the above ranges are large, the Year 3 report will look to assess these findings using secondary data and provide a sense of where in these ranges the impact is likely to lie, or even whether these ranges might overestimate the impact due to the self-reported nature of the underlying data. As suggested by the secondary analysis of the Year 1 early impact evaluation (see below), it is likely that estimates based on secondary data will be lower than those based on self-reported data.

Table 2 below compares the results of the Year 2 analysis to those from the Year 1 report, which relate to the estimated proportion, number and pre-pandemic employment of borrowers that would have closed by December 2020 (December 2021 in the case of the Year 2 analysis) if they had not had access to the Covid-19 Loan Guarantee Schemes. As shown in the table, estimated survival impacts are higher in Year 2.

##### Table 2 : Year 1 survey-based estimates compared to Year 2 survey-based estimates

| Scheme |  | Year 1[[6]](#footnote-7) | Year 2[[7]](#footnote-8) |
| --- | --- | --- | --- |
| BBLS | Proportion of borrowers that may have ceased trading without access to the scheme | 10%-34% | 12%-42% |
| BBLS | Number of borrowers that may have ceased trading without access to the scheme | 146,000-505,000 | 175,000-618,000 |
| CBILS/CLBILS | Proportion of borrowers that may have ceased trading without access to the scheme | 7%-28% | 6%-35% |
| CBILS/CLBILS | Number of borrowers that may have ceased trading without access to the schemes | 5,000-21,000 | 4,000-25,000 |
| Total | Number of pre-pandemic jobs in borrower firms that may have ceased trading without access to the schemes | 0.5 million – 2.9 million | 0.9 million-3.4 million |

Source: London Economics’ analysis of survey data, BBB Management Information and BBB portal data

Impact on turnover and employment

Econometric models are used to estimate the impacts of the Covid-19 Loan Guarantee Schemes on businesses’ turnover and employment in the second year of the pandemic.

The econometric analysis does not identify a robust[[8]](#footnote-9) statistically significant impact of the BBLS or CBILS/CLBILS schemes on borrowers’ turnover or employment in the second year of the pandemic in addition to the impacts arising due to business survival outlined above. Indeed, because the analysis is based on a survey of businesses that largely have survived, these estimated impacts mostly exclude any impacts from business survival[[9]](#footnote-10).

Wider impacts

Econometric analysis was also undertaken to explore whether businesses (borrowers and non-borrowers) in sectors that received more funding under the Covid-19 Loan Guarantee Schemes experienced any impact on turnover and employment.

Overall, the evidence of additional benefits of the Covid-19 Loan Guarantee Schemes for businesses in sectors receiving larger amounts of support is inconclusive. This is primarily because of the high correlation between the use of the Covid-19 Loan Guarantee Schemes and another important business support measure – the Coronavirus Job Retention Scheme (CJRS) – across sectors, which makes it difficult to attribute variations in outcomes at the sector level to a specific business support measure.

## Secondary analysis of Year 1 early impact evaluation

To assess the findings from the Year 1 early impact evaluation, a secondary analysis of the impact of the Covid-19 Loan Guarantee Schemes on business survival, turnover, and employment in the first year of the pandemic[[10]](#footnote-11) was conducted. This section summarises the results of this exercise. Rather than a quantitative survey, such as was conducted in the Year 1 early impact evaluation, the exercise utilised secondary data sources such as the IDBR and the BICS to explore the impact of the Covid-19 Loan Guarantee Schemes on businesses. This allows for a much larger number of businesses to be included in the analysis relative to the early impact evaluation.

Impact on business survival

It is estimated that an additional 5.0%-6.5%[[11]](#footnote-12) of all BBLS borrowers (i.e. around 74,000-96,000[[12]](#footnote-13) businesses) and 4.0%-4.7%[[13]](#footnote-14) of CBILS/CLBILS borrowers (i.e. around 3,000-3,500[[14]](#footnote-15) businesses) could have ceased trading between April 2020 and March 2021 had the Covid-19 Loan Guarantee Schemes not been in place. It is estimated that these borrowers account for approximately 256,000-326,000 jobs.[[15]](#footnote-16)

The Year 1 survey-based analysis estimated that an additional 10%-34% of BBLS borrowers (i.e. 146,000 to 505,000 businesses) and 7%-28% of CBILS/CLBILS borrowers (i.e. 5,000 to 21,000 businesses) could have ceased trading by December 2020 had the Covid-19 Loan Guarantee Schemes not been in place. These businesses were estimated to represent 0.5 million to 2.9 million pre-pandemic jobs.

The secondary analysis results therefore suggest a lower impact of the Covid-19 Loan Guarantee Schemes compared to the Year 1 analysis. This may be explained by the fact that the Year 1 analysis largely relied on borrowers’ self-reported likelihood of closing in the absence of Covid-19 Loan Guarantee Schemes, whereas this analysis was based on observed closure rates. Based on this, the secondary analysis of Year 2 impact evaluation findings (which will be undertaken as part of the Year 3 evaluation) may lead to lower estimates of the business survival impacts compared to those presented above based on self-reported survey data.

Impact on turnover and employment

Both the original Year 1 survey analysis and this report’s secondary analysis exercise used econometric models to quantify the impacts of the Covid-19 Loan Guarantee Schemes on businesses’ turnover and employment.

Turnover

The econometric analysis of secondary data finds a positive and statistically significant impact of the BBLS and CBILS/CLBILS schemes on borrowers’ turnover.This suggests that, on average, BBLS and CBILS/CLBILS borrowers’ turnover was respectively 10% and 12% higher than it would have been in the absence of the Covid-19 Loan Guarantee Schemes in the first year of the pandemic. It should be noted that this is in addition to any impact arising from business survival, as businesses that permanently closed in the first year of the pandemic were excluded from this econometric analysis (as well as the econometric analysis of employment, described below).

In contrast, the Year 1 report’s econometric analysis of survey data did not find a statistically significant impact of the BBLS or CBILS/CLBILS schemes on borrowers’ turnover. The differences between the results could be caused by the fact that the Year 1 analysis was based on a much smaller sample size.

Employment

The econometric analysis of secondary data finds a positive and statistically significant impact of the BBLS and CBILS/CLBILS schemes on borrowers’ employment levels.This suggests that, on average, BBLS and CBILS/CLBILS borrowers’ employment was respectively 6% and 9% higher than it would have been in the absence of the Covid-19 Loan Guarantee Schemes in the first year of the pandemic. Again, it should be noted that this is in addition to any impact arising from business survival, as businesses that permanently closed in the first year of the pandemic were excluded from this econometric analysis.

As was the case with turnover, the Year 1 econometric analysis of survey data did not find a statistically significant impact of the BBLS or CBILS/CLBILS schemes on borrowers’ employment. As with turnover, the difference between the results of the Year 1 analysis and secondary analysis may be due to the different sample sizes.

Additional econometric analysis was undertaken to estimate the number of additional jobs that could have been lost in the absence of the Covid-19 Loan Guarantee Schemes in the first year of the pandemic, taking into account both the impacts on businesses that would have permanently closed in their absence, and businesses that would have survived but with lower employment levels.[[16]](#footnote-17) It was estimated that 704,000 additional jobs could potentially have been lost among borrowers in the absence of the Covid-19 Loan Guarantee Schemes. This estimate is made up of 407,000 job losses avoided due to the BBLS scheme, and 297,000 job losses avoided due to the CBILS/CLBILS schemes. Given that this analysis aims to account for both impacts on employment via business survival and impacts on employment of businesses that would have survived in the absence of the Covid-19 Loan Guarantee Schemes, this estimate cannot be considered additional to the estimate of pre-pandemic jobs among businesses that survived due to the Covid-19 Loan Guarantee Schemes presented above.

Differences between Year 1 survey-based analysis and secondary analysis presented in Year 2

In light of key differences between the survey-based results presented in last year’s report and those of the secondary analysis conducted this year, the box below highlights key factors that may be driving these differences.

**Interpreting differences between Year 1 survey-based analysis and the exercise based on secondary data presented in Year 2**

This box discusses key factors that may be driving differences between the Year 1 survey-based analysis (presented in last year’s report), and the assessment of these results based on secondary data (presented in this year’s report).

A first important difference is the use of a self-reported counterfactual in the Year 1 survey-based survival analysis, in contrast to this exercise, which fully relies on secondary data to estimate the counterfactual outcome in the absence of the Covid-19 Loan Guarantee Schemes. This means that results from this exercise are less likely to be affected by issues such as poor recall (for example borrowers may have been overly pessimistic about their survival prospects in the absence of the schemes).

Second, the secondary analysis was based on a sample size of the order of tens of thousands to over a hundred thousand businesses, whereas the survey-based analysis was based on a sample of hundreds of businesses. The much larger sample sizes in the secondary analysis increases the likelihood of detecting an impact of the schemes.

Third, there were differences in the econometric model specifications between the survey-based and secondary analyses due to differences in the types of data available. Indeed, the survey-based analysis took into account businesses’ use (or not) of various other support during the pandemic (for example CJRS, deferral of VAT payments), as well as their perception of certain business obstacles. Most of this information was not available in secondary data (other than an indicator of CJRS use), though a longer time series of turnover and employment allowed to account for pre-pandemic growth (which may have influenced the types of challenges faced during the pandemic).

Fourth it is possible that the temporary measures put in place as part of the Corporate Insolvency and Governance Act 2020 (CIGA 2020) may have delayed the closures of certain businesses. If this issue was particularly prevalent among businesses which did not access the Covid-19 Loan Guarantee Schemes, it may have ‘artificially’ lowered the estimated counterfactual closure rate (and therefore the impact) estimated in secondary data.[[17]](#footnote-18) As a result, the estimated impacts on business survival may increase in the secondary analysis of the Year 2 impacts (presented in next year’s report) as these delayed closures (if any) materialise. It is unclear whether this issue would affect self-reported survey-based counterfactuals as this depends on survey respondents’ awareness of CIGA 2020, and whether they took it into account when assessing their counterfactual outcome.

Finally, it should also be noted that at the time of publication of this report the full impacts of the schemes have not materialised, and further evidence will become available over time. As such, to a certain degree it is too early to tell which of the estimates presented in this report are the most accurate. Next year’s analysis will add another year of data and may provide greater clarity on whether there may have been ‘delayed’ closures recorded in secondary data. Furthermore, additional qualitative analysis may be undertaken to explore whether survey respondents’ perceptions of their survival prospects in the absence of the schemes might have been excessively pessimistic. Together, these findings may provide additional insights on the reliability of each set of results.

Product market displacement

Product market displacement shows the extent to which benefits from the schemes in the form of increased business output (relative to a scenario without the Covid-19 Loan Guarantee Schemes) occur at the expense of other businesses.

Product market displacement was estimated to assess the extent to which the Covid-19 Loan Guarantee Schemes had a net impact on economic output. In the Year 1 analysis, product market displacement was calculated based on borrowers’ self-reported assessment of the level of competition they faced (element I), the extent to which their competitors would take up their sales if they ceased trading (element II), and the extent to which their competitors were based in the UK (element III). The first of these three elements was compared to Herfindahl-Hirschman Indices (HHI) as observable measures of sector-level market competition. The correlation across sectors between HHIs and businesses’ average assessment of the level of competition that they faced is close to zero in both the case of the BBLS and CBILS/CLBILS, suggesting that there is little evidence of a relationship between self-reported competition and the competition that is observed through the calculation of HHIs. Businesses tend to report lower levels of competition than HHIs suggest. The average element I displacement factor when using self-reported competition is 58% and 63% for BBLS and CBILS/CLBILS recipients respectively, compared to 74%-80% for both groups when using observed competition.

Product market displacement was re-calculated based on a combination of self-reported data – capturing elements II and III – and HHI data – capturing element I. Following this approach, product market displacement was estimated to be 51%-56% for BBLS borrowers and 52%-56% for CBILS/CLBILS borrowers. This compares to Year 1 estimates of 43% for BBLS borrowers and 46% for CBILS/CLBILS borrowers, based fully on self-reported data. The difference in estimated product market displacement between these approaches is due to higher levels of competition suggested by analysis of HHIs, in comparison to levels of self-reported competition. Note that product market displacement is unlikely to have occurred immediately due to economic output being below its potential during much of the pandemic; but it may become more noticeable as the economy approaches full capacity.

Business Insights and Conditions Survey

As part of the secondary analysis of Year 1 impacts, the Business Insights and Conditions Survey (BICS) has been analysed to provide additional context for the findings of the Year 1 analysis. The majority of businesses that received government support reported that the government support they used helped them to continue trading during the pandemic. However, the proportion of businesses stating that the support they received helped them continue trading was higher amongst businesses that used a government-backed loan (75%) than non-borrowers (57%). These results are consistent with findings from the Year 1 business survival analysis.[[18]](#footnote-19)

##### Table 3: Business survival findings from the Year 1 analysis of self-reported data, secondary analysis of Year 1 impacts and BICS analysis

| Research method | Findings |
| --- | --- |
| Year 1 (based on self-reported impacts) | An additional 10%-34% of BBLS borrowers and 7%-28% of CBILS/CLBILS borrowers could have permanently closed by December 2020 had the Covid-19 Loan Guarantee Schemes not been in place. |
| Year 1 impacts – secondary analysis (based on observed closure rates in IDBR) | An additional 5.0%-6.5% of BBLS borrowers and 4.0%-4.7% of CBILS/CLBILS borrowers could have permanently closed by March 2021 in absence of the schemes |
| BICS (descriptive analysis) | 75% of businesses that used a government-backed loan reported that the support they received helped them continue trading, compared to 57% of those that only used other types of government support. |

Source: London Economics’ analysis of the Business Insights and Conditions Survey (BICS), survey data, IDBR data, BBB Management Information and BBB Portal Data.

Borrowers were also more likely to have reduced the ambition of their expansion plans than non-borrowers (18% compared to 12%) and to have postponed or cancelled their expansion plans altogether (34% compared to 19%). This is consistent with the finding in the Year 1 survival analysis that loans were very important for business survival, as businesses may have used the finance to ‘keep their business afloat’ rather than expand. Borrowers were more likely than non-borrowers to have stopped or reduced their capital expenditure as a result of the Covid-19 pandemic, but also almost twice as likely to have increased their capital expenditure.

Borrowers (15%) were more likely to have reduced their innovation due to the pandemic than non-borrowers (7%). Both groups of companies were more likely to have increased their innovation than to have reduced it, but borrowers were more likely than non-borrowers to have increased their innovation since the pandemic (32% compared to 29%). This is consistent with Year 1 finding that borrowers were more likely than non-borrowers to be ‘trading in new goods, services, and/or markets’.

The vast majority of companies (between 91% and 93%) reported that their workforce could meet the demands of the business between March and May 2020. This is consistent with the Year 1 finding that a relatively small proportion of borrowers (approximately one tenth) used their loans to make "other adjustments to working practices (for example to ensure workplace is Covid-19 safe).” Borrowers were more likely than non-borrowers to have experienced a decrease in footfall due to the pandemic (67%, compared to 63%), but were also more likely to have seen an increase in their footfall (7%, compared to 6%).

A clear majority of borrowers (68%) and non-borrowers (75%) indicated that they could access goods, materials, and services without having to change supplier. 12% of borrowers were unable to access goods, services or materials at all and 20% to change supplier or find alternative solutions, higher than the corresponding proportions for non-borrowers (10% and 16% respectively). This is consistent with the Year 1 survey finding that supply chain disruptions were a common obstacle to businesses, particularly for borrowers.

# Introduction

London Economics and Ipsos were commissioned by the British Business Bank (BBB) in March 2021 to undertake a three-year evaluation of the Bounce Back Loan Scheme (BBLS), Coronavirus Business Interruption Loan Scheme (CBILS) and Coronavirus Large Business Interruption Loan Scheme (CLBILS) (hereafter referred to as the “Covid-19 Loan Guarantee Schemes” or the schemes (unless stated otherwise)).

This report provides findings from the second year of the evaluation, which consists of two main parts. The first of these is a process evaluation aiming to assess the processes adopted to deliver the three Covid-19 Loan Guarantee Schemes and enable them to efficiently meet their policy objectives. The second is an impact evaluation providing estimates of the schemes’ impacts on borrower-level and wider economic outcomes in the second year of the pandemic, and a secondary analysis of key results from the early impact evaluation presented in the [first year report](https://www.british-business-bank.co.uk/wp-content/uploads/2022/06/Evaluation_of_BBLS_CBILS_and_CLBILS___Yr1_Report__accessible_.pdf).

## Policy context

The extent to which the Covid-19 pandemic could potentially disrupt businesses and challenge them financially became apparent by mid-March 2020 in the UK. Business impacts of the pandemic started materialising in March 2020 following the introduction of public health measures to mitigate the spread of the virus and adoption of preventative behavioural changes amongst the UK population. Survey data from the first wave of the Business Insights and Conditions Survey (BICS)[[19]](#footnote-20) highlighted early impacts on turnover, with 47% of surveyed businesses reporting that turnover was lower than normal between the period of 9 March to 22 March 2020, and subsequent waves showed a worsening situation over a short period of time.

Other emerging business impacts of the pandemic included disruptions at the operational level, from input provision, to exports, to workforce availability, as well as deflated business confidence. Again, the first wave of the BICS found that close to 25% of businesses reported that imports of materials, goods and services were affected by the pandemic, while close to 60% of businesses reported lacking confidence or feeling uncertain about having the financial resources to continue operating throughout the pandemic. These impacts also progressively worsened over time.

As a result of these early disruptions and the significant financial uncertainty affecting UK businesses, the government acted quickly, and the Chancellor introduced CBILS as part of the Spring Budget on 12 March 2020. CBILS was developed by BEIS, BBB, HMT, and in collaboration with industry bodies and lenders and launched on 23 March 2020. CLBILS was subsequently launched on 20 April 2020 and BBLS on 4 May 2020. Further detail on the development timeline of the schemes and the theory of change can be found in the [first year report](https://www.british-business-bank.co.uk/wp-content/uploads/2022/06/Evaluation_of_BBLS_CBILS_and_CLBILS___Yr1_Report__accessible_.pdf).[[20]](#footnote-21)

## Key objectives

The overarching aims of the Schemes were to offer support to businesses experiencing disruptions to their cashflow and losses in revenue due to the Covid-19 outbreak (CBILS and CLBILS) and allow rapid access to finance during the outbreak (BBLS).[[21]](#footnote-22) The table below outlines the key objectives of the scheme (and the year of the evaluation in which each is assessed) and presents the evidence collected to assess success of the Schemes against each objective.

##### Table 4: Objectives of the schemes and assessment of progress

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## Evaluation context

This report is the second in a series of three reports that are the principal output of this evaluation.

The [first year report](https://www.british-business-bank.co.uk/wp-content/uploads/2022/06/Evaluation_of_BBLS_CBILS_and_CLBILS___Yr1_Report__accessible_.pdf) presented findings from the process evaluation and provided an early impact evaluation. The process evaluation component assessed the effectiveness of the processes adopted to administer the Covid-19 Loan Guarantee Schemes, considered end-to-end processes from scheme design through to implementation and explored key learning opportunities. The impact evaluation analysed the quantitative survey data collected as a part of the project to assess the additionality of the Covid-19 Loan Guarantee Schemes, and their impact on business outcomes (survival, turnover, employment).

This report focuses on the impact evaluation using survey data (collected in 2022) to assess the impact of the Covid-19 Loan Guarantee Schemes on business outcomes in the second year of the pandemic and assesses the Year 1 results (i.e., impacts in the first year of the pandemic) using secondary data sources. Additionally, the wider impacts of the Covid-19 Loan Guarantee Schemes on the general population of businesses (borrowers and non-borrowers) are explored. A process evaluation focused on monitoring, repayment and counter fraud processes has been undertaken, drawing on scheme management information, wider data and a series of qualitative interviews with key stakeholders and accredited lenders.

In the third and final year, the study will focus on the process, impact, and economic evaluations. A further stage of process evaluation will be undertaken, which will focus on some of the processes that could not be fully assessed in Year 2 (for example recovery pilots, the effect of the formalisation of the counter fraud strategy and further analysis of counter fraud activity). The impact evaluation component will again use survey data (collected in 2023) to assess the impact of the Covid-19 Loan Guarantee Schemes on business outcomes in the third year of the pandemic – with the addition of labour productivity as a business outcome[[22]](#footnote-23) – and analyse the second year’s results using secondary data sources. Finally, the economic evaluation component will assess the value for money of the Covid-19 Loan Guarantee Schemes.

A full list of research questions for this evaluation can be found in the [first year report](https://www.british-business-bank.co.uk/wp-content/uploads/2022/06/Evaluation_of_BBLS_CBILS_and_CLBILS___Yr1_Report__accessible_.pdf). This report is organised as follows:

* The first chapter presents the findings from the process evaluation.
* The second chapter provides the findings of the year 2 impact evaluation, covering the impact of lending on businesses.
* The third chapter presents the results of the secondary analysis of the year 1 impact evaluation using secondary data.

Detailed information on the methods used in the evaluation and supplementary analysis are provided in the annexes to the report.

# Process evaluation

This section of the report provides findings from the second year research exploring the processes used to deliver the schemes. In particular, the report focuses on the processes used to monitor lenders, repayment processes and enforcement actions. The evaluation activity used in this report took place in the summer of 2023.

## Research questions

The key process evaluation questions, set out in the Invitation To Tender (ITT), are presented in the table below. Many of these questions were answered in the Year 1 process evaluation[[23]](#footnote-24), and the key evaluation questions covered in the Year 2 process evaluation are highlighted in italics. In order to answer these questions, the research team, in partnership with the BBB and DBT developed evaluation questions to assess the repayment, monitoring and enforcement processes.

##### Table : Key process evaluation questions

|  |  |
| --- | --- |
| Scheme design | * + - How did government provide strategic direction to deliver the Covid-19 Loan Guarantee Schemes?     - How close to optimal was the mix of input from specialty teams as part of the scoping and delivery phases?     - How effective was communication and collaboration with (a) lenders and (b) the business community?     - How effective was the analysis of lender incentives and resulting behaviour?     - To what extent does scheme design complement other business support interventions?     - How successfully have the adaptations to the Covid-19 Loan Guarantee Schemes made post-launch (for example for BBLS only, Pay as You Grow and the availability of top-ups) been implemented?     - To what extent do the post-launch adaptations complement the other scheme parameters?     - *To what extent did scheme design strike an appropriate balance between speed of delivery and controls?* |
| Scheme delivery | * + - How effective are the processes used by lenders?     - How high were awareness levels of the Covid-19 Loan Guarantee Schemes among eligible businesses?     - How did eligible business perceive the Covid-19 Loan Guarantee Schemes before deciding whether or not to apply?     - To what extent are borrowers satisfied with the lending process?     - How thorough were risk management practices adopted?     - Were the BBB’s and other government organisations’ infrastructure capable to cope with the Covid-19 Loan Guarantee Schemes?     - ***To what extent did scheme performance meet objectives and expectations? Which areas of delivery worked well?***     - Which areas of delivery require the most improvement?     - Was the method of delivery used the most appropriate for these interventions?     - What have other governments done with similar schemes?     - Are there international comparisons? |
| Debt recovery processes | * + - ***Has the design process for the recovery regime learnt any lessons from scheme design? Are the debt recovery processes fit for purpose?*** |
| Variation in processes | * + - Are there any significant variations in processes between different lenders on each of the Covid-19 Loan Guarantee Schemes?     - Is there any evidence that businesses run by management teams or business owners with certain protected characteristics have been disadvantaged by any of the scheme processes? |

## Methodology

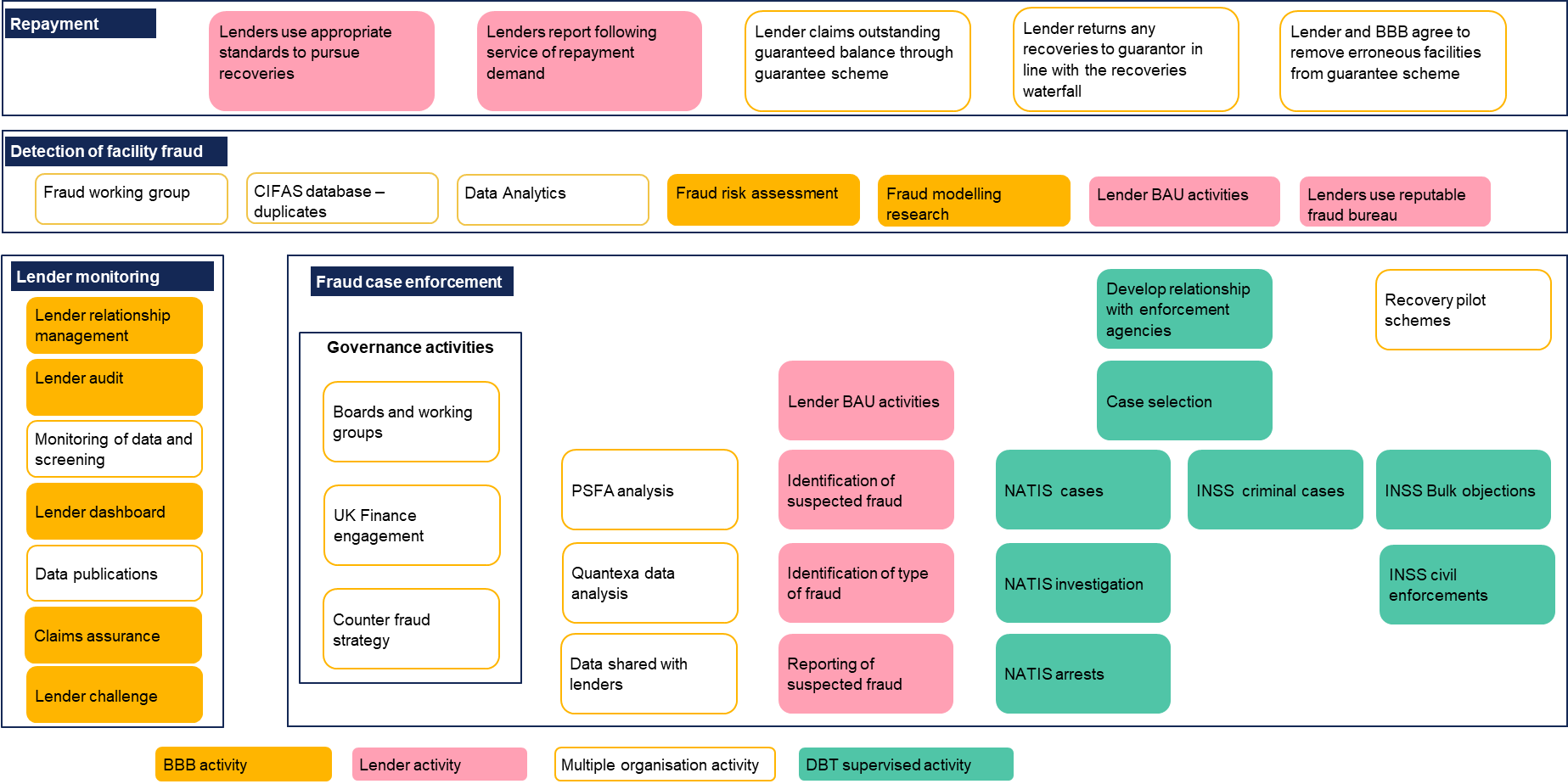
The methodological approach for the Year 2 evaluation was agreed by the BBB in May 2023. The findings for this report are based on the agreed methodology, which included:

* Initial scoping interviews with two key stakeholders and workshops to form an agreed approach to the evaluation.
* A review of programme documentation and data, provided by the BBB to the research team. Note that some data from the September publication of the COVID-19 loan guarantee schemes performance is included in this report. This is based on data available as at 30th June 2023. We note that more recent performance data may have been published by the time of this evaluation report’s publication.
* A review of wider published evidence.
* Depth interviews with nine stakeholders.
* Depth interviews with six accredited lenders.

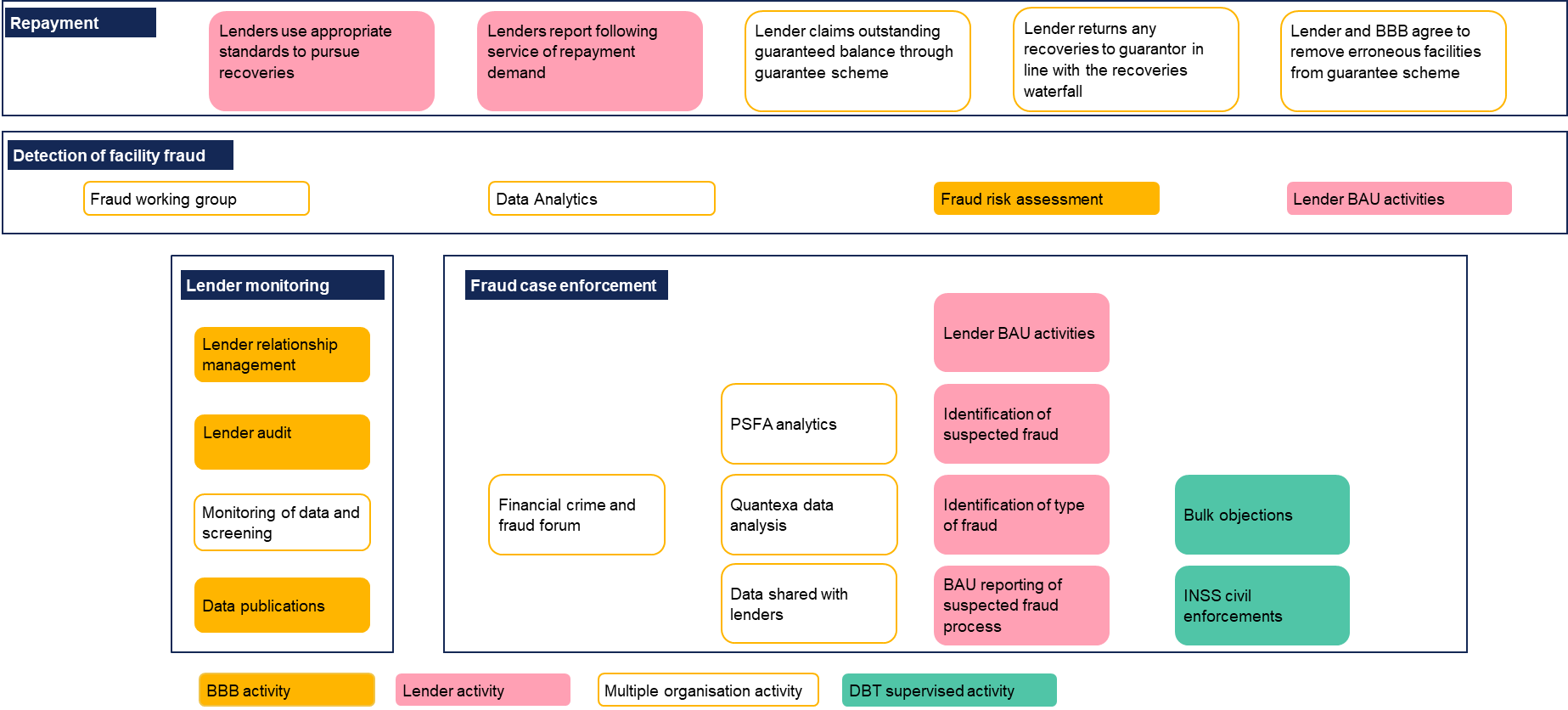
## Processes used

The following figures present the processes used by the schemes in terms of monitoring lenders, repayment, and enforcement processes. The first figure shows the processes used for BBLS, and the second those used for CBILS and CLBILS.

##### Figure : Process map for the Bounce Back Loans Scheme



##### Figure : Process map for the Coronavirus Business Interruption Loan Scheme and Coronavirus Large Business Interruption Loan Scheme

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Repayments

The key processes used to secure repayments of the Covid-19 Loan Guarantee Schemes facilities are:

* **Lenders utilising appropriate mechanisms to secure repayments on the facilities:** These mechanisms are not dictated in the scheme rules for CBILS and CLBILS, but for BBLS the lender agreement sets out specific principles and requirements for repayments in the case of fraud.
* **Where lenders cannot secure repayments they report this**, using standard data sharing and reporting approaches, to the BBB.
* **If a lender cannot secure repayments on facilities, they “claim” the outstanding value with the BBB** through the Covid-19 Loan Guarantee Schemes, and the BBB will transfer the funds to the lender within 30 days of the claim.
* Subsequently, **if the lender is able to secure further recovery from a “settled” facility, they will repay the BBB, as appropriate, via the agreed mechanism**.
* **The BBB also analyses the portfolio of lending**, and where facilities have been put into the Covid-19 Loan Guarantee Schemes that are ineligible and/or the BBB determines that the lender has breached the scheme rules, it brings this to the attention of lenders. Where these challenges are validated, the facilities are removed from the Covid-19 Loan Guarantee Schemes, and the BBB will be reimbursed if the facility has already been settled.

Monitoring

The key processes involved in the monitoring of accredited lenders are:

* **Lender relationship management and challenge:** the BBB appointed a relationship manager to effectively manage the relationship between each accredited lender and the Bank. The relationship manager has oversight of all the requirements for their lender and holds conversations with the lender if they fail to comply with scheme rules.
* **A lender audit:** Each year a sample of accredited lenders will be audited, using a risk-based approach (with the risks evolving over the course of the schemes, including, but not limited to, the risk that a facility was fraudulently obtained) to ensure compliance with the scheme rules.
* **Monitoring and publication of data:** Accredited lenders are required to share data about their portfolio with the BBB. This data is used to produce scheme dashboards to monitor performance and underpin the governance of the schemes. A selection of the data is then published on a quarterly basis on the DBT website.

Enforcement

The key enforcement activities are:

* The functioning of **working groups and boards** to oversee the enforcement activities through the schemes. This includes participation from the BBB, DBT, the Cabinet Office, HM Treasury, UK Finance and lenders.
* **The development of a counter fraud strategy:** Due to the timescales under which the schemes were developed and launched, there was not a dedicated counter fraud strategy in place at the start of the schemes (although there were existing counter fraud activities taking place). This has been developed by the BBB, DBT and the Cabinet Office to underpin the counter fraud and enforcement activity delivered through the BBLS.
* **Data analytics:** The Cabinet Office and the BBB undertake data analytics to attempt to identify the scale of suspected fraudulent activity, by utilising data around duplicate loans, network analysis and using central government data to identify potentially fraudulent applications. In addition to reviewing this data, lenders are also mandated to use the CIFAS database for BBLS (although not for CBILS or CLBILS) to identify duplicate loan applications. The results from the data analysis are sent to accredited lenders, showing the cases in their portfolio that have been identified as suspected fraud cases – and the lenders can review this data / investigate facilities, and use this information to update their suspected fraud flags. In addition, the data also provides assurance that lender claims under the guarantee have not been made in error, identifies where there are any claims that should be reviewed.
* **Lender counter fraud activity:** As part of Business As Usual (BAU) lending, accredited lenders undertake counter fraud work, such as initial ‘know your customer’ checks (at origination) and ongoing fraud monitoring throughout the course of the facility (such as detecting fraudulent activity on business accounts). This activity is also undertaken as part of CBILS, CLBILS and BBLS. The BAU counter fraud activity will vary from lender to lender. Where their BAU mechanisms identify suspected cases of fraud, these flags are reported to the BBB and where appropriate the Insolvency Service (INSS) and National Investigation Service (NATIS). Guidelines on the types of cases to refer are provided by DBT.
* **Enforcement activity with external agencies:** Where appropriate, NATIS / INSS carry out additional enforcement measures in appropriate cases including, criminal investigations, director misconduct. Both NATIS and INSS pursue criminal investigations and prosecutions, with INSS also pursuing disqualifications for director misconduct. For the cases referred to NATIS that relate to the schemes, NATIS will feed back on case selection to a governance board from DBT, and will conduct criminal investigations with a view to pursuing criminal prosecutions. The Insolvency Service will investigate reported cases and pursue civil disqualification of directors and criminal cases against suspected fraudulent activity, and will provide feedback on outcomes achieved to DBT.
* **For BBLS, there are a series of recovery pilot schemes:** These will test new approaches to securing repayments. These processes have not been assessed in this evaluation.

## Monitoring

This section provides an assessment of the monitoring processes used by the schemes to support the delivery of the schemes in line with their objectives and the lender agreements between the BBB and accredited lenders. This section draws on information provided by the Bank and findings from the qualitative interviews with accredited lenders and stakeholders.

Data sharing

Accredited lenders were required to share data with the BBB about their Covid-19 Loan Guarantee Schemes lending portfolio in order for the Bank and DBT to monitor the overall size and scale of the programmes and to ensure that accredited lenders were providing facilities in line with the signed lender agreements. The data sharing requirements required lenders to report the value of repayments made, whether repayments were on schedule, the number and value of facilities in arrears, and any cases of default, on a quarterly basis. Additionally, lenders were required to provide information on the number of facilities that were suspected cases of fraud, and the value of these facilities. Lenders were also required to submit their claims under the guarantee for the outstanding value of facilities that had defaulted within 12 months (for BBLS) or 18 months (for CBILS / CLBILS) of the default taking place.

The findings from the research indicate that the data collected has served its intended purposes. The data collected by the BBB has been shared within the Bank and across steering and governance groups. This information has been used to keep individuals involved in the governance informed of the cost to the public purse, the likely future cost and fraud assessments. The information supports the decision-making process on topics to target with programme resources. This information was reported by stakeholders to be appropriate and useful in supporting the governance of the programme. The data provided is also usually sufficient for internal teams within the Bank to analyse each lenders’ portfolio to support an initial assessment of where the risks lie and whether a particular cohort of facilities warrants further investigation Stakeholders did not raise many data fields that they would have liked to be included in the shared data that was not already present.

Although no data was available to independently verify the completeness, accuracy, or timeliness of data provided, stakeholders did not report any significant concerns with the quality of information provided. The only issue reported by stakeholders was that the data was lumpy (submitted quarterly) rather than real time, meaning there could be large changes between quarters. Accredited lenders also did not report any challenges with the data sharing requirements, either in terms of the nature of data requested or frequency of collections. They also considered that the BBB had improved the data sharing mechanisms over the course of the schemes. As highlighted in the previous process evaluation, there were issues with the accuracy of the data provided by lenders as initially data was compiled manually by a high proportion of accredited lenders and then shared with the Bank, leading to issues with human error. The Bank introduced Application Programming Interfaces (APIs) to automate this process and reduce errors, but, at the time of the last evaluation (2022), few accredited lenders had utilised these APIs. In 2023, larger lenders reported using APIs where required (usually for BBLS due to the scale of lending). However, for smaller lenders (and smaller portfolios) data could still be shared using spreadsheets. Stakeholders and lenders reported that given the experience of lenders and the BBB over time there were fewer reported errors and that data accuracy was not seen as a significant challenge at this stage. This has led to an improvement in efficiency for the schemes for both accredited lenders (less time spent compiling, revising and resubmitting data) and for the Bank (having accurate data first time reduces revisions made to data analysis).

A selection of the data provided by accredited lenders has also been published, with the depth of data and level of disaggregation deviating from the original plans for the programme. This decision was made due to external political pressure placed on the BBB and DBT for greater transparency of the schemes’ delivery and public interest in the schemes’ performance. All lenders agreed to the publication of data[[24]](#footnote-25), and none of the lenders consulted reported that they were reluctant for the data to be published. However, BBB stakeholders reported that some lenders were initially reluctant for the data to be published at a lender level.

Both stakeholders and accredited lenders reported some concerns regarding how published data would be viewed, analysed, and used by individuals outside the schemes. For example, both stakeholders and lenders are concerned that people would use the data as a ranking if those that had the highest cases of suspected fraud were considered “bottom of the league table” and worst at tackling fraud. This will not necessarily be the case, and lenders with higher cases of suspected fraud could have a different customer base to other lenders, or have different mechanisms for identifying suspected fraud, so the figures are not directly comparable with each other. Similar concerns were raised about the publication of defaults data, but to date, none of the accredited lenders that were consulted reported any adverse effects on their business from the publication of data.

Although not the aim of the quarterly publication of the Covid-19 loan guarantee scheme performance data, stakeholders initially thought that the publication of data could influence lender behaviour – for example attempts to ensure their default rates were as low as possible by introducing new recovery practices or attempts to limit the cases of suspected fraud. However, neither stakeholders nor accredited lenders reported that the publication of data could be directly linked to changes in the behaviour of lenders in any way. It has not led to changes in approaches, and this was reported by accredited lenders to be due to the comfort they had in having the data published. However, stakeholders have reported that there has been a general change in accredited lender behaviour towards the reporting of suspected fraud cases to the BBB – although it has not been possible to link this to any particular process (for example the publication of data, the audit process, relationship management and lender challenge etc.). As mentioned in subsequent sections, lenders have generally, to date, undertaken similar activities to BAU around fraud detection, repayment, and enforcement activities (as would be expected given the requirements in the lender agreements). It is not possible to assess compliance levels before and after the publication of data, as data from the lender audits (see Lender audit section below) cannot be compared across years.

Lender relationships

The ways in which accredited lenders were managed by the Bank altered over the course of the delivery of the BBLS. Initially, lenders would contact a different individual for each topic (for example, one individual for the data shared, one for the audit, one for repayments etc.), and these teams within the Bank did not always have a view on what requests other BBB teams were making of accredited lenders. As the BBB’s capacity grew, an individual “relationship manager” for each accredited lender on BBLS was introduced (with the relationship manager approach already being in place for CBILS and CLBILS). The role of the relationship manager was to be the main point of contact for the lender, develop a relationship with the accredited lender, be in a position to represent their concerns internally within the Bank, have an understanding of all the different functions of the Covid-19 Loan Guarantee Schemes to provide a single point of contact for lenders, and be able to manage performance when required.

Stakeholders at the BBB reported that the introduction of the relationship manager role had been successful in improving engagement and agreement between the Bank and accredited lenders. This was seen as being particularly important in enabling critical processes such as the lender audit (see Lender audit section below) and the removal of ineligible facilities from the guarantee (see Repayments section below). The reason this was reported to work well was that the relationship manager would have a greater understanding of the needs and capacity of the lender and therefore a greater understanding of how requests from the Bank would impact upon lenders. This understanding would help the BBB and accredited lenders come to a consensus on challenging issues, such as whether ineligible facilities should be removed from the schemes.

Stakeholders also reported that having the relationship manager involved in all discussions with accredited lenders helped the Bank to understand the volume of requirements being placed onto accredited lenders and supported the Bank by providing a greater level of internal consistency in processes. This is rather than the previous situation of each team in the Bank contacting/asking for information from BBLS-accredited lenders independently. Having this detailed understanding of the BBB’s requirements and how the accredited lender operated was reported to improve conversations with lenders and reduce the risks of the relationship between the lenders and the Bank breaking down.[[25]](#footnote-26)

Accredited lenders interviewed were more neutral about the added value of the relationship manager role. Lenders reported that when they had a specific issue on one of the Covid-19 Loan Guarantee Schemes, they would still approach the specific team within the BBB rather than the relationship manager (for example the data team, or the central scheme team). They reported that regular catch ups with the relationship manager did not add much due to the maturity of the schemes. Accredited lenders reported that they have fewer queries on the schemes now relative to whilst the schemes were live and were comfortable with the processes being used. Stakeholders reported that there are still a significant number of queries submitted from accredited lenders about the schemes.

Lender audit

The lender audit process has been ongoing since the schemes were launched. The audit process has continued throughout the delivery of the schemes, and accredited lenders are required to participate in the audit. The topics which the audit has covered have altered between years, and these topics are proposed and agreed by the programme boards in the audit plans. For example, in 2021/22 the topics covered included in life events, Pay As You Grow (PAYG) for BBLS and recoveries, and in 2022/23 the audit focused more on collections, recoveries and claims. The number of accredited lenders that are audited each year has reduced since the first year, becoming more risk-based rather than attempting to cover all lenders. All of the lenders interviewed reported that they had participated in at least two audits since the schemes began and were generally satisfied with the proportionality of the lender audit process, recognising that it was an in-depth audit but that this was required given the size of the schemes and the public funding available. There were no issues or challenges raised by the lenders interviewed about the audit process, reporting that the topics and scale of the audit were appropriate.

As presented in the first process evaluation, where the audit highlighted areas of concern at a lender-level, the auditors provided feedback and the lenders were required to provide additional information / alter their processes within a period set by the auditors. These findings were presented at a lender collaboration meeting between the auditor and the accredited lender, and if there were any further differences of opinion or challenges at this point the relationship manager would become involved in the discussions to seek a resolution.

The majority of accredited lenders received a positive outcome from their audit in each of the years of the schemes. In the first year of the schemes, 79% of accredited lenders received a positive outcome, in the second year 78%, and in the third year 90%. This shows that the majority of accredited lenders appeared to be operating within the rules of the schemes. However, care should be taken when interpreting this data, and comparisons should not be drawn between years due to the differences in sampling approach and topics covered in each year of the audit.

However, stakeholders did raise one main challenge with the lender audit process, which was obtaining an appropriate level of engagement from accredited lenders. This was around ensuring the lenders had capacity to support the initial audit and then fully engaged with the feedback meetings and undertook the required actions which came out of the audit.

It has not been possible to access more detailed data about audit outcomes due to the commercial sensitivity of the audit information. Therefore, it has not been possible to objectively explore which areas of the lender agreement lenders have struggled to comply with and areas that compliance is higher, or how effective the audits have been in driving compliance with the scheme rules.

## Repayments

The Covid-19 Loan Guarantee Schemes provided over 1.6 million facilities to businesses with a value of £77 billion in guaranteed loans. This section provides information about the processes used to secure repayments on these guaranteed loans and around ensuring the lender agreements around facilities with guarantees are correctly applied. The section draws on evidence from the BBB’s management information, wider literature, and depth interviews with stakeholders and accredited lenders.

Repayments made

The figures below present the value of the Covid-19 Loan Guarantee Scheme portfolios (and the proportion of facilities) which have either been fully repaid, or payments are on schedule. They are taken from the Covid-19 loan guarantee schemes performance data published in September 2023. This reflects data as of 30th June 2023 which was the most recently available at the time of writing this evaluation report. However, it is noted that more recent performance data may be available to readers by the time this report is published. The data shows that:

* 22% of the value of facilities drawn have been fully repaid across all Covid-19 Loan Guarantee Schemes (£17 billion):
  + In CBILS, 33% of the value of facilities drawn have been fully repaid (£9 billion).
  + In CLBILS, 66% of the value of facilities drawn have been fully repaid (£3 billion).
  + In BBLS, where the majority of facilities (and value of the portfolio) are, 12% of the value of facilities issued has been fully repaid (£6 billion).
* A further 40% of the total value of Covid-19 Loan Guarantee Schemes facilities drawn is currently on schedule to be fully repaid, although the value of these facilities could fall into default in the future (£31 billion):
  + In CBILS, 37% of the value of facilities drawn is on schedule (£10 billion).
  + In CLBILS, 21% of the value of facilities drawn is on schedule (£1 billion).
  + In BBLS, 44% of the value of facilities drawn is on schedule (£20 billion).

These figures show that of the £77 billion in drawn facilities as part of the Covid-19 Loan Guarantee Schemes, 22% of this total value has so far been fully repaid and is not at risk of default or guarantee claims (£17 billion). This does not include partial repayments for facilities where full payment has not yet been provided. A further 40% of the total drawn value (£31 billion) is on schedule, although this could fall into default in the future. The variation by scheme shows that for BBLS the total values fully repaid are below those percentages (at 12%), which accredited lenders and stakeholders attributed to the design of the BBLS (for example, the extended repayment period) and the application and assessment process. The risk of higher default rates on the BBLS was identified during the scheme design phase and has been accepted at a political level through the ministerial direction agreed for the scheme.

##### Figure : Number of facilities fully repaid and on schedule

Source: BBB Management Information, June 2023 (published September 2023)

##### Figure : Value of fully repaid facilities and outstanding balance for on schedule facilities[[26]](#footnote-27)

Source: BBB Management Information, June 2023 (published September 2023)

Although the majority of the portfolio value of the Covid-19 Loan Guarantee Schemes have either been fully repaid or are on schedule, 15% of the total value of the facilities drawn (or 23% of the total volume of facilities) have fallen into arrears or have defaulted (including those that have progressed to the accredited lender making a claim or settling a claim with the BBB). The value of facilities that have defaulted (including facilities that have been settled and claimed) or are in arrears in the Covid-19 Loan Guarantee Schemes are (as of June 2023):

* 22% of the value of BBLS (£10.4 billion)
* 4% of the value of CBILS (£1.1 billion)
* 1% of the value of CLBILS (£46 million)

The average proportion of facilities that fall into arrears or default in commercial lending is around 2%[[27]](#footnote-28), which has remained fairly steady both before and after the Covid-19 pandemic. Around half of these facilities would be expected to enter default.

Therefore, the proportion of the total volume of facilities in arrears or defaulted in the Covid-19 Loan Guarantee Schemes is around three times higher than would be expected in commercial SME lending in the UK for CBILS (at 7% of total volume of facilities), and around 12 times higher in BBLS (at 24% of the total volume of facilities) than would be expected for commercial lending to SMEs in the UK. However, at the outset of the schemes, the BBB anticipated higher rates of default on the schemes than in commercial lending. As mentioned above, for BBLS the Bank modelled multiple scenarios including a 25% default rate. This indicates that the current 22% of total drawn value (and 24% of total volume of facilities) in arrears and default were not outside the initial expectations for the schemes.

The accredited lenders interviewed suggested that their own arrears and default rates on CBILS and CLBILS were broadly in line with business-as-usual commercial lending, because they still felt they had a stake in the facility and the assessment criteria they used were more in line with commercial lending assessments than those used for BBLS (where the assessment was largely based on borrower self-certification of eligibility). They stated that the higher rate of arrears and defaults on the BBLS was expected because the usual checks that lenders undertook to ensure businesses could repay the loan were not required as part of the scheme. As mentioned above, this risk was identified at the outset of the scheme and accepted.

##### Figure : Proportion of total volume of facilities offered in arrears, defaulted, settled and claimed

Source: BBB Management Information, June 2023 (published September 2023)

##### Figure : Outstanding and settled value on facilities in arrears, defaulted, settled and claimed facilities as a percentage of total drawn value

Source: BBB Management Information, June 2023 (published September 2023)

Approaches used to secure repayments

In line with the lender agreements, lenders were expected to use business-as-usual processes and adhere to minimum requirements for collecting repayments. The results of the lender audits in year three indicate that 90% of lenders were compliant with these requirements.[[28]](#footnote-29) Lenders and stakeholders also reported limited differences in their approaches to securing repayments for the Covid-19 Loan Guarantee Schemes compared to their BAU approaches in the qualitative research. This should be expected as lenders were not required to introduce additional processes to collect repayments for the schemes. Both lenders and stakeholders felt the approaches to securing repayments were appropriate for the schemes as these are the processes they use for commercial lending, and additional effort to recover these funds would not be commercially viable. The accredited lenders interviewed reported that the arrears rates observed were largely as a result of the scheme designs. Other factors which lenders suggested may have had an impact on arrears rates were some lingering effects of the Covid-19 pandemic and new challenges facing businesses (for example, increasing costs and the cost of living crisis, the war in Ukraine and impacts resulting from the UK’s exit from the European Union). These issues were impacting on business performance and their ability to service the debt from the Covid-19 Loan Guarantee Schemes.

At the time of the evaluation research, the BBB and DBT had recently launched some recovery pilot schemes for BBLS (with further pilot activities planned) to try to increase the proportion of facilities (and value of funds) reclaimed from borrowers that are in arrears or have defaulted. However, as these have only been designed and launched recently (within 2023), these have not been explored at this stage of the process evaluation. As mentioned above, accredited lenders reported that their existing approaches were commercially viable, so these pilots should be seen as mechanisms to explore whether different approaches can demonstrate value for money to the Government.

Removal of guarantees

The BBB introduced a process for removing the guarantee from loans that were ineligible for the guarantee, and had been determined to be ineligible for the Covid-19 Loan Guarantee Schemes and/or breached scheme rules.[[29]](#footnote-30) There are different reasons for the removal of the guarantee, but essentially the guarantee has been applied to the loan when it should not have been given the scheme rules. These reasons were reported to be human and administrative error, for example approving facilities for companies that did not meet the scheme criteria (ineligible sector, or ineligible due to company formation date), or which were a duplicate facility. Ineligible facilities are identified by the BBB through an inspection of monitoring data submitted by accredited lenders and an analysis of the CIFAS database. The use of the CIFAS database is compulsory for the BBLS, but some lenders reported using the database for CBILS and CLBILS as well.

Where an ineligible facility is identified, the relationship manager will discuss the individual loans with the lender, presenting that the loans were ineligible for the scheme and developing a common understanding of whether the loan should be removed from the Covid-19 Loan Guarantee Schemes.

This process was reported to work well by stakeholders, both in terms of the identification of ineligible facilities through the data review and the relationship managers’ conversations with accredited lenders. Stakeholders reported that in general lenders accepted the reasons why loans were ineligible and were satisfied that these should be removed. For more complicated cases, a level of mediation and negotiation was required from the relationship manager, as stakeholders felt it was important to generate a consensus on the removal of guarantees rather than taking an adversarial approach.

The relationship manager role was seen as being important in these discussions, as the relationship manager had built up trust with the lender and can also understand their point of view given their understanding of how the lender works, but balances this with the needs of the Bank and the schemes. At the time of the evaluation, stakeholders reported that no cases had led to serious dispute between the Bank and any accredited lender.

Once agreement is reached between the accredited lender and the BBB about the need to remove a guarantee, the lender would remove the guarantee from their portfolio and report this back to the Bank’s data portal, meaning the loan has been removed from the Covid-19 Loan Guarantee Schemes. There were no issues or challenges reported with this process.

The ineligibility of facilities due to sectors or company formation dates can be clearly highlighted by the relationship manager to the accredited lender, using the facility data and the scheme rules. Another reason for ineligibility of loans was described as duplicate facilities for BBLS. The reasons for these appearing would not always be human or administrative error, as the CIFAS database used to check for duplicates was not a requirement in the early days of the schemes (and only became a requirement for BBLS, although some lenders reported using the database voluntarily for CBILS and CLBILS). Some lenders have highlighted challenges with the reliability of the CIFAS database. These cases require discussions and negotiations between the BBB and accredited lenders about whether duplicate facilities are ineligible, and if so which facility is an ineligible duplicate facility and in some cases needs to be removed from the schemes. Where the ineligible facility requires discussion and negotiation, the relationship manager role is more important than for the cases which involved human or administrative error.

## Counter fraud work and Enforcement

This section provides an assessment of the processes used to identify suspected cases of fraud and enforcement work to secure payments and prosecute individuals who have committed fraud through the schemes. The section draws on evidence from the BBB’s management information, and depth interviews with stakeholders and accredited lenders.

Governance

The National Audit Office undertook a review of the BBLS in 2021 and made several recommendations about the scheme. These included improving upon its identification, quantification, and recovery of fraudulent loans within the Scheme. The report also concluded that the counter-fraud strategy evolved over time but lacked clear governance at the outset and sufficient resources.

Stakeholders reported that the current governance structures for anti-fraud activities includes individuals from all relevant organisations and departments, such as the BBB, DBT, the Cabinet Office Anti-Fraud team and input from UK Finance. No stakeholders felt that individuals from any other department or organisation should be involved in the governance of these activities. However, in addition to the correct organisations being represented, some stakeholders reported that the skills and experience of the individuals involved in the governance structures has improved as the schemes have progressed. For example, boards overseeing the enforcement activity now include individuals with a background in enforcement with practical experience of how investigations are implemented, and are therefore able to provide input into the enforcement activity rather than the external agencies acting in a more independent manner.

One of the reasons stakeholders suggested for the improvement in experience in the governance was an increase in focus and resources available to tackle fraudulent activity. The resources made available for enforcement activities were increased in 2022, which has led to the recruitment of individuals with relevant experience into Government departments.

A further development which has been reported by stakeholders to have had a positive impact on the Governance of the Covid-19 Loan Guarantee Schemes is the formalisation of a Counter Fraud Strategy. This has been developed by DBT and the BBB over the last year and describes all the activities being undertaken to attempt to identify fraudulent facilities and to reclaim the value from these fraudulent claims. This documents both existing activities and planned future activities, underpinning what each activity aims to achieve and the responsibility for the activity. It was reported that this document helps to provide clarity on different activities and their purpose, and how their effectiveness will be measured (and therefore influence their implementation). However, it is still too early to assess the effectiveness and impact of the Counter Fraud Strategy.

Detection of fraud cases

As highlighted in the previous process evaluation, the scheme design for the BBLS led to an increase in the likelihood of fraud compared to BAU lending. This risk was identified in the scheme design phase, which was accepted at a political level by Ministers in the ministerial direction. The risks were reported to be accepted owing to the urgency of the situation and the risk of irreversible damage to the economy.

The National Audit Office undertook an investigation into BBLS in 2021, which had a focus on the strength of counter fraud processes. The investigation found that the approach to fraud prevention evolved with time, with certain measures added after the scheme launched.

An initial BBB-commissioned assessment of the level of fraud occurrence associated with a sample of loans undertaken in March 2021 had a central estimate that around 11% of BBLS loans were likely to be fraudulent (with an estimated value of £4.9bn, based on facilities drawn down until 31 March 2021). An updated assessment undertaken in October 2021 indicated that the estimate of fraud occurrence may be lower than this (at 7.5%).

The BBB has produced more recent data which presents the value of cases that accredited lenders have flagged as suspected fraud cases on the three Covid-19 Loan Guarantee Schemes. This showed that in the BBLS, around £1.7 billion of lending has been flagged as suspected cases of fraud. It should be noted that this is suspected fraud cases as of June 2023 – and flags of suspected fraud can be added and removed by lenders at any point.[[30]](#footnote-31) The £1.7 billion represents 2.2% of the total lending through the Covid-19 Loan Guarantee Schemes. The value of facilities that have been flagged as suspected cases of fraud in the Covid-19 Loan Guarantee Schemes are (as of June 2023):

* 3.5% of the value of BBLS (£1.7 billion)
* 0.2% of the value of CBILS (£39 million)
* 0% of the value of CLBILS (£0 million)

The vast majority of accredited lender flagged suspected fraud cases are from the BBLS portfolio (around 97% of the total value of suspected fraud from the three schemes).

For BBLS, the estimated value of loans with suspected fraud flags is lower than the research to estimate potential cases of fraud at the outset of the scheme. The potential reasons for this decrease were suggested as being the full repayment of facilities that were highlighted as potential cases of fraud and the removal of the guarantee from some cases that were identified as potentially fraudulent.

##### Figure : Proportion of the value of schemes portfolio value that are suspected fraud cases

Source: BBB Management Information, June 2023 (published September 2023)

Stakeholders and accredited lenders reported that the processes that have been introduced to identify suspected cases of fraud have been comprehensive. These processes have included:

* Accredited lenders reported that they have used their BAU practices internally to identify suspected cases of fraud post award, such as monitoring of business accounts and for asset finance checking that actual assets have been purchased and are in use.
* For the BBLS, the compulsory use of the CIFAS database to identify potential duplicate loans (which many lenders reported not using prior to the Covid-19 Loan Guarantee Schemes). Some lenders reported a challenge in that the CIFAS database returned false positive results for duplicate loans, and further checks were required after examining the database.
* The BBB, DBT and the Cabinet Office undertook additional analysis to identify indicators of suspected cases of fraud. The analysis used Government datasets that link individuals and companies (forming a network analysis), Companies House data and HMRC data. The Cabinet Office analysis took place post facility approval. These sets of analyses were initially applied to the BBLS portfolio, but have since been extended to the CBILS portfolio. The reason that this additional activity has been undertaken is due to accepted additional risk of fraudulent activity on the schemes due to their design, and a desire to protect the public purse from this fraudulent activity. Both stakeholders and accredited lenders reported that this activity was beneficial in supporting a stringent assessment of suspected fraud activity, and added value in that the accredited lenders themselves could not have completed the analysis due to resource and data access issues.[[31]](#footnote-32) Both stakeholders and accredited lenders reported that this additional information was being used to further identify suspected cases of fraud. The analysis undertaken by the Cabinet Office led to a sharing of 6,478 instances of indications of suspected fraud, and of these accredited lenders accepted that 2,817 met their definitions of suspected fraud (43%).

However, some accredited lenders reported challenges in utilising the data. Firstly, a barrier to use reported by some lenders was their regulatory and legal ability to use the data to mark a business as a suspected case of fraud and further investigate the business. They reported that there was a question mark over whether this data could be used in their existing regulatory framework to identify suspected fraud cases – for example, whether they would be compliant with their regulatory framework if they used the external information as a reason to launch a full investigation of suspected fraud against a borrower.

Stakeholders also reported that there are differences in appetite among different accredited lenders to utilising the data provided by the data analytics exercise. The lenders did not report this as meaning that they cannot use the data, but that it is a further barrier which needs to be worked through so that the data can be fully exploited and potentially used on future similar schemes. A further challenge raised by stakeholders was the appetite of some lenders to utilise the data, preferring not to engage with it. Some smaller lenders interviewed did report looking at the data of suspected cases of fraud, and when examined they did not reach the same conclusion as the data analytics, and did not add any suspected fraud flags to their data. This led to a conclusion that the work was not adding value to their organisation.

A further outcome, which particularly relates to the BBLS, was reported by both stakeholders and accredited lenders that there had been an improvement in the level of engagement and knowledge sharing between the BBB and accredited lenders, and between accredited lenders themselves about how to identify fraudulent activity. This was facilitated by working groups run by the Bank as part of the schemes. Stakeholders and accredited lenders felt that such activity would not have taken place in the absence of the schemes. However, the benefit of this activity was not recognised by all accredited lenders, with some feeling that the recommendations and practices being discussed in these meetings was not relevant to them as a lender (due to the size or type of lender) or because their own practices were already ahead of what was being discussed. Even in the cases where lenders did not see a benefit to their organisation, they still reported that it was beneficial to the industry for these discussions to take place.

Stakeholders felt that there was potentially more modelling using further Government and private data sources which could be used to attempt to identify further cases of suspected fraud. However, the stakeholders acknowledged there would be diminishing returns from these exercises as most of the suspected cases of fraud have already been identified. However, there was not a consensus among stakeholders around the additional value of further fraud identification work, as some lenders are reluctant to utilise the suspected cases of fraud identified from the modelling work and there is limited capacity to enforce further cases of fraud (although many others have used the data provided to identify suspected fraud cases and pursue recoveries).

Enforcement activities

Accredited lenders reported using their BAU practices to report relevant suspected cases of fraud to external agencies such as NATIS. This involved the lender making contact with the external agency when they believed a serious case of fraud had been committed, and responding to the external agencies’ requests for information if the case was being pursued.

However, enforcement activities have been bolstered as a result of the Covid-19 Loan Guarantee Schemes. This is because more resource has been devoted to it from the UK Government, to attempt to protect and limit the public spending on fraudulently claimed guarantees. Stakeholders reported that there had not been significant changes in the type of enforcement work that has been undertaken by external agencies, but the volume of cases has increased significantly as a result of the schemes.

Insolvency Service

The Insolvency Service undertakes both civil and criminal investigations leading to civil director disqualifications and criminal prosecutions for financial misconduct by businesses. Stakeholders reported that the Service utilised existing practices which had worked well in identifying fraudulent cases and securing criminal and civil justice outcomes. It was reported by stakeholders that the type of work being undertaken by the Insolvency Service being similar to that undertaken prior to the Covid-19 Loan Guarantee Schemes, and the Insolvency Service already reporting into DBT (as an executive agency reporting into DBT). As a result of these factors, stakeholders reported that the service was able to select which cases to pursue without additional input from DBT.

The outcomes achieved by the Insolvency Service at the time of the evaluation included:

* 600 director disqualifications due to Covid loan scheme abuse.
* Claiming compensation from businesses involved in Covid loan scheme abuse. The value of this is not included in the outcomes the Insolvency Service performance is measured against, and this activity has increased compared to their BAU activity through a reported desire to protect the public purse.
* Securing voluntary repayments from businesses, where the Insolvency Service contacts a business and prior to enforcement action taking place the business repays the loan amount.

However, the Insolvency Service faced some challenges in pursuing the cases of fraud through the Covid-19 Loan Guarantee Schemes, particularly the BBLS, where stakeholders reported (alongside the figures reported in Figure 8) that most of the cases of fraud came from. These challenges were:

* **Resource challenges:** These were the most significant challenges faced by the Insolvency Service. The increase in lending, and particularly the way in which lending was provided through the BBLS meant that there was a large increase in suspected cases of fraud to be investigated and prosecuted, and the Insolvency Service required additional staffing to deal with this. However, due to the nature of the schemes being time limited (all the lending through the schemes has already been provided), this additional staffing would only be required for a fixed period. This, coupled with the fact that the resources required workers with high and niche skills sets, made recruitment challenging. This challenge was resolved, but it took a significant period of time for the service to be staffed at the required level.
* **Administrative challenges:** These challenges were less significant than the resource challenges and were reported to be resolved relatively quickly. They involved ways of working between the BBB and the Insolvency Service, such as lines of communication and having administrative processes, such as the provision of the bank details to transfer money reclaimed by the service to. These challenges did not significantly impact upon the Insolvency Service’s ability to undertake its investigations and prosecutions.

NATIS

The second strand of enforcement activity is led by NATIS, which investigates more serious cases of fraud through the schemes such as organised crime. The NATIS enforcement activity has generated some outcomes (as of 30 September 2023), which include[[32]](#footnote-33):

* Opening 228 investigations into BBLS fraud covering a total value of £76 million of BBLS facilities.
* 104 arrests from these investigations.

The NATIS enforcement activity is managed through DBT. Staff from NATIS were seconded into DBT (BEIS) to provide the enforcement arm for the Covid loans. There have been changes made to the framework through which the NATIS activity is delivered during the course of the schemes. Changes are currently being made to the processes being used to manage the NATIS enforcement activity. As a result of these ongoing changes, the effectiveness of the NATIS enforcement activity will be fully evaluated in the Year 3 evaluation.

## Conclusions

The findings presented in the preceding sections present an assessment of the processes used to monitor lenders, secure repayments and counter fraud and enforcement activity. In this section these key findings are used to answer the key evaluation questions set out in the ITT.

To what extent did scheme design strike an appropriate balance between speed of delivery and controls?

The research identified some issues in the original design and implementation of the schemes which continue to have significant resource constraints on their delivery, which impacts upon the schemes’ effectiveness. These are understandable given the time pressures under which the schemes were designed and implemented, but demonstrate the impact that the speed of design and implementation have had on delivery.

These issues were around eligibility and compliance. Due to the self-certification nature of the scheme, ineligible and duplicate facilities were initially accepted onto the BBLS. Subsequently, resource has had to be dedicated to identifying these ineligible facilities and obtaining consent from the accredited lenders to remove these from the guarantee. If automated processes and checks on eligibility had been in place at the outset of the schemes, resources dedicated to identifying and removing ineligible loans would not have been required, although introducing these checks would have taken additional time and resource at the scheme design and implementation stage.

This suggests that there are some areas where similar schemes could be improved in the future to attempt to improve compliance and reduce the resources required to implement schemes – however, it is understandable that these were not introduced for the Covid-19 Loan Guarantee Schemes given the challenging timescales for the design and implementation of the schemes.

How effective are the processes used by lenders?

Many of the processes used in the delivery of the Covid-19 Loan Guarantee Schemes have been effective. These include:

* **The process to remove any ineligible facilities** was reported to be working efficiently by stakeholders, in both identifying ineligible facilities and removing these from the scheme portfolios. The relationship manager role was reported to play an important part in the effective functioning of this process.
* **The processes used to identify suspected cases of fraud:** the BBB, DBT and the Cabinet Office have undertaken data modelling exercises to identify suspected cases of fraud, on top of those cases identified by lenders through their BAU monitoring approaches. Both stakeholders and accredited lenders reported that this activity was beneficial in supporting a stringent assessment of suspected fraud activity, and added value in that the accredited lenders themselves could not have completed the analysis due to resource and data access issues. The analysis undertaken by the Cabinet Office led to a sharing of 6,478 instances of indications of suspected fraud, and of these accredited lenders accepted that 2,817 met their definitions of suspected fraud (43%).
* **Enforcement activities delivered by the Insolvency Service:** although not a process used by lenders, this is a process used by the Covid-19 Loan Guarantee Schemes which is working well. These processes have overcome some initial resource and administrative challenges and are reported to be delivering investigations and enforcement activity in line with expectations. The Insolvency Service has not had to introduce new ways of working to undertake enforcement activity for the Covid-19 Loan Guarantee Schemes.

To what extent did scheme performance meet objectives and expectations? Which areas of delivery worked well?

Around £1.7 billion of lending through the Covid-19 Loan Guarantee Schemes has been flagged as suspected cases of fraud by accredited lenders, or 2.2% of total lending. The vast majority of suspected cases of fraud are in the BBLS portfolio (3.5% of the lending through the BBLS, 0.2% for CBILS and 0% in CLBILS). The risks of fraud in the BBLS in particular was highlighted at the scheme design stage and were accepted by Ministers. However, the current estimated level of suspected fraud is lower than previous estimates from the Bank (of 11% and 7%). The current estimates of suspected fraud are reported to be more robust than the previous estimates.

Generating learning

One of the key overarching findings from this stage of research is that there appears to have been improvements made to the processes used to deliver the schemes as delivery has progressed. These improvements appear to have been in:

* **Data sharing:** Accredited lenders and stakeholders reporting fewer issues with data reporting than in the first process evaluation, and evidence that more lenders are now utilising some of the automated processes (the APIs) for data sharing.
* **Management of lenders:** The introduction of the relationship manager role for the BBLS (the role was already in place for CBILS and CLBILS) was reported to provide an improvement in how lenders are managed from a BBB viewpoint, meaning they are in a better position to hold challenging conversations with lenders about their performance in the schemes.
* **The formalisation of the counter fraud strategy:** Previously no formalised strategy existed for the schemes. The introduction of a formalised strategy to document counter fraud activities and planned activities, their objectives, and how effectiveness would be measured, provided an improvement in clarity about the counter fraud work to be undertaken as part of the schemes.
* **Improvements in the identification of suspected cases of fraud:** Utilising Government and other data sources and expertise to identify indicators of suspected cases of fraud and sharing this information with lenders has helped to improve accredited lenders’ identification of suspected cases of fraud. However, some challenges remain in ensuring that this data is/can be used by lenders.
* **Enforcement activity management at DBT:** These improvements are currently ongoing, including developing a new triage process. However, improvements have already been made in terms of improving the oversight of enforcement activities, increasing the skills base of those involved in the management of the work strand and documenting what the purpose of the activities are.

Has the design process for the recovery regime learnt any lessons from scheme design? Are the debt recovery processes fit for purpose?

The BBB’s management data suggests that 22% of the Covid-19 Loan Guarantee Schemes portfolio value has been fully repaid (as of 30th June 2023). This represents £17 billion of repayments made. This does not include partial repayments for facilities where full payment has not yet been provided. A further 40% (£31 billion) is on schedule to be repaid (although this could fall into arrears or default). The value of facilities that have defaulted (including facilities that have been settled and claimed) or are in arrears in the Covid-19 Loan Guarantee Schemes are (as of June 2023):

* 22% of the value of BBLS (£10.4 billion)
* 4% of the value of CBILS (£1.1 billion)
* 1% of the value of CLBILS (£46 million)

The default rates are above the arrears and default rate for SMEs in commercial lending both before and after the Covid-19 pandemic (around 2%[[33]](#footnote-34)). However, the higher rate of arrears observed in the BBLS was anticipated at the scheme design stage, which was accepted by Ministers. The BBB had modelled multiple scenarios, including a 25% default rate for BBLS while the scheme was being designed, and the current rate is below this scenario. Lenders reported that the approaches used to secure repayments were in line with their BAU models and were not the reason for the higher than usual arrears / defaults in the schemes.

Evidence from the stakeholder interviews suggests that the recovery processes are working as expected. The effectiveness of repayment mechanisms, and in particular the recovery pilots’ activities, will be fully assessed in the Year 3 process evaluation.

# Year 2 impact evaluation

## Introduction

The aim of the Year 2 impact evaluation was to quantify the impacts of the three Covid-19 Loan Guarantee Schemes on business-level economic outcomes of borrowers in the second year after the onset of the pandemic. More specifically, it consists of three main strands of analysis:

1. Did the Covid-19 Loan Guarantee Schemes have an impact on borrowers’ survival prospects?
2. Did the Covid-19 Loan Guarantee Schemes have an impact on borrowers’ turnover and employment?
3. Did the Covid-19 Loan Guarantee Schemes have an indirect impact on businesses’ (borrowers’ and non-borrowers’) turnover and employment?

To address these research questions, Ipsos undertook a survey of two sets of businesses. The first set of businesses received funding through one of the Covid-19 Loan Guarantee Schemes. The second set of businesses faced challenges or opportunities as a result of the Covid-19 pandemic and were eligible for one of the Covid-19 Loan Guarantee Schemes but did not receive a facility under one of the Covid-19 Loan Guarantee Schemes.

The methods used in this evaluation were chosen to try and isolate the impact of the Covid-19 Loan Guarantee Schemes on business outcomes from variation in outcomes caused by the different challenges that businesses may have faced during the pandemic and any impact of other support schemes. However, the results should be interpreted with the context that the pandemic and other economic shocks (such as the energy crisis) presented unprecedented and varied challenges to businesses and there were many different support schemes available to businesses at that time.

In total, 961 businesses completed a mixed mode survey (online and telephone[[34]](#footnote-35)) between August 2022 and October 2022, of which 242 interviews were with BBLS borrowers, 189 interviews were with CBILS borrowers, and 9 interviews were with CLBILS borrowers. The remaining 521 interviews were with non-borrowers. Of the 961 interviews completed, 666 were with businesses that also responded to the survey conducted for the first year of the evaluation and 295 did not.

Due to the small number of CLBILS interviews (in part due to the limited population size), and the similarity between CBILS and CLBILS (the main difference being that CLBILS served larger businesses, did not include a Business Interruption Payment, and the term was shorter), the CBILS and CLBILS samples were combined in the analysis.[[35]](#footnote-36) [[36]](#footnote-37)

The Year 2 impact evaluation relies on a combination of survey-based self-reported impacts, secondary data, and econometric analysis of survey data. In particular:

* The impact of the Covid-19 Loan Guarantee Schemes on business survival is estimated based on observed closure rates in BBB Portal Data as well as businesses’ own assessment of their survival prospects in the absence of the Covid-19 Loan Guarantee Schemes, collected through the survey.
* The estimation of the direct effect of the Covid-19 Loan Guarantee Schemes on borrowers’ turnover and employment is based on econometric analysis of survey data that incorporates several business characteristics, the kinds of obstacles they faced because of the pandemic, and use of other business support schemes.
* Indirect impacts of the Covid-19 Loan Guarantee Schemes are also explored econometrically, using data from the survey as well as BBB Management Information and HMRC data on the use of the Coronavirus Job Retention Scheme (CJRS).

This chapter also triangulates some of the results with other sources of evidence (for example analysis from DBT and the ONS). Furthermore, the Year 2 results will be assessed in the Year 3 report of this evaluation (in a similar manner to the secondary analysis of the results from the Year 1 report that are presented later in this Year 2 report).

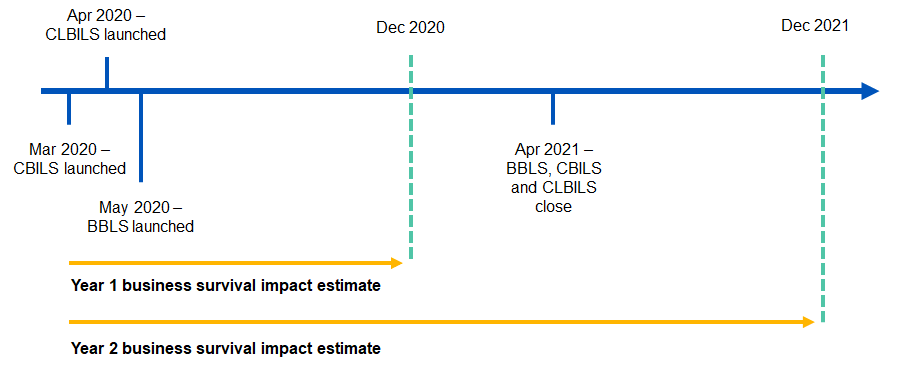
For increased comparability between the borrower (or treatment) group and the non-borrower group, non-borrowers were screened during fieldwork based on whether they faced challenge or opportunities because of the Covid-19 pandemic. In particular, businesses that indicated they did not face challenges or opportunities arising from the Covid-19 pandemic were excluded from consideration for the non-borrower group.[[37]](#footnote-38) This ensures that, like borrowers,[[38]](#footnote-39) non-borrowers were also impacted by the pandemic and therefore makes it more likely that they faced similar financial or operational issues to borrowers. To further increase comparability of the borrower and non-borrower groups considered in the econometric analysis, additional matching between both groups was carried out (based on borrower characteristics, and the kinds of obstacles faced during the pandemic).[[39]](#footnote-40)

The rest of this chapter outlines the results of each of the strands of analysis listed above in turn, starting with the analysis of business survival – based on survey and secondary data – the econometric analysis of turnover and employment – based on survey data – and the econometric analysis investigating whether the Covid-19 Loan Guarantee Schemes had indirect impacts on borrowers’ and non-borrowers’ turnover and employment – based on survey and secondary data. Additional methodological information and results can be found in Annex 3.

## Impact on business survival

To assess the Covid-19 Loan Guarantee Schemes’ impact on the survival of businesses, this study estimated the additional number of businesses that would have ceased trading without access to the schemes by comparing observed and (self-reported) counterfactual closure rates. Figure 9 shows the timeline over which the business survival impacts are estimated in the first and second year of the evaluation.

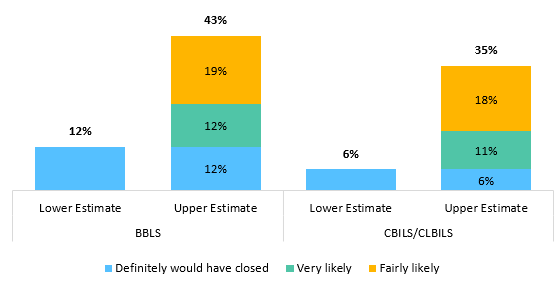
##### Figure 9: Timeline of self-reported business survival analysis



The observed closure rate of businesses which received a loan under BBLS, CBILS or CLBILS, defined as the proportion of borrowers that permanently closed before the end of December 2021, is estimated using BBB Portal Data (see Annex 3 for more detail). This is then compared to the counterfactual closure rate, according to a scenario under which the Covid-19 Loan Guarantee Schemes had not been in place, which is estimated using a survey question which asked businesses to assess the likelihood with which they would have permanently closed before the end of December 2021 if they had not received funding from one of the Covid-19 Loan Guarantee Schemes.[[40]](#footnote-41)

It is estimated that between 12% and 43%[[41]](#footnote-42) of BBLS borrowers that have not permanently closed would have permanently closed by December 2021 if they had not had access to the Covid-19 Loan Guarantee Schemes, compared to between 6% and 35%[[42]](#footnote-43) of CBILS/CLBILS borrowers. An estimated range is presented because of the uncertainty (and difficulty) around borrowers providing an assessment of their hypothetical survival prospects in the absence of receiving their loan. In particular, to answer this question accurately, businesses must be able to anticipate how they may have acted differently if they had not received their loan and whether this behaviour would have been sufficient to ensure the survival of their business. The lower estimate relates exclusively to businesses indicating that they definitely would have permanently closed without their loan, whereas the upper estimate also includes businesses who indicated that they were very likely or fairly likely to have permanently closed without their loan. This is presented graphically, showing the breakdown of responses that are included in the upper estimate, in Figure 10. The results of this analysis will be assessed using secondary data as part of the Year 3 report and as such are provisional.

##### Figure 10: Lower and upper estimates of Year 2 self-reported closure rates without access to the Covid-19 Loan Guarantee Schemes



Source: London Economics’ analysis of survey data

Table 6 below compares the results of this analysis to those from the Year 1 report, which relate to the proportion of borrowers that would have closed by December 2020 if they had not had access to the Covid-19 Loan Guarantee Schemes.

##### Table 6: Self-reported closure rates without access to the Covid-19 Loan Guarantee Schemes: Year 1 survey-based estimate compared to Year 2 survey-based estimate

| Scheme | Year 1 | Year 2 |
| --- | --- | --- |
| BBLS | 10%-34% | 12%-43% |
| CBILS/CLBILS | 7%-28% | 6%-35% |

Source: London Economics’ analysis of survey data

Both the lower and upper bound estimates are higher in Year 2 than Year 1, with the exception of the lower bound estimate for CBILS/CLBILS. This likely reflects that businesses believe that the loans they received under the Covid-19 Loan Guarantee Schemes continued to help them survive during 2021. That the CBILS/CLBILS estimate is slightly lower in Year 2 than Year 1 reflects that fewer businesses indicated that they definitely would have permanently closed in Year 2 and more businesses indicated that they were very likely or fairly likely to have permanently closed.

The closure rate in the absence of support under the Covid-19 Loan Guarantee Schemes (counterfactual closure rate) tends to decrease with size for BBLS borrowers, although no clear pattern with regards to size can be seen for CBILS/CLBILS borrowers.[[43]](#footnote-44) BBLS businesses that are majority owned by females have a similar counterfactual closure rate to those that are minority female-owned.[[44]](#footnote-45) In contrast, majority female-owned CBILS/CLBILS businesses have a slightly lower counterfactual closure rate than other businesses that used CBILS/CLBILS.[[45]](#footnote-46) With regards to both BBLS and CBILS/CLBILS borrowers, the counterfactual closure rate for businesses which are majority owned by individuals from an ethnic minority was higher than for other businesses.[[46]](#footnote-47) Variation in the counterfactual closure rate was also found across region and sector.[[47]](#footnote-48)

The observed closure rates – calculated based on BBB Portal Data – are found to be substantially lower than the counterfactual closure rates outlined above. It is estimated that 3% of BBLS borrowers and 1% of CBILS/CLBILS borrowers permanently closed before the end of December 2021. To estimate the percentage of borrowers that may have permanently closed without the schemes, one needs to take into account the fact that the counterfactual closure rates presented above are only calculated for businesses that had not permanently closed. Therefore, the impact of the Covid-19 Loan Guarantee Schemes is estimated as follows:

As a result, taking both the counterfactual and observed closure rates into account, it is estimated that an additional 12%-42% of BBLS borrowers (i.e. 175,000 to 618,000 businesses[[48]](#footnote-49)) and 6%-35% of CBILS/CLBILS borrowers (i.e. 4,000 to 25,000 businesses[[49]](#footnote-50)) may have ceased trading by December 2021 (i.e., in 2020 or 2021) without access to the Covid-19 Loan Guarantee Schemes. These results are presented in Table 7. Based on the survey results, BBB Portal Data and BBB management information, it is estimated that these borrowers account for approximately 0.9 million to 3.4 million pre-pandemic jobs.[[50]](#footnote-51)

It should be noted that these results will be assessed in a secondary analysis as part of the Year 3 evaluation. The assessment of the Year 1 business survival analysis using secondary data (presented in the next chapter) suggested a lower impact than the survey-based estimates from the Year 1 analysis. The next chapter discusses possible reasons underlying the difference between the secondary and survey-based analyses (for example borrowers’ self-reported likelihood of closure in the absence of the Covid-19 Loan Guarantee Schemes may be affected by recall issues and lead to an overestimated impact). Therefore, the results in this section should be treated with caution, as it is possible that the Year 3 secondary analysis may find a smaller impact on business survival than these results show.

##### Table 7: Estimated increase in proportion and number of business closures in absence of the BBLS and CBILS/CLBILS schemes

| Scheme | Proportion of borrowers | Number of borrowers |
| --- | --- | --- |
| BBLS | 12%-42% | 175,000-618,000 |
| CBILS/CLBILS | 6%-35% | 4,000-25,000 |

Source: London Economics’ analysis of survey data, BBB Management Information and BBB portal data

As discussed in the Year 1 report, Brown and Cowling (2020) found that 8.6% of businesses had no retained earnings before the pandemic and were therefore at immediate risk of a liquidity crisis as the pandemic began.[[51]](#footnote-52) Building on this, Calabrese et al. (2022) found that the number of businesses seeking finance increased by 9.6 percentage points between April-June and July-September 2020. The authors suggest that the businesses that did not seek finance in April-June 2020 but did in July-September 2020 are likely to have had precautionary savings at the onset of the pandemic but had since ran out of cash.[[52]](#footnote-53) Therefore, it is argued that the proportion of businesses at risk of ceasing trading during the pandemic was larger than the 8.6% found by Brown and Cowling, as businesses which had savings before the pandemic were also found to be at risk.

Calabrese et al. (2022) conclude that the loan guarantee schemes were important for businesses and are likely to have prevented a bankruptcy crisis in the short term. However, the withdrawal of these schemes and other business support measures introduced during the pandemic – for example the Coronavirus Job Retention Scheme (CJRS), VAT payment deferrals, temporary changes to insolvency law through the Corporate Insolvency and Governance Act 2020 (CIGA 2020) – was therefore expected to lead to an increase in business closures in 2021 and 2022 compared to 2020. Overall, emerging evidence suggests that there may indeed be an upward trend in business closures.

**Business demographics and the impact of Covid-19**

DBT’s Business Population Estimates (BPE)[[53]](#footnote-54) show a 1.9% increase in the number of UK businesses between 2019 and 2020. This is followed by decreases between 2020 and 2021 (of 6.5%) and 2021 and 2022 (1.5%). However, the declining business numbers can be wholly accounted for by unregistered businesses, which are mostly self-employed people classed as sole proprietorships.[[54]](#footnote-55) When only looking at registered businesses, the business population increases by 0.3% between 2020 and 2021 and by 0.6% between 2021 and 2022. A larger increase in the business population can be seen throughout 2021 than during 2020, which could be driven by a decrease in the number of business closures, an increase in the number of business births or both.

Looking only at registered businesses, the ONS (2022)[[55]](#footnote-56) find a small increase in the business closure rate between 2020 and 2021 from 10.3% to 11.1%. This compares to an increase in the business birth rate from 11.5% to 12.4%. This suggests that the faster growth in the number of businesses in the UK in 2021 as shown in the BPE could be caused by an increase in the business birth rate, whilst the business closure rate also increases.

Lastly, quarterly experimental business demography statistics[[56]](#footnote-57) show that an average of 77,200 businesses permanently closed per quarter in 2020. This is similar to the pre-pandemic average, which was 78,600 per quarter between 2017 and 2019. In contrast, an increase in the number of business closures can be seen in following years. In 2021, 86,300 businesses permanently closed on average per quarter, which represents an increase of 12% compared to 2020. A further increase of 10% (up to 94,600 per quarter) can be seen in 2022.

## Impact on turnover and employment

Econometric models are used to estimate the impacts of the Covid-19 Loan Guarantee Schemes on businesses’ turnover and employment in the second year of the pandemic. The econometric approach is based on a comparison of business outcomes between borrowers and a group of non-borrowers before and in the years after the policy intervention (i.e. the Covid-19 Loan Guarantee Schemes).

The group of non-borrowers to which the outcomes of borrowers are compared was constructed to be as similar as possible to the sample of borrowers to ensure that variations in business outcomes were more likely due to the Covid-19 Loan Guarantee Schemes’ impacts rather than underlying differences between the two groups of businesses. In practice, this was implemented in two steps:

1. Non-borrowing businesses were screened during fieldwork based on whether they faced challenge or opportunities because of the Covid-19 pandemic. This aimed to ensure that non-borrowers were affected by the pandemic, thereby potentially creating similar financial or operational issues to those experienced by borrowers.[[57]](#footnote-58)
2. Among the sample of non-borrowers, a ‘control’ group was constructed based on their similarity to borrowers with respect to pre-pandemic characteristics (for example turnover and sector) and the kinds of business obstacles encountered during the pandemic – described in Annex 3. This exercise is implemented through propensity score matching (PSM).[[58]](#footnote-59) A limitation of this method is that it does not allow to match borrowers and non-borrowers based on unobserved characteristics (for example attitudes to risk).

The outcomes of the sample of borrowers and the control group are compared against one another before and in the years after the introduction of the Covid-19 Loan Guarantee Schemes. This allows for pre-existing differences between the groups that may remain after steps 1 and 2 above to be accounted for. This approach differs from the difference-in-differences approach used in the Year 1 report (and the secondary assessment of that analysis presented later in this report) in that there are three years of data included in the model rather than two. A fixed effects estimation framework is used to estimate the impacts on turnover and employment. Full details on the data used and econometric approach are provided in Annex 3.

Full results from the econometric analysis are presented in Annex 3 (Table 28, Table 29 and Table 30), with the main findings for each outcome of interest and the interpretation in percentage terms of the coefficient of interest outlined below. Two sets of analysis are performed, one for BBLS and the other for CBILS and CLBILS combined.[[59]](#footnote-60)

In addition, to assess the robustness of the results, the econometric model is also run controlling for the possibility that certain businesses may have used other support schemes during the pandemic, such as the Coronavirus Job Retention Scheme (CJRS) or VAT deferral. The inclusion of these control variables in the model is intended to minimise the risk that any impact of these schemes is incorrectly attributed to the Covid-19 Loan Guarantee Schemes.

Turnover

The econometric analysis does not identify a statistically significant[[60]](#footnote-61) impact of the BBLS scheme on borrowers’ turnover in the second year of the pandemic (Table 8). In terms of the CBILS/CLBILS schemes, the results suggest that borrowers’ turnover was approximately 14% higher (significant at the 5% level) than it would have been without borrowing through the scheme. However, this result is not robust to the inclusion of controls related to participation in other schemes. This suggests that part of the estimated impact of CBILS/CLBILS on turnover may be due to other support schemes. It should be noted that, because the analysis is based on a survey of businesses which have survived, these estimated impacts mostly exclude any impact on turnover from business survival (discussed in the previous section).

##### Table 8: Percentage difference in turnover associated with borrowers’ use of the schemes

| Scheme | Without controls | With controls |
| --- | --- | --- |
| BBLS | 0% | 2% |
| CBILS/CLBILS | 14%\*\* | 12% |

Note: \*\*\* p-value<0.01, \*\* p-value<0.05, \* p-value<0.1. In the Year 2 survey, recontact businesses were asked to provide turnover figures for their latest complete financial year. Newly contacted businesses were asked to provide turnover figures for their latest complete financial year, their financial year between 2020 and 2021 and their financial year prior to 23 March 2020. Full results are provided in Table 28 in Annex 3. Given that the dependent variable of the regression is expressed in logarithmic form, the percentage change in turnover associated with borrowers’ use of the Covid-19 Loan Guarantee Schemes (denoted by the variable “Borrower, post-intervention” taking the value of 1) is approximately equal to , where is the regression coefficient of that variable (for example in the case of the CBILS/CLBILS with no controls, = 14%). Source: London Economics’ analysis of survey data.

As discussed in the Year 1 report, the lack of an impact of the schemes on turnover is consistent with the way in which borrowers typically used the funds from the Covid-19 Loan Guarantee Schemes. In particular, the main use of funds for most borrowers (51% for BBLS and 59% for CBILS/CLBILS) was for working capital or to provide financial security rather than activities that are likely to generate turnover.

To assess whether the results vary geographically, by sector or according to protected characteristics of the ownership group the impacts of the Covid-19 Loan Guarantee Schemes were also estimated according to these characteristics.[[61]](#footnote-62) The estimated coefficients of interest remain largely insignificant (the Northern Ireland-specific coefficient in the CBILS/CLBILS model – positive and statistically significant – being an exception).[[62]](#footnote-63) This suggests that the impact of the Covid-19 Loan Guarantee Schemes mostly did not differ according to these dimensions (see Table 31, Table 33 and Table 35 in Annex 3).

Employment

The econometric analysis does not identify a statistically significant impact of the Covid-19 Loan Guarantee Schemes on the number of people employed by borrowers in the second year of the pandemic (Table 9). As above, it should be noted that this impact mostly excludes the impact on employment from surviving businesses that would have ceased trading permanently in the absence of the Covid-19 Loan Guarantee Schemes.

The inclusion of variables related to participation in other business support schemes such as the CJRS and VAT deferral do not change the statistical significance of the estimated impacts.

For context, the UK employment rate (the proportion of 16-64 year olds in work) sat at 76.6% before the onset of the pandemic in January 2020, before falling to 74.6% in November 2020 and then recovered to 75.6% in March 2022.[[63]](#footnote-64)

##### Table 9: Percentage difference in employment associated with borrowers’ use of the schemes

| Scheme | Without controls | With controls |
| --- | --- | --- |
| BBLS | -4% | -3% |
| CBILS/CLBILS | -19% | -17% |

Note: \*\*\* p-value<0.01, \*\* p-value<0.05, \* p-value<0.1. In the Year 2 survey, recontact businesses were asked to provide employment figures for their latest complete financial year. Newly contacted businesses were asked to provide employment figures for their latest complete financial year, their financial year between 2020 and 2021 and their financial year prior to 23 March 2020. Full results are provided in Table 29 in Annex 3. Given that the dependent variable of the regression is expressed in logarithmic form, the percentage change in turnover associated with borrowers’ use of the Covid-19 Loan Guarantee Schemes (denoted by the variable “Borrower, post-intervention” taking the value of 1) is approximately equal to , where is the regression coefficient of that variable. Source: London Economics’ analysis of survey data.

As with turnover, the additional models providing estimates for the impact of the Covid-19 Loan Guarantee Schemes by sector, region and protected characteristics generally do not yield statistically significant results for the coefficients of interest. This suggests that the impacts of the Covid-19 Loan Guarantee Schemes mostly did not differ across these groups (see Table 32, Table 34 and Table 36 in Annex 3). The exceptions to this were the estimates related to the impact of the scheme on Northern Irish BBLS recipients and the additional impact of the CBILS/CLBILS schemes on businesses with at least 50% ownership by ethnic minorities (both positive and statistically significant).[[64]](#footnote-65)

## Wider impacts

Econometric models are used to estimate the impacts of the Covid-19 Loan Guarantee Schemes on businesses’ (borrowers and non-borrowers) turnover and employment. More specifically, the analysis explores whether businesses in sectors receiving more funding under the Covid-19 Loan Guarantee Schemes experienced any additional benefits. For instance, this may be expected if funding from the Covid-19 Loan Guarantee Schemes increases survival and therefore leads to the avoidance of demand interruption or supply chain disruption in the case of businesses that sell their output or source their inputs from within the same sector. Alternatively, businesses may benefit from increased funding to other sectors if that funding increases demand from those sectors (or limits supply disruptions if these sectors are a source of inputs).

There were a wide range of support schemes available at the time of the Loan Guarantee Schemes, many of which are likely to have been used more intensely by the same sectors (i.e. those which struggled the most during the pandemic). The key challenge of this strand of analysis is that there is a very high correlation at the sector level between the amount of funding under each of the three Covid-19 Loan Guarantee Schemes and the CJRS, and so attributing any wider impacts to a particular scheme is challenging. With this in mind, the results presented in this section should be interpreted with caution.

The outcomes of businesses are compared against one another before and in the years after the introduction of the Covid-19 Loan Guarantee Schemes. A fixed effects estimation framework is used to estimate the wider impacts of the schemes on turnover and employment. Details on the variables used and econometric specification can be found in Annex 3.

When considering a possible impact on turnover, the coefficient of interest is insignificant in the baseline model but becomes positive and significant when sector-level CJRS support is included. The coefficient is 0.016, which would imply that an additional £1,000 per business of Covid-19 Loan Guarantee Scheme loans into the sector a business operates in is associated with a 1.6% uplift in turnover in that sector. This may suggest that the omission of CJRS may downward bias the wider impacts of the Covid-19 Loan Guarantee Schemes and that the wider impacts of the schemes and the CJRS collectively cancel each other out. However, this result should be interpreted with caution[[65]](#footnote-66) given the high degree of correlation between sector-level funding under the Covid-19 Loan Guarantee Schemes and sector-level CJRS funding.

When considering possible wider impacts on employment, the coefficient of interest is significant (but only at the 10% level) both when sector-level CJRS funding is included as a control and when it is not. The size of the coefficient of interest is 0.003, which would suggest that an additional £1,000 of scheme loans per business into the sector is associated with a 0.3% increase in employment.

##### Table 10: Percentage difference in turnover and employment associated with an additional £1,000 per business of scheme loans into the sector

| Scheme | Without CJRS control | With CJRS control |
| --- | --- | --- |
| Turnover | 0.4% | 1.6%\*\*\* |
| Employment | 0.3%\* | 0.3%\* |

Note: \*\*\* p-value<0.01, \*\* p-value<0.05, \* p-value<0.1. In the Year 2 survey, recontact businesses were asked to provide employment figures for their latest complete financial year. Newly contacted businesses were asked to provide employment figures for their latest complete financial year, their financial year between 2020 and 2021 and their financial year prior to 23 March 2020. Full results are provided in Table 30 in Annex 3. Source: London Economics’ analysis of survey data, BBB Management Information, BEIS Business Population Estimates and HMRC CJRS data.

Overall, the evidence of additional benefits of the schemes[[66]](#footnote-67) for businesses in sectors receiving larger amounts of support under the schemes is inconclusive. This is primarily because of the high correlation[[67]](#footnote-68) between the use of the schemes and the CJRS across sectors, which makes it difficult to attribute variations in outcomes at the sector level to a specific scheme.

# Secondary analysis of early impact evaluation

## Introduction

This chapter presents the results of the secondary analysis of the Year 1 early impact evaluation. The exercise utilises secondary data sources to explore the impact of the Covid-19 Loan Guarantee Schemes on businesses rather than a quantitative survey. This allows for a much larger number of businesses to be included in the analysis relative to the early impact evaluation, and for triangulation of self-reported data (for example in the business survival analysis). For context, the findings of the Year 1 early impact evaluation are presented in Table 11.

##### Table 11: Results of the Year 1 Early Impact Evaluation

| Measure assessed | BBLS | CBILS/CLBILS |
| --- | --- | --- |
| Business survival | The scheme avoided the closure of 10%-34% of all BBLS borrowers (146k-505k businesses). | The scheme avoided the closure of 7%-28% of all CBILS/CLBILS borrowers (5k-21k businesses). |
| Jobs in businesses saved by the schemes | 0.5 million – 2.9 million jobs | |
| Turnover | No statistically significant impact. | No statistically significant impact. |
| Employment | No statistically significant impact. | No statistically significant impact. |
| Product market displacement | Average product market displacement of 43%. | Average product market displacement of 46%. |

Source: London Economics’ analysis of survey data, BBB Management Information and BBB Portal Data

## Impact on business survival

The liquidity that was made available as part of the Covid-19 Loan Guarantee Schemes aimed to provide borrowers with a lifeline enabling them to honour their immediate obligations despite lower revenue. Analysis conducted in Year 1 of the evaluation suggested that the schemes avoided the permanent closure of 146k-505k BBLS borrowers and 5k-21k CBILS/CLBILS borrowers. This section aims to assess the Year 1 survey-based estimates of the impact of the Covid-19 Loan Guarantee Schemes on businesses’ short-term survival.

To estimate the Covid-19 Loan Guarantee Schemes’ impact on business survival, this secondary exercise estimated the observed closure rate of borrowers (i.e. those businesses that received a loan under one of the three Covid-19 Loan Guarantee Schemes) based on a sample within the Inter-Departmental Business Register (IDBR),[[68]](#footnote-69) and compared this with an estimate of their counterfactual closure rate. The counterfactual closure rate is estimated as the closure rate among a ‘control’ group of non-borrowers (i.e. a comparison group) selected based on their similarity to borrowers with respect to pre-pandemic firm characteristics (for example turnover, sector, etc.). This exercise was implemented through propensity score matching (PSM).[[69]](#footnote-70) The difference between the closure rates of the borrower group and the control group of non-borrowers is the estimated impact of the Covid-19 Loan Guarantee Schemes on business survival. Hereafter, the groups of non-borrowers matched to BBLS and CBILS/CLBILS borrowers are referred to as ‘BBLS non-borrowers’ and ‘CBILS/CLBILS non-borrowers’.

Whereas the Year 1 survey estimated the counterfactual closure rate as the proportion of borrowers who self-reported that they would likely or definitely have permanently closed in the absence of the schemes, this exercise used secondary data from the IDBR and other data sources including BBB Management Information and Portal Data.[[70]](#footnote-71)

Results of the secondary analysis

Across both the BBLS and CBILS/CLBILS, it was found that the estimated counterfactual closure rates (i.e. the closure rates of BBLS and CBILS/CLBILS non-borrowers) broadly decrease with size, i.e. large firms who did not take a loan under the Covid-19 Loan Guarantee Schemes were less likely to experience a business closure than small firms who did not take a loan under the schemes.[[71]](#footnote-72) This finding could be interpreted as larger businesses being more resilient than smaller businesses, since larger businesses have a higher likelihood of survival even in the absence of the Covid-19 Loan Guarantee Schemes. The average closure rate was 9.9% among BBLS non-borrowers, and 4.9% among CBILS/CLBILS non-borrowers (Table 12).[[72]](#footnote-73)

The closure rates among BBLS and CBILS/CLBILS borrowers were 4.2% and 0.6% respectively, in both cases lower than the estimated counterfactual closure rates (i.e. the closure rates of non-borrowers) outlined in Table 12. The closure rate among borrower firms also broadly decreases with size.[[73]](#footnote-74)

##### Table 12: Impact on business survival: Estimated closure rates among borrowers and non-borrowers (BBLS and CBILS/CLBILS)

| Scheme | Closure rate among non-borrowers | Closure rate among borrowers |
| --- | --- | --- |
| BBLS | 9.9% | 4.2% |
| CBILS/CLBILS | 4.9% | 0.6% |

Source: London Economics’ analysis of IDBR data, BBB Management Information and BBB Portal Data.

Comparing the counterfactual closure rate with the closure rates among borrowers, it is estimated that an additional 5.0%-6.5%[[74]](#footnote-75) of all BBLS borrowers (i.e. around 74,000-96,000 businesses[[75]](#footnote-76) [[76]](#footnote-77)) and 4.0%-4.7%[[77]](#footnote-78) of CBILS/CLBILS borrowers (i.e. around 3,000-3,500 businesses[[78]](#footnote-79) [[79]](#footnote-80)) could have ceased trading between April 2020 and March 2021 had the Covid-19 Loan Guarantee Schemes not been in place. It is estimated that these borrowers account for approximately 256,000-326,000 pre-pandemic jobs.[[80]](#footnote-81) [[81]](#footnote-82) This analysis includes business closures up until March 2021, so it may be that these estimates will change with additional instances of business closure. Further analysis, covering business closure up until March 2022 and using the same data source, will be presented in the Year 3 report.

In order to explore whether results vary across sectors or geographically, the survival impact in terms of business closure rates was also estimated separately across these dimensions. Across regions, the impact (i.e. the difference between closure rates among borrowers and non-borrowers) is broadly comparable, although lower in Northern Ireland in the case of both the BBLS and CBILS/CLBILS. Across sectors, the impact is somewhat higher in the Construction sector in the case of CBILS/CLBILS, and lower in “Other Services” in the case of the BBLS.[[82]](#footnote-83)

The estimated survival impact of the Covid-19 Loan Guarantee Schemes decreases with size. In all sectors and for both BBLS and CBILS/CLBILS, the largest difference between the counterfactual and observed closure rates is seen among either businesses with turnover of less than £50,000 or businesses with turnover between £50,000 and £100,000. The relatively large estimated survival impacts (approximately 10%) for smaller CBILS/CLBILS borrowers (with turnover under £100,000) may suggest that CBILS was effective in supporting small businesses’ survival in its first few weeks, prior to the launch of the BBLS.

In contrast, the differences between the counterfactual and observed closure rates for CBILS/CLBILS borrowers are very low when turnover is greater than £5 million, which is consistent across all sectors. Looking at BBLS, the smallest difference between the counterfactual and observed closure rates is seen for businesses with turnover between £1 million and £5 million, which is the largest turnover band included in the BBLS analysis, for businesses in the Business Services, Primary/Manufacturing and Other Services sectors. These findings suggest that the Covid-19 Loan Guarantee Schemes tended to have the greatest impact on survival for the smallest businesses.

Comparison with Year 1 survey-based results

The Year 1 survey-based analysis estimated that an additional 10%-34% of BBLS borrowers (i.e. 146,000 to 505,000 businesses) and 7%-28% of CBILS/CLBILS borrowers (i.e. 5,000 to 21,000 businesses) could have permanently closed by December 2020 had the Covid-19 Loan Guarantee Schemes not been in place, accounting for 0.5 million to 2.9 million jobs.[[83]](#footnote-84) The results of the secondary analysis therefore suggest a lower impact of the Covid-19 Loan Guarantee Schemes on business survival than the survey-based analysis presented in the Year 1 report.

There could be a number of reasons that the estimates from the secondary analysis are lower than those from the Year 1 survey analysis. Indeed, these exercises are based on different datasets and approaches. The Year 1 analysis relied on primary data and borrowers’ self-reported likelihood of closing in the absence of Covid-19 Loan Guarantee Schemes. However, this assessment of a hypothetical scenario carries some difficulties – for instance, businesses may not perfectly recall their financial situation during the pandemic, or what actions they may have taken in the absence of the Covid-19 Loan Guarantee Schemes, all of which would have affected their ‘counterfactual’ likelihood of closure. Moreover, the upper-bound estimate of the Year 1 findings also includes businesses that reported that they would have been ‘very likely’ or ‘fairly likely’ to close, not just those that reported that they would ‘definitely’ have closed.

In contrast, the secondary analysis estimated borrowers’ counterfactual likelihood of closure in the absence of the Covid-19 Loan Guarantee Schemes based on a matched control group of non-borrowers, and relied on observed, secondary data (i.e. IDBR, BBB Portal data and BBB Management Information) rather than self-reported information.[[84]](#footnote-85) In addition, the matched sample of IDBR data has a sample size of the order of tens of thousands to hundreds of thousands of businesses, whereas the survey was based on analysis of a sample of the order of hundreds of businesses.

Furthermore, it is possible that fraud investigations or the temporary measures that were put in place as part of the Corporate Insolvency and Governance Act 2020 (CIGA 2020) may have delayed the closures of certain businesses. In that sense, the cut-off for counting businesses as having permanently closed (up to March 2021) may be too early for delayed business closures (if any) to be accounted for, given ongoing fraud investigations and the fact that the temporary measures as part of CIGA 2020 were not fully removed until March 2022. The net impact of these two types of delayed closures could be to either increase or decrease the estimated impacts of the Covid-19 Loan Guarantee Schemes on business closures. Indeed, on one hand, closures held up by fraud investigations are likely to lower the estimated impact of the BBLS scheme (as that would increase the closure rate of borrowers). On the other hand, if temporary measures under CIGA 2020 predominantly delayed closures of non-borrowers, this could increase the estimated impact of the Covid-19 Loan Guarantee Schemes (as that would increase the closure rate of non-borrowers).

##### Table 13 : Impact on business survival: Year 1 survey-based estimates compared to secondary analysis estimates

| Scheme | Estimated impact in Year 1 survey-based analysis | Estimated impact in secondary analysis |
| --- | --- | --- |
| BBLS | 10%-34% | 5.0%-6.5% |
| CBILS/CLBILS | 7%-28% | 4.0%-4.7% |

Source: London Economics’ analysis of survey data, IDBR data, BBB Management Information and BBB Portal Data.

Insights for the Year 2 analysis

Estimates of the impact of the Covid-19 Loan Guarantee Schemes on borrowers’ survival prospects are outside the range calculated in the Year 1 analysis: they are substantially lower than the upper bound of the range estimated in the Year 1 analysis, and lower than the lower bound of the range (albeit of a similar order of magnitude). This suggests that survey respondents may have overestimated their likelihood of closing in the absence of the Covid-19 Loan Guarantee Schemes – particularly those which answered that they would have been very likely or fairly likely to close (indeed, the latter responses were included in the upper bound estimate in the Year 1 analysis). This suggests that the lower bounds of the estimated ranges in the Year 1 and Year 2 survey-based business survival analyses may be more reliable estimates than the upper bounds, though even the former may overestimate the impact of the Covid-19 Loan Guarantee Schemes to a certain degree.

## Impact on turnover and employment

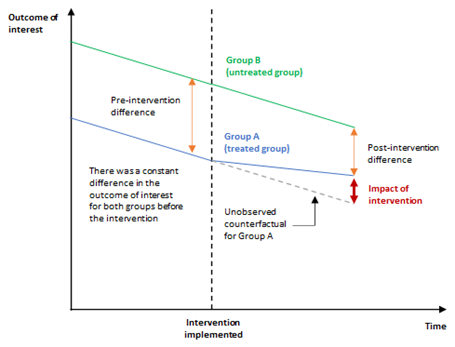
The Year 1 survey analysis used econometric models to quantify the impacts of the Covid-19 Loan Guarantee Schemes on businesses’ turnover and employment. A similar approach is used in the secondary analysis in the sense that it is also based on the comparison of business outcomes of borrowers and a group of non-borrowers before and after the introduction of the Covid-19 Loan Guarantee Schemes (i.e. the policy intervention). The main difference between both analyses is the use of distinct data sources – namely primary survey data in the case of the Year 1 analysis, and secondary data in the case of this exercise.

To maximise the likelihood that any differences in outcomes between the samples of borrowers and non-borrowers are due to the Covid-19 Loan Guarantee Schemes rather than other factors, a control group of non-borrowers (i.e. a comparison group) was constructed based on their similarity to borrowers with respect to their pre-pandemic characteristics (for example turnover, sector, etc.). This exercise was implemented through propensity score matching (PSM). While this approach is similar to that adopted in the Year 1 survey analysis, it should be noted that non-borrowing businesses could not be screened based on whether they faced challenge or opportunities because of the Covid-19 pandemic as in Year 1 because that information was not available in secondary data. Furthermore, the set of variables used to assess the similarity between borrowers and non-borrowers as part of the PSM differed between the Year 1 analysis and secondary analysis due to data availability (see Annex 4).

As in the Year 1 analysis, outcomes within the sample of borrowers and the control group of non-borrowers are compared against one another both before and after the introduction of the Covid-19 Loan Guarantee Schemes as part of a difference-in-differences (DiD) estimation framework. Comparing both groups before and after the introduction of the Covid-19 Loan Guarantee Schemes rather than only afterwards allows one to account for any pre-existing differences between the two groups that may remain after the PSM has been implemented.

This is demonstrated in the figure below, showing differences in outcomes between treated businesses (Group A) and untreated or control businesses (Group B). In this hypothetical example, prior to the Covid-19 Loan Guarantee Schemes being in place, untreated businesses outperform treated businesses (i.e. there is a pre-existing difference in outcomes) though this is not necessary for this method to be valid. After the Covid-19 Loan Guarantee Schemes are introduced, treated businesses reduce their margin of underperformance, and this is the impact of the Covid-19 Loan Guarantee Schemes: the difference between treated and control businesses after the introduction of the Covid-19 Loan Guarantee Schemes, minus the corresponding difference prior to their introduction (i.e. the difference-in-differences), which is positive.[[85]](#footnote-86)

##### Figure 11: Difference-in-difference framework illustration



The key assumption of the difference-in-differences method is that borrowers’ and non-borrowers’ outcomes follow a common trend. In this case, this means that the trajectories of turnover and employment (absent the Covid-19 Loan Guarantee Schemes) do not differ between both groups. If this is not satisfied, the difference-in-differences of outcomes could be due to factors other than the Covid-19 Loan Guarantee Schemes, thereby leading to a biased DiD estimate. This assumption is discussed in greater detail in Annex 4. As demonstrated in the balance tables (see Annex 4), in the full sample (i.e., prior to the PSM) there are differences between borrowers and non-borrowers which are substantially reduced in the sample obtained after PSM is implemented. As a result, the use of PSM prior to the difference-in-differences analysis makes this assumption more plausible, as discussed in more detail in Annex 4.

Full details of the data used, and econometric approach are also provided in Annex 4.

Results of the secondary analysis

The main findings and the interpretation in percentage terms of the coefficients of interest are outlined below, in turn, for each outcome of interest (turnover and employment). Full results from the econometric analysis are presented in Annex 4 (Table 45 and Table 46). Estimates of the impact of the Covid-19 Loan Guarantee Schemes on the outcomes of interest are presented separately for the BBLS, and for the CBILS and CLBILS combined.[[86]](#footnote-87)

The first variable "Post-intervention" in the model takes the value of one in the first year of the pandemic and its coefficient measures the change in turnover (or employment) among non-borrowers after the onset of the pandemic (this is assumed to be the change in turnover (or employment) that borrowers would have experienced in the absence of the policy intervention). The second variable "Borrower, post-intervention" in the model takes the value of one in the first year of the pandemic for the borrowing business sample only. It is the coefficient of interest as it isolates the impact of receiving a BBLS (or CBILS/ CLBILS) loan on turnover (or employment).[[87]](#footnote-88) The two variables together measure the change in turnover (or employment) among borrowers.

In addition, to assess the robustness of results, the econometric model is re-run controlling for the possibility that certain businesses may have used other support during the pandemic, in the form of the Coronavirus Job Retention Scheme (CJRS). The inclusion of this variable in the model is intended to minimise the risk that any impact of the CJRS – the most prevalent other support scheme according to the Year 1 survey analysis – is incorrectly attributed to the Covid-19 Loan Guarantee Schemes. Compared to the Year 1 survey analysis, secondary data sources were not available on the use of VAT deferral or the use of other support apart from participation in the CJRS.[[88]](#footnote-89)

Turnover

The econometric analysis finds a positive and statistically significant impact of the BBLS and CBILS/CLBILS schemes on borrowers’ turnover.[[89]](#footnote-90) This suggests that, on average, BBLS and CBILS/CLBILS borrowers’ turnover was respectively 10% and 12% higher than it would have been in the absence of the Covid-19 Loan Guarantee Schemes. It should be noted that this estimated impact is in addition to the business survival analysis in the previous section, since businesses that permanently closed in the first year of the pandemic were excluded from the econometric analysis of turnover and employment.

The variable "Post-intervention" is negative and statistically significant in both models, and suggests that, on average, non-borrowers experienced a drop in post-pandemic turnover compared to the pre-pandemic period of 8.4% in the case of the BBLS and 10.8% in the case of the CBILS/CLBILS.

##### Table 14: Percentage change in turnover

| Model | Post-intervention | Borrower, post-intervention (impact estimate) | |
| --- | --- | --- | --- |
| BBLS with CJRS control | -8.4%\*\*\* | | 9.7%\*\*\* |
| CBILS/CLBILS with CJRS control | -10.8%\*\*\* | | 11.5%\*\*\* |

Note: \*\*\* p-value<0.01, \*\* p-value<0.05, \* p-value<0.1. Full results are presented in Table 45 in Annex 4. Given that the dependent variable of the regression is expressed in logarithmic form, the percentage change in turnover associated with borrowers’ use of the Covid-19 Loan Guarantee Schemes (denoted by the variable “Borrower, post-intervention” taking the value of 1) is approximately equal to , where is the regression coefficient of that variable. Source: London Economics’ analysis of IDBR data, BBB Portal Data and HMRC Coronavirus Job Retention Scheme (CJRS) data.

As shown in Annex 4, the inclusion or exclusion of the variable accounting for participation in the CJRS does not have a material impact on the statistical significance or size of the estimated impact. This suggests that the positive estimate of the impact of the scheme is not driven by use of the CJRS and incorrectly attributed to the Covid-19 Loan Guarantee Schemes. As shown in Annex 4, the coefficient related to CJRS use is statistically significant and positive for both BBLS and CBILS/CLBILS.[[90]](#footnote-91) The use of CJRS is associated with an additional 2.1% of turnover for BBLS and 5.5% for CBILS/CLBILS.[[91]](#footnote-92)

In order to explore whether results vary across sectors or geographically,[[92]](#footnote-93) the impacts were also estimated according to these business characteristics. The estimated coefficients of interest (“Borrower, post intervention”, interacted with each sector or region) are largely statistically significant, with a few exceptions: North / Yorkshire, Northern Ireland and Wales in the case of BBLS; and Northern Ireland, Scotland and the South of England, as well as the “Other Services” sector in the CBILS/CLBILS model.[[93]](#footnote-94) (See Table 48 and Table 50 in Annex 4).

Employment

The econometric analysis finds a positive and statistically significant impact of the BBLS scheme and the CBILS/CLBILS schemes on borrowers’ employment levels.[[94]](#footnote-95) This suggests that, on average, BBLS and CBILS/CLBILS borrowers’ employment was respectively 5.7% and 9.0% higher than it would have been in the absence of the Covid-19 Loan Guarantee Schemes. Again, it should be noted that this estimated impact is in addition to the business survival analysis in the previous section, since businesses that permanently closed in the first year of the pandemic were excluded from the econometric analysis of turnover and employment.

The variable "Post-intervention" is negative and statistically significant in both models, and suggests that, on average, non-borrowers experienced a drop in employment post-pandemic compared to the pre-pandemic period of 3.8% in the case of BBLS and 5.7% in the case of CBILS/CLBILS.

##### Table 15: Percentage change in employment

| Model | Post-intervention | Borrower, post-intervention (impact estimate) |
| --- | --- | --- |
| BBLS with CJRS control | -3.8%\*\*\* | 5.7%\*\*\* |
| CBILS/CLBILS with CJRS control | -5.7%\*\*\* | 9.0%\*\*\* |

Note: \*\*\* p-value<0.01, \*\* p-value<0.05, \* p-value<0.1. Full results are presented in Table 46 in Annex 4. Given that the dependent variable of the regression is expressed in logarithmic form, the percentage change in turnover associated with borrowers’ use of the Covid-19 Loan Guarantee Schemes (denoted by the variable “Borrower, post-intervention” taking the value of 1) is approximately equal to , where is the regression coefficient of that variable. Source: London Economics’ analysis of IDBR data, BBB Portal Data and HMRC Coronavirus Job Retention Scheme (CJRS) data.

As shown in Annex 4, the inclusion or exclusion of a variable accounting for participation in the CJRS does not change the statistical significance of the estimated impact (i.e. the coefficient on the variable “Borrower, post intervention”). As shown in Annex 4, the estimated coefficients on CJRS use are statistically significant and positive in the case of both the BBLS and CBILS/CLBILS models. CJRS use is associated with approximately 1.4% higher employment in the BBLS model and approximately 1.8% higher employment in the CBILS/CLBILS model.[[95]](#footnote-96)

In order to explore whether results vary across sectors or geographically, the impacts were also estimated according to these business characteristics. The estimated coefficients of interest (“Borrower, post intervention”, interacted with each sector or region) are largely statistically significant, with a few exceptions: North / Yorkshire, and Northern Ireland, as well as the “Other Services” sector in the BBLS model; and Northern Ireland and Scotland in the CBILS/CLBILS model.[[96]](#footnote-97) (See Table 49 and Table 51 in Annex 4).

Calculating the additional potential job losses in the absence of the Covid-19 Loan Guarantee Schemes

In order to estimate the total number of additional job losses that could have occurred in the absence of the Covid-19 Loan Guarantee Schemes, further econometric analysis of employment was undertaken. This analysis replicated the approach adopted in the econometric analysis of employment described above but differed in one key respect - rather than excluding businesses that permanently closed in the first year of the pandemic from the econometric analysis, these businesses were included.[[97]](#footnote-98) By including these firms, the analysis intended to capture both a) job losses avoided due to the avoidance of business closure among borrowers,[[98]](#footnote-99) and b) job losses avoided due to surviving borrowers having higher post-pandemic employment than would otherwise have been expected in the absence of the Covid-19 Loan Guarantee schemes (see Figure 12). However, the implication of this approach was that the estimated impact cannot be considered additional to the estimate of pre-pandemic jobs among businesses that survived thanks to the Covid-19 Loan Guarantee Schemes presented in the section on business survival within this chapter.

##### Figure 12: The nature of potential job losses in the absence of the Covid-19 Loan Guarantee Schemes

The revised econometric approach (i.e. including firms that permanently closed in the first year of the pandemic) finds a positive and statistically significant impact of the BBLS scheme and the CBILS/CLBILS schemes on borrowers’ employment levels.[[99]](#footnote-100) This suggests that, on average, BBLS and CBILS/CLBILS borrowers’ employment was respectively 6.4% and 10.3% higher than it would have been in the absence of the Covid-19 Loan Guarantee Schemes.[[100]](#footnote-101)

Based on estimates of the average post-pandemic employment levels of borrowers, the number of borrowers, and estimates from the difference-in-difference analysis, it is estimated that 704,000 additional jobs could potentially have been lost among all firms in the absence of the Covid-19 Loan Guarantee Schemes.[[101]](#footnote-102) This estimate is made up of 407,000 job losses avoided due to the BBLS scheme, and 297,000 job losses avoided due to the CBILS/CLBILS schemes (Table 16).

##### Table 16 : Additional potential job losses in the absence of the Covid-19 Loan Guarantee Schemes, by scheme[[102]](#footnote-103)

| Scheme | Total |
| --- | --- |
| BBLS | 407,000 |
| CBILS/CLBILS | 297,000 |
| **Total** | **704,000** |

Source: London Economics’ analysis of IDBR data, BBB Portal Data, BBB Management Information and HMRC Coronavirus Job Retention Scheme (CJRS) data. Figures are rounded to the nearest thousand.

Comparison with Year 1 survey results

The Year 1 econometric analysis of survey data did not find a statistically significant impact of the BBLS or CBILS/CLBILS schemes on borrowers’ turnover, whereas this secondary analysis finds that on average, BBLS and CBILS/CLBILS borrowers’ turnover was respectively 9.7% and 11.5% higher than it would have been in the absence of the Covid-19 Loan Guarantee Schemes.

There could be a number of reasons that the findings from this exercise differ to the findings from the analysis of the Year 1 survey. First, there were differences in the set of variables included in the PSM and difference-in-difference specifications due to data availability (see Annex 5 of the Year 1 report, and Annex 4 of this report). Second, the findings are based on different data sets. In the Year 1 survey, primary data was used in the form of businesses’ self-reported turnover in a sample of several hundreds of businesses. An advantage of this dataset was that it contained information on business obstacles faced by respondents (for example supply chain disruptions), which could be used in the PSM (though this information was also self-reported).

In contrast, the econometric models in this exercise are run on a sample of around 80,000-140,000 businesses (in the case of CBILS/CLBILS and BBLS respectively), with turnover data based on a range of sources including the ONS’s Annual Business Survey (ABS), VAT returns from HMRC, and imputation from HMRC’s PAYE data. This larger sample size is an important advantage of the IDBR analysis.

##### Table 17 : Main differences between the datasets used in the Year 1 analysis and secondary analysis exercise

|  | Year 1 analysis | Secondary analysis |
| --- | --- | --- |
| Main data source | Primary data (survey) | Secondary data (IDBR) |
| Approximate number of businesses in econometrics | Several hundreds | c. 80k-140k |
| Main variables available in raw data | Basic firmographics (for example turnover, employment, sector) between 2019 and 2021, firms' perception of business obstacles caused by the pandemic, information on businesses' use of several types of Government support measures (i.e. CJRS, deferral of VAT payments, other support). | Basic firmographics (for example turnover, employment, sector) between 2017 and 2021, use of CJRS |

The Year 1 econometric analysis of survey data did not find a statistically significant impact of the BBLS scheme or the CBILS/CLBILS schemes on borrowers’ employment, whereas this exercise finds that on average, BBLS and CBILS/CLBILS borrowers’ employment (among surviving firms) was respectively 5.7% and 9.0% higher than it would have been in the absence of the Covid-19 Loan Guarantee Schemes.

As with the analysis of turnover, differences between the Year 1 survey analysis and this exercise could be due to differences in the PSM or difference-in-difference specifications, sample size differences, or to the fact that employment in the Year 1 survey was self-reported while IDBR employment data is based on a range of sources including the Business Register and Employment Survey (BRES), the Short Term Employment Survey (STES), HMRC’s PAYE data, and imputation from VAT returns.

Insights for the Year 2 analysis

The impact of the Covid-19 Loan Guarantee Schemes on turnover and employment is positive and statistically significant in the secondary analysis, and statistically insignificant in the Year 1 survey-based analysis. One possible reason for some of these differences may be the relatively lower sample sizes in the survey analysis compared to the secondary analysis.

The sample size of the Year 2 survey is smaller than the sample size of the Year 1 survey. With this in mind, the absence of a robust and statistically significant impact of the schemes on turnover in the second year of the pandemic is perhaps unsurprising and the small sample size should be taken into account when considering this result. A secondary analysis of these estimates (using the same data source as the secondary analysis of the Year 1 survey estimates presented above) will be provided in the Year 3 report.

## Product market displacement

Product market displacement was estimated in the Year 1 report in order to assess the extent to which Covid-19 Loan Guarantee Schemes had a net impact on economic output. Displacement shows the extent to which benefits from the schemes in the form of increased business output (relative to a scenario without the Covid-19 Loan Guarantee Schemes) occur at the expense of other businesses. For example, no additional economic output is achieved if a surviving business’ output would have been fully replaced by its competitors had it permanently closed. It is expected that any displacement caused by the Covid-19 Loan Guarantee Schemes is unlikely to have occurred immediately due to economic output being below its potential during much of the pandemic. Instead, it is likely that displacement will become apparent later on as the economy approaches capacity.

When calculating product market displacement in the Year 1 report, three elements were considered. First, the competitiveness of the market in which borrowers operate (element I). Second, the extent to which borrowers’ sales would be taken up by competitors if they were to cease trading (element II). Third, the location of competitors, in order to assess the extent to which displacement occurs within the UK economy (element III).

##### Figure 13: Stages of calculating product market displacement

For each business, quantitative values (‘displacement factors’) for each element were mapped from the relevant survey questions. Then, an overall displacement measure was calculated by multiplying the displacement factors from all three elements. Aggregate displacement was then computed by averaging business-level displacement.

In the Year 1 early impact evaluation, the average product market displacement was found to be 43% for BBLS borrowers and 46% for CBILS/CLBILS borrowers. This suggests that approximately 43% (46%) of the business activity preserved through the BBLS’ (CBILS’/CLBILS’) impact on survival could have been absorbed by other businesses in the absence of the schemes.

The average element I displacement factor was found to be 58% for BBLS borrowers and 63% for CBILS/CLBILS borrowers in the Year 1 report, suggesting that the latter operate (or perceive themselves as operating) in more competitive markets than the former.[[103]](#footnote-104) The approach used to calculate this displacement factor assumes that businesses can accurately determine the level of competition that they face. To assess whether this assumption is realistic, the self-reported measure calculated in the Year 1 report is compared to an alternative, observed measure of market competition.[[104]](#footnote-105) The metric used to assess sector-level market competition is the Herfindahl-Hirschman Index (HHI), which is defined as the sum of the squares of the (percentage) market shares of all firms operating in a given sector (see Annex 6 for more details). An increase in the HHI of a sector is associated with an increase in its market concentration, and a smaller HHI indicates more competition.

In the first part of this section, correlations between the observed and self-reported estimates of market competition are calculated. Second, the HHI associated with each firm is mapped to a percentage value, which is used as element I (instead of self-reported competition, as was done for the Year 1 report) in an alternative measure of product market displacement.[[105]](#footnote-106) It should be noted that, in this alternative measure of product market displacement, elements II and III are still self-reported (as in the original displacement measure). This measure is then compared to the aforementioned estimates of product market displacement found in the Year 1 report. Both product market displacement estimates refer to the first year of the pandemic to ensure comparability.

Correlation between self-reported and observed market competition

The measure of self-reported competition used in the correlation analysis is the element I displacement factor, derived from a survey conducted for the Year 1 report. The measure of observed competition used is the HHI in the sector. The correlations were calculated at the sector level, meaning that an average of self-reported competition was calculated for all BBLS and CBILS/CLBILS businesses in each sector, and these averages were then compared to the sectors’ HHIs in the correlation analysis.

Correlation estimates close to zero are estimated for both BBLS and CBILS/CLBILS businesses, suggesting that there is little evidence of a relationship between self-reported competition and the competition that is observed through the calculation of HHIs. The correlation between self-reported and observed competition for BBLS borrowers is -0.114, indicating a weak negative correlation. For CBILS/CLBILS borrowers, a weak positive correlation of 0.055 is estimated. This weak correlation is consistent with the fact that the element I displacement factor estimated using self-reported competition is different to that using observed competition, as described below.

Impact on product market displacement of using observed market competition

As outlined above, average market displacement was found to be 43% for BBLS businesses and 46% for CBILS/CLBILS business when using self-reported competition. The corresponding element I displacement factors used in these calculations were 58% and 63% respectively (Table 18). However, when using observed competition, the element I displacement factors increase to 74%-80% for both BBLS and CBILS/CLBILS recipients. This implies that businesses tend to report lower levels of competition than HHIs suggest that they face. As a result, product market displacement increases when using observed competition, to 51%-56% for BBLS recipients and 52%-56% for CBILS/CLBILS businesses. For context, an evaluation of the Enterprise Finance Guarantee scheme[[106]](#footnote-107) estimated that 49% of business activity was product market displacing, which is larger than the estimates calculated using self-reported competition in this report but smaller than those calculated using observed competition.

##### Table 18: Product market displacement and the element I displacement factor using self-reported and observed competition

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Element I displacement factor (self-reported competition) | Product market displacement (self-reported competition) | Element I displacement factor (observed competition) | Product market displacement (observed competition) |
| BBLS borrowers | 58% (55%-60%) | 43% (40%-46%) | 74%-80% (74%-81%) | 51%-56%  (48%-60%) |
| CBILS/CLBILS borrowers | 63% (60%-65%) | 46% (42%-49%) | 74%-80%  (74%-81%) | 52%-56%  (49%-60%) |

Note: 95% confidence intervals are provided in brackets. Source: London Economics’ analysis of survey data and the Business Structure Database.

## Business Insights and Conditions Survey

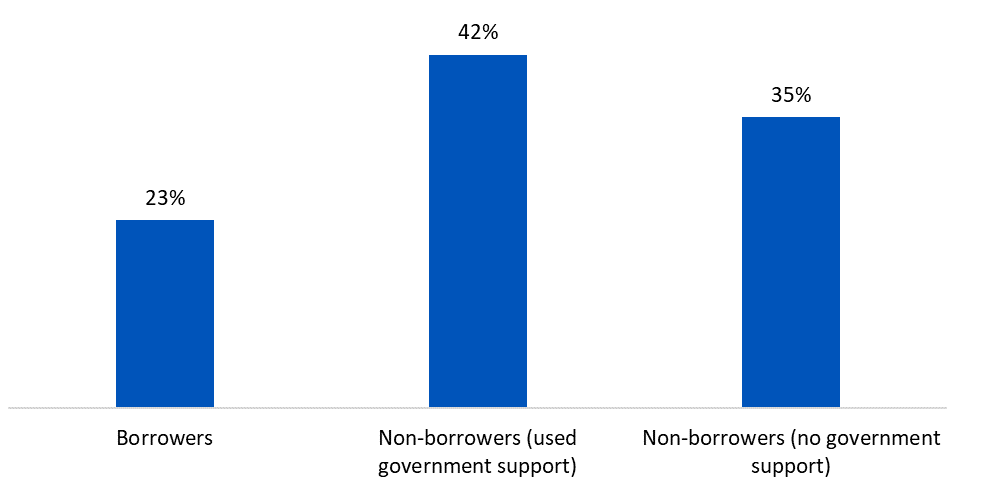
In this section, the Business Insights and Conditions Survey (BICS)[[107]](#footnote-108) will be used to provide further insights on the challenges businesses faced during 2020 and 2021 and to assess the findings of the Year 1 report where possible. The key themes addressed include the importance of government support to businesses, business expansion, capital expenditure, innovation, the ability of businesses’ workforces to meet demands of the business, footfall, and businesses’ ability to access goods, materials, and services. Across the key themes, borrowers[[108]](#footnote-109) tended to be more likely to than non-borrowers to be impacted negatively by the pandemic, such as through reductions in footfall or issues regarding access to goods, materials, and services. Borrowers also were more likely to undertake less innovation due to the pandemic, and to have reduced or stopped both their capital expenditure and their expansion plans. Borrowers were more likely than non-borrowers (which received other government support) to report that the government support they received helped them continue trading.

These findings suggest that borrowers tended to be impacted more by the pandemic and that the loans they received played an important role in their ability to survive. Nevertheless, it should be noted that the analysis in this section is purely descriptive, and is provided to add context to the econometric analysis earlier in the report.[[109]](#footnote-110) As such, differences between borrowers and non-borrowers should not be interpreted as a causal impact of government-backed loans.

Use and importance of government support

On average, between June and October 2020,[[110]](#footnote-111) almost a quarter (23%) of UK businesses reported that they had used a government-backed loan since the start of the pandemic (Figure 14), whilst 42% of businesses had not used a government-backed loan but had used other support and 35% of businesses had used no government support at all. The percentage of businesses that had used a government-backed loan increased throughout the period, from 20% in June 2020 to 26% in October 2020. For the remainder of this analysis, businesses which used a government-backed loan are referred to as borrowers, and those which did not (regardless of whether they used other support or borrowed from other sources) are referred to as non-borrowers.

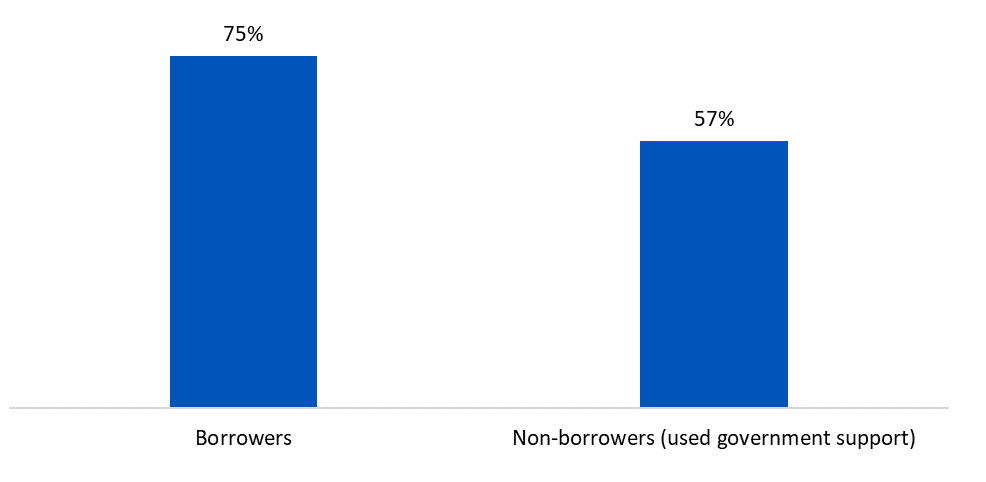
##### Figure 14: Percentage of businesses that had used different types of government support, or no support, June-October 2020



Note: This figure is based on a number of questions in the ‘Access to Financial Support’ section of the BICS. More details on how firms were allocated to each group are presented in Annex 5. ‘Borrowers’ refers to businesses that used a government-backed loan, ‘non-borrowers (used government support)’ refers to businesses that did not use a government-backed loan but did use other support and ‘non-borrowers (no government support)’ refers to businesses that used no government support. The figure shows the mean of the percentage of respondents which were in each category, taken across waves 7-16, which were conducted in and refer to the period between June and October 2020. Percentages may not add to 100% due to rounding. Source: London Economics’ analysis of the Business Insights and Conditions Survey (BICS).

The majority of businesses which received government support, regardless of their use of a government-backed loan, reported that the government support they used helped them continue trading during the pandemic (Figure 15). Nevertheless, the proportion of businesses which stated that the support they received helped them continue trading was higher amongst borrowers (75%) than non-borrowers (57%).

##### Figure 15: Percentage of borrowers and non-borrowers that indicated that government support helped them continue trading, June-October 2020



Note: This figure is based on the question ‘Did the support received from these initiatives or schemes help your business continue trading?’, using a mean of the percentage of respondents which answered ‘Yes, it helped us to continue trading’, taken across waves 7-16, which were conducted in and refer to the period between June and October 2020. ‘Borrowers’ refers to businesses that used a government-backed loan and ‘non-borrowers (used government support)’ refers to businesses that did not use a government-backed loan but did use other support. Source: London Economics’ analysis of the Business Insights and Conditions Survey (BICS).

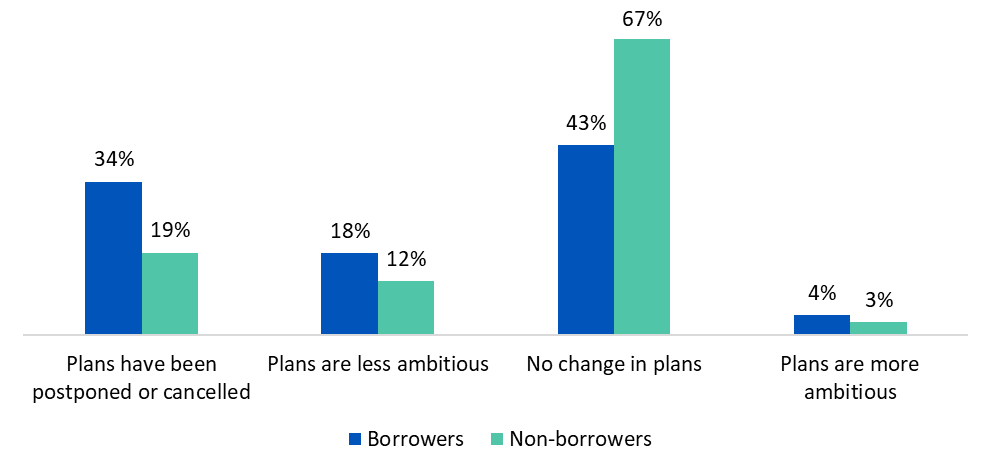
Although not completely comparable, these results are consistent with findings from the Year 1 business survival analysis, which found that the Covid-19 Loan Guarantee schemes helped borrowers continue trading during the pandemic based on self-reported data – specifically it was estimated that 9.9%-34.1% of BBLS borrowers and 6.8%-28.3% of CBILS/CLBILS borrowers could have ceased trading without the Covid-19 Loan Guarantee Schemes.

Nevertheless, as mentioned above, results from this analysis (as well as that presented in the following sub-sections) should not be treated as causal impacts of government-backed loans but as additional context to analysis presented earlier in the report.[[111]](#footnote-112)

Expansion

Government-backed loan recipients (hereafter referred to as borrowers) were more likely than non-borrowers to see their plans for expansion impacted by the pandemic (Figure 16). Borrowers were more likely to have reduced the ambition of their expansion plans than non-borrowers (18% compared to 12%) and to have postponed or cancelled their expansion plans altogether (34% compared to 19%). Consequently, borrowers were less likely (43%) to have seen no impact on their expansion than non-borrowers (67%).

##### Figure 16: Change in expansion plans of borrowers and non-borrowers compared to before the pandemic, August-October 2020

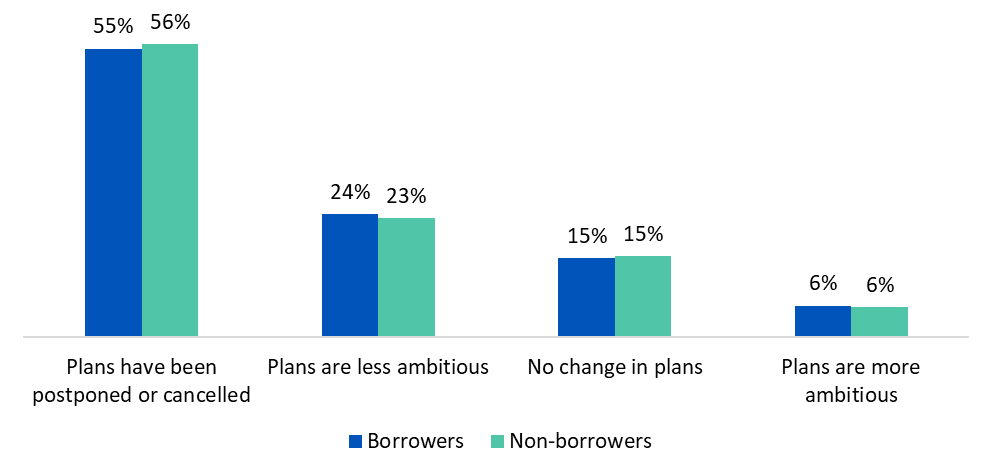


Note: This figure is based on the question ‘How has the coronavirus (Covid-19) pandemic affected your business's plans for expanding the business?’. The figure shows the mean of the percentage of respondents which answered each response, taken across waves 12, 13 and 15, which were conducted between and refer to the period between August and October 2020. ‘Borrowers’ refers to businesses that used a government-backed loan and ‘non-borrowers’ refers to businesses that did not use a government-backed loan. Respondents which answered ‘not sure’ are not included in the percentages presented. Percentages may not add to 100% due to rounding. Source: London Economics’ analysis of the Business Insights and Conditions Survey (BICS).

It is of note that borrowers were substantially more likely to have actually had plans to expand before the pandemic than non-borrowers. Whilst 25% of non-borrowers reported previous plans to expand, over half of borrowers (54%) had plans to expand before the pandemic.[[112]](#footnote-113)

When looking only at those businesses which had plans to expand before the pandemic, differences between borrowers and non-borrowers are mostly removed (Figure 17). For both borrowers and non-borrowers, just over half of companies which had plans to expand before the pandemic (respectively 55% and 56%) postponed or cancelled their plans as a consequence of the pandemic. Only 15% of both borrowers and non-borrowers reported that they had not changed their expansion plans due to the pandemic. This suggests that, despite their use of a government-backed loan, borrowers may have had similar struggles to non-borrowers during this period, which may have led them to stop or reduce their expansion plans. This is consistent with the findings from the survival analysis, which suggest that many borrowers expect that they would have permanently closed without access to a loan, and may have therefore used the finance to ‘keep their business afloat’ rather than expand.

##### Figure 17: Change in expansion plans of borrowers and non-borrowers compared to before the pandemic for businesses which were planning to expand before the pandemic, August-October 2020



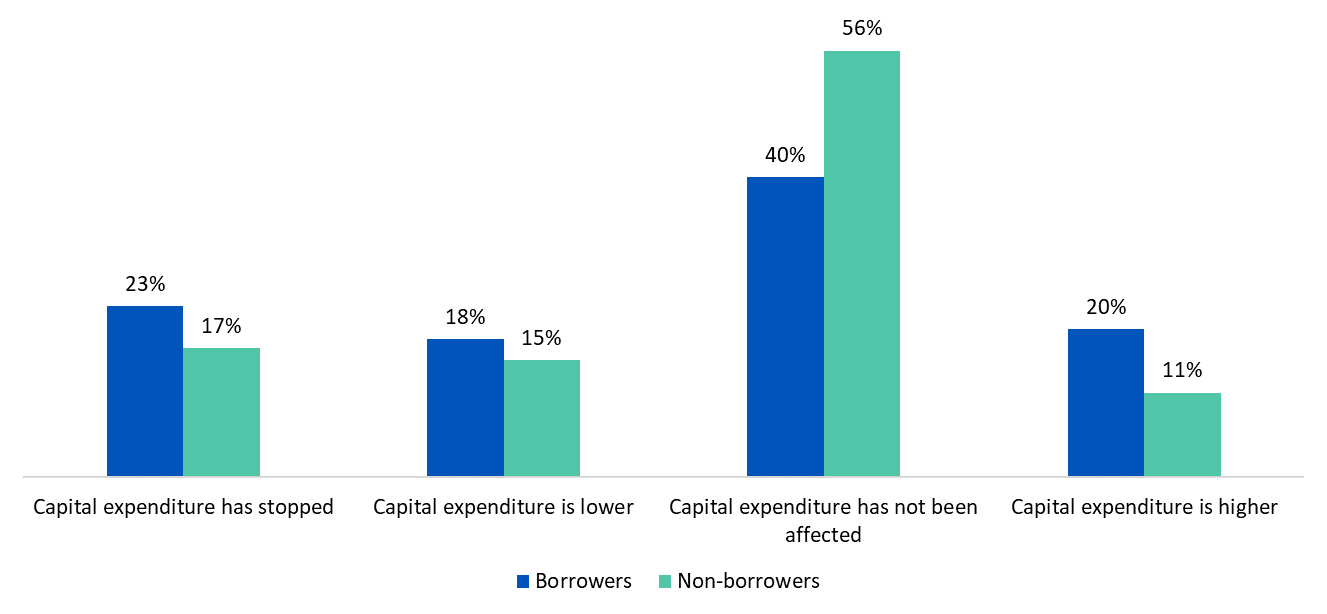
Note: This figure is based on the question ‘How has the coronavirus (Covid-19) pandemic affected your business's plans for expanding the business?’, only including those that responded ‘Yes’ to the question ‘Was your business planning to expand its business before the coronavirus (Covid-19) pandemic?’. The figure shows the mean of the percentage of respondents which answered each response, taken across waves 12, 13 and 15, which were conducted between and refer to the period between August and October 2020. ‘Borrowers’ refers to businesses that used a government-backed loan and ‘non-borrowers’ refers to businesses that did not use a government-backed loan. Respondents which answered ‘not sure’ are not included in the percentages presented. Percentages may not add to 100% due to rounding. Source: London Economics’ analysis of the Business Insights and Conditions Survey (BICS).

Capital Expenditure

As with business expansion, borrowers were more likely than non-borrowers to have both stopped (23% compared to 17%) and reduced (18% compared to 15%) their capital expenditure compared to non-borrowers (Figure 18). For these borrowers, debt and interest payments (or, if these had not yet begun, expected interest payments) may have constrained new investment and capital expenditure.

Yet, borrowers (20%) were also almost twice as likely to have experienced an increase in capital expenditure since before the pandemic when compared to non-borrowers (11%). Borrowers (40%) were therefore less likely than non-borrowers (56%) to have had their capital expenditure unaffected by the pandemic.

##### Figure : Effect of the pandemic on capital expenditure of borrowers and non-borrowers, June 2020-January 2021



Note: This figure is based on the question ‘How has the coronavirus (Covid-19) pandemic affected your business's capital expenditure?’. The figure shows the mean of the percentage of respondents which answered each response, taken across waves 7, 9, 11, 13, 15, 17, 19, 21 and 23, which were conducted between June 2020 and February 2021 and refer to the period between June 2020 and January 2021. ‘Borrowers’ refers to businesses that used a government-backed loan and ‘non-borrowers’ refers to businesses that did not use a government-backed loan. Respondents which answered ‘not sure’ are not included in the percentages presented. Not applicable responses, which was answered by 22% of borrowers and 35% of non-borrowers, are also excluded from the analysis. Percentages may not add to 100% due to rounding. Source: London Economics’ analysis of the Business Insights and Conditions Survey (BICS).

During 2021, there was a reduction in the proportion of businesses whose capital expenditure was lower than normal expectations or had stopped altogether. Indeed, in February 2021,[[113]](#footnote-114) 31% of borrowers and 21% of non-borrowers had stopped their capital expenditure, but only 8% and 13% respectively answered in this way in December 2021.

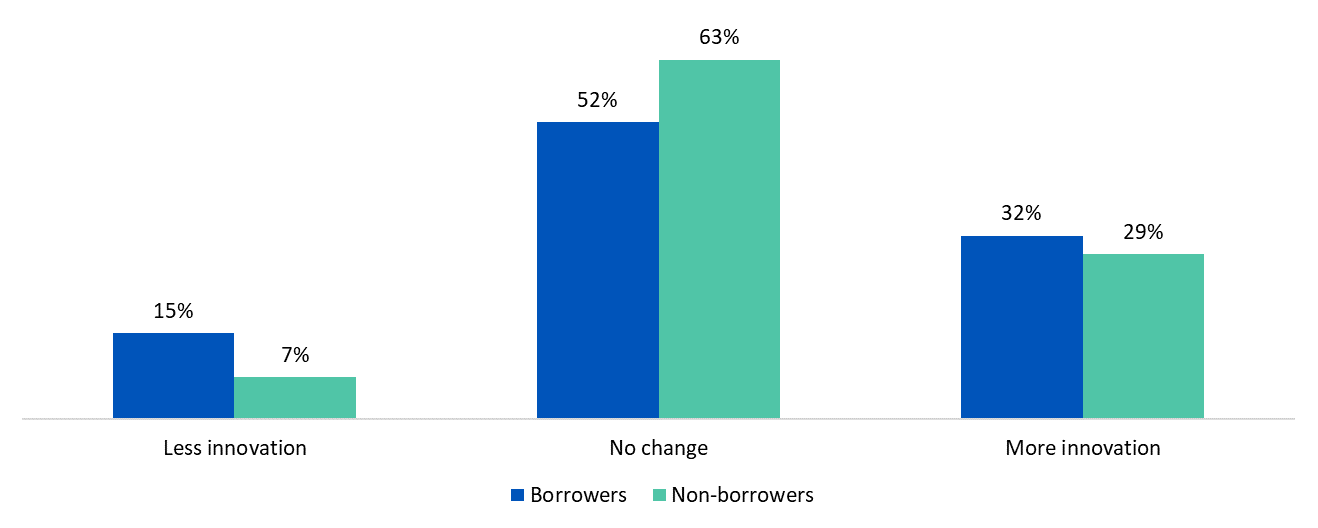
Similarly, while 17% of borrowers and 26% of non-borrowers reported that their capital expenditure was lower in February 2021 than normal expectations for the time of year, this reduced to 8% and 19% by December 2021.

At the same time, there was little change in the proportion of businesses that responded that their capital expenditure was higher than normal expectations throughout the period. Instead, an increasing proportion of businesses reported that their capital expenditure was ‘not affected’, suggesting that investment may be in the process of reverting to normal expected levels rather than compensating for any decrease during the pandemic.

Innovation

Borrowers (15%) were more than two times as likely to have reduced their innovation due to the pandemic than non-borrowers (7%) in June and July 2020 (Figure 19). While both groups of companies were more likely to have increased their innovation than reduced it, borrowers were more likely than non-borrowers to have increased their innovation since the pandemic (32% compared to 29%). Similarly, the Year 1 quantitative survey found that borrowers were more likely than non-borrowers to be ‘trading in new goods, services, and/or markets’ during the pandemic.

##### Figure : Effect of the pandemic on innovation of borrowers and non-borrowers (June and July 2020)

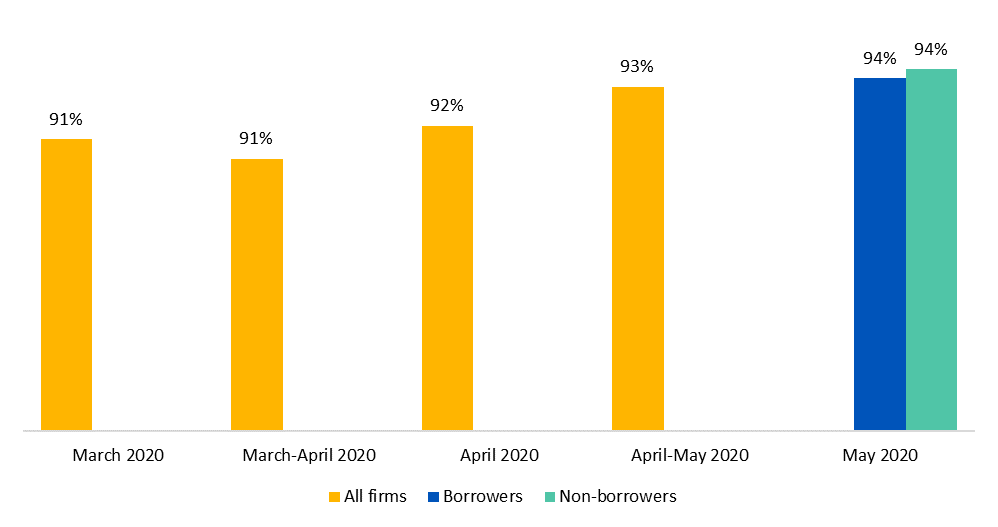


Note: This figure is based on the question ‘How has your business’s level of innovation been affected by the coronavirus (Covid-19) pandemic?’. The figure shows the mean of the percentage of respondents which answered each response, taken across waves 8 and 9, which were conducted between and refer to the period between June and July 2020. ‘Borrowers’ refers to businesses that used a government-backed loan and ‘non-borrowers’ refers to businesses that did not use a government-backed loan. Respondents which answered ‘not sure’ are not included in the percentages presented. Not applicable responses, which was answered by 31% of borrowers and 45% of non-borrowers, are also excluded from the analysis. Percentages may not add to 100% due to rounding. Source: London Economics’ analysis of the Business Insights and Conditions Survey (BICS).

Workforce

The vast majority of companies (between 91% and 93%) reported that their workforce could meet the demands of the business between March and May 2020 (Figure 20). Business surveys indicate that the capacity used by firms at this time was below average,[[114]](#footnote-115) which may have meant that the workforce were more likely to be able to meet demands of businesses even if they had to adjust their working practices. Looking at May 2020 only, 94% of both borrowers and non-borrowers suggested that their workforce could meet the demands of the business. Similarly, the Year 1 report found that a relatively small proportion of borrowers (approximately one tenth) used their loans to make "other adjustments to working practices (for example ensure workplace is Covid-19 safe)", suggesting that borrowers and non-borrowers were similarly equipped to manage Covid-19 requirements.

##### Figure : Percentage of businesses reporting that their workforce was able to meet the demands of the business for all firms (March-May 2020), borrowers and non-borrowers (May 2020)

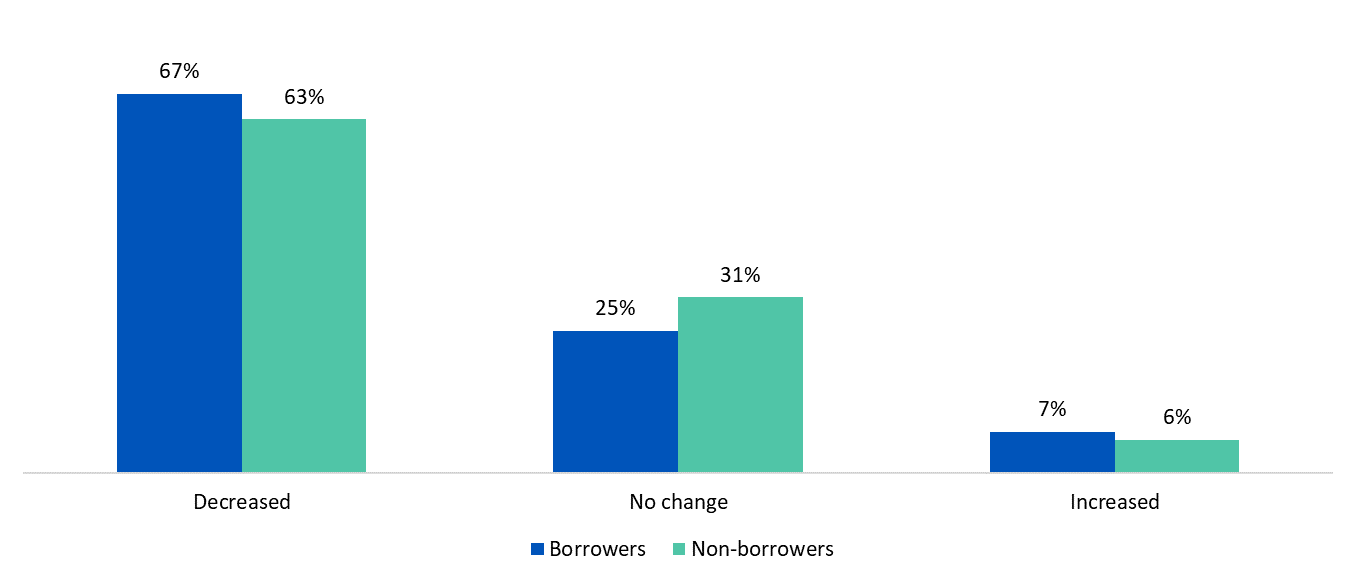


Note: This figure is based on the question ‘Was your business's workforce able to meet the demands of the business in the last two weeks?’, showing the percentage of respondents which answered ‘Yes, the workforce could meet the business’s demands’. In the waves that refer to the period between March-May 2020 (waves 1-4, also conducted between March and May 2020), responses could not be broken down by borrower status, so the percentage for all businesses is shown. In the wave referring to May 2020 (Wave 5, also conducted in May 2020), the question regarding the use of government-backed loans is asked, so borrowers and non-borrowers can be broken down. ‘Borrowers’ refers to businesses that used a government-backed loan and ‘non-borrowers’ refers to businesses that did not use a government-backed loan. Percentages in this figure are unweighted, as weights are not available in the BICS until Wave 7. Bars with the same percentage can be different heights due to rounding. Source: London Economics’ analysis of the Business Insights and Conditions Survey (BICS).

Footfall

Over two thirds (67%) of borrowers experienced a decrease in footfall due to the pandemic, compared to 63% of non-borrowers (Figure 21). Borrowers were also slightly more likely to see an increase in footfall (7% and 6%), meaning therefore that borrowers (25%) were less likely than non-borrowers (31%) to experience no change in footfall due to the pandemic.

##### Figure 21: Effect of the pandemic on footfall of borrowers and non-borrowers compared to normal expectations for the time of year, July-October 2020

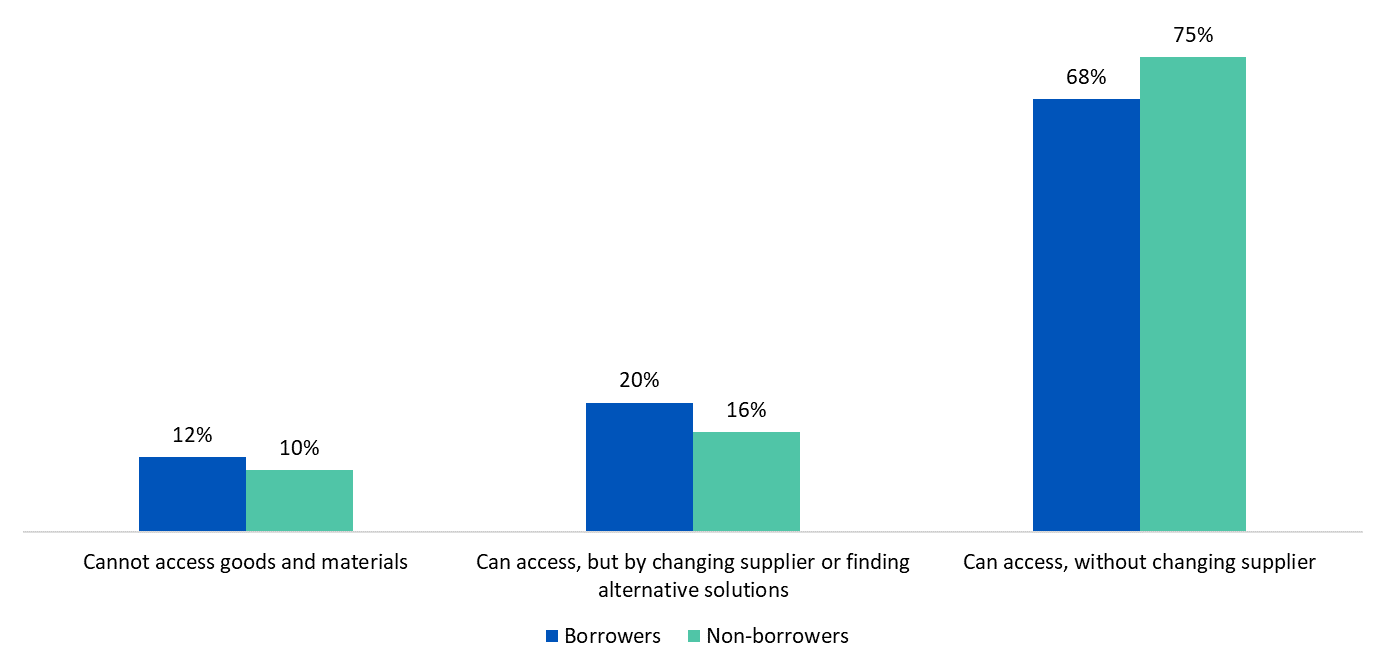


Note: This figure is based on the question ‘In the last two weeks, how has the coronavirus (Covid-19) pandemic affected your business's footfall, compared with normal expectations for this time of year?’. The figure shows the mean of the percentage of respondents which answered each response, taken across waves 11, 12, 13 and 15, which were conducted between August and October 2020 and refer to the period between July and October 2020. ‘Borrowers’ refers to businesses that used a government-backed loan and ‘non-borrowers’ refers to businesses that did not use a government-backed loan. Respondents which answered ‘not sure’ are not included in the percentages presented. Not applicable responses, which was answered by 44% of borrowers and 60% of non-borrowers, are also excluded from the analysis. Percentages may not add to 100% due to rounding. Source: London Economics’ analysis of the Business Insights and Conditions Survey (BICS).

Accessing Goods, Materials, and Services

With regards to businesses’ ability to access goods, materials, and services from within the UK, the most frequent response for borrowers (68%) and non-borrowers (75%) was that they could access them without having to change supplier (Figure 22). Almost a third of borrowers had issues with accessing goods, materials, and services, either being unable to access them at all (12%) or having to change supplier or find alternative solutions (20%). In comparison, 10% of non-borrowers could not access goods, materials, and services and 16% could but needed to change supplier or find alternative solutions. The Year 1 quantitative survey also found that supply chain disruptions were a common obstacle to businesses, and that borrowers were more likely to report these issues than non-borrowers.

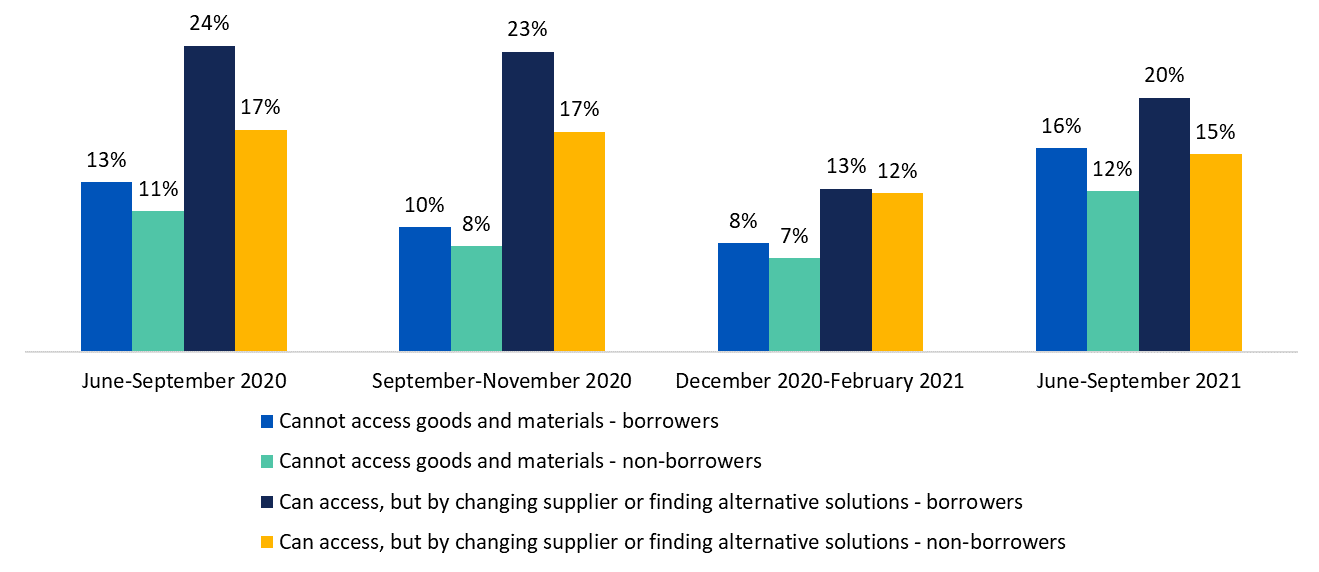
##### Figure 22: Ability of borrowers and non-borrowers to access goods, materials and services from the UK, June 2020-September 2021



Note: This figure is based on the question ‘Was your business able to get the materials, goods or services it needed from within the UK in the last two weeks?’. The figure shows the mean of the percentage of respondents which answered each response, taken across waves 7, 8, 9, 10, 11, 12, 13, 15, 17, 19, 21, 22, 23, 24, 25, 35, 37, and 39, which were conducted in and refer to the period between June 2020 and September 2021. ‘Borrowers’ refers to businesses that used a government-backed loan and ‘non-borrowers’ refers to businesses that did not use a government-backed loan. Not applicable responses, which was answered by 23% of borrowers and 40% of non-borrowers, are also excluded from the analysis. Percentages may not add to 100% due to rounding. Source: London Economics’ analysis of the Business Insights and Conditions Survey (BICS).

Looking at how supply chain issues changed throughout the pandemic, the proportion of both borrowers and non-borrowers that reported issues with access to goods, materials and services from the UK reduced throughout 2020 (Figure 23). The most striking example of this relates to the proportion of borrowers having to change supplier or find alternative solutions, which decreased from 24% in the June-September 2020 period to 13% in the December 2020-February 2021 period. However, an increase in the proportion of companies reporting issues can be seen between the December 2020-February 2021 period and the June-September 2021 period. During each period, borrowers were more likely to report issues than non-borrowers.

##### Figure 23: Difficulties of borrowers and non-borrowers in accessing goods, materials and services from the UK across time, June 2020-September 2021

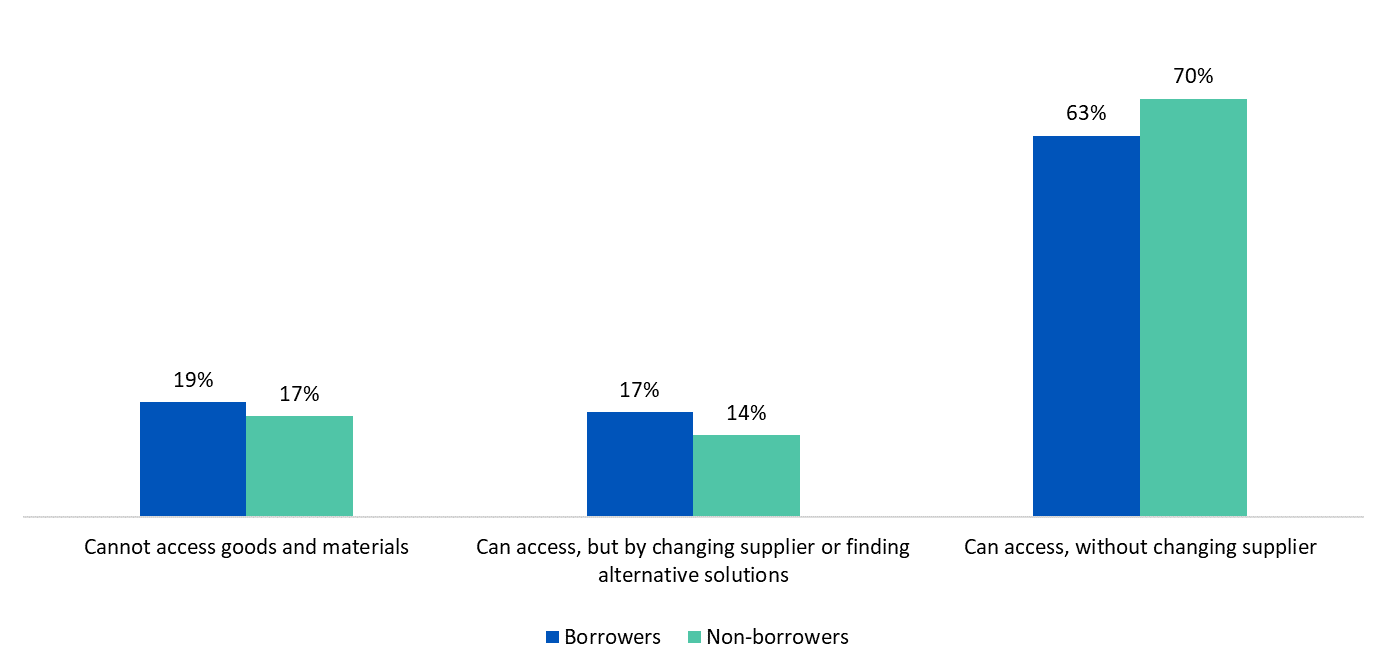


Note: This figure is based on the question ‘Was your business able to get the materials, goods or services it needed from within the UK in the last two weeks?’. The figure shows the mean of the percentage of respondents which answered each response, taken across relevant waves. ‘June-September 2020’ refers to waves 7-13, which were conducted between June and September 2020. ‘September-November 2020’ refers to waves 15, 17 and 19, which were conducted between October and December 2020. ‘December 2020-February 2021’ refers to waves 21-25, which were conducted between December 2020 and March 2021. ‘June-September 2021’ refers to waves 35, 37 and 39, which were conducted between July and September 2021. ‘Borrowers’ refers to businesses that used a government-backed loan and ‘non-borrowers’ refers to businesses that did not use a government-backed loan. Not applicable responses were excluded from the percentages presented. Due to a break in the question being asked in the survey, no data is available between March and May 2021. Source: London Economics’ analysis of the Business Insights and Conditions Survey (BICS).

The majority of both borrowers (63%) and non-borrowers (70%) reported no issues with their ability to access goods, materials, and services from the EU, although non-borrowers were again less likely to have issues than borrowers (Figure 24). Borrowers were more likely than non-borrowers to not be able to access goods, materials, and services from the EU (19% and 17% respectively) and to have had to change supplier or find alternative solutions (17% and 14%).

The proportion of borrowers that could not access goods, materials and services from the EU peaked at 24% in June 2021 and was at its smallest in April and May 2021 (13%). For non-borrowers, the percentage of businesses which could not access goods, materials and services imported from the EU ranged from 13% (in March 2021) to 22% (June and August 2021). It should be noted that the majority of respondents (an average of 71% of borrowers and 78% of non-borrowers across the waves analysed) answered ‘not applicable’ to this question and are therefore excluded from this analysis.

##### Figure 24: Ability of borrowers and non-borrowers to access goods, materials and services from the EU, January-September 2021



Note: This figure is based on the question ‘Was your business able to get the materials, goods or services it needed from the EU in the last two weeks?’. The figure shows the mean of the percentage of respondents which answered each response, taken across waves 24-31, 33, 35, 37 and 39, which refer to the period between January and September 2021 and were conducted between February and September 2021. ‘Borrowers’ refers to businesses that used a government-backed loan and ‘non-borrowers’ refers to businesses that did not use a government-backed loan. Not applicable responses, which was answered by 71% of borrowers and 78% of non-borrowers, are also excluded from the analysis. Percentages may not add to 100% due to rounding. Source: London Economics’ analysis of the Business Insights and Conditions Survey (BICS).

# Annex 1 – Process Evaluation Framework

The table below provides the process evaluation framework of the Year 2 and Year 3 process evaluation of the Covid-19 Loan Guarantee Schemes. This shows the key evaluation questions for each process, and the data sources which are used to provide evidence to answer the questions. The process evaluation framework was developed following a review of Covid-19 Loan Guarantee Scheme documentation, wider published information, and workshops with key stakeholders including BBB, DBT and HM Treasury. The process evaluation framework was developed alongside the process maps presented in the Process Evaluation section of the main report process map, which detailed all the mechanisms and processes used to deliver the Covid-19 Loan Guarantee Scheme.

##### Table : Process evaluation framework

| Evaluation question | Metrics | Source of data | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| Monitoring data | Document / literature review | BBB / DBT / HMT interview | Lender interview | Wider stakeholder interview |
| **Monitoring** | | | | | | |
| Was all relevant data included in the data dashboards to monitor the performance of a lender’s portfolio? |  | X |  | X | X |  |
| Was data provided in a timely manner to and from Lenders to inform counter fraud actions? | Frequency of data from lenders | X |  | X | X |  |
| In what ways did the publication of data impact upon lender behaviour? |  |  |  |  |  |  |
| How effective was the lender challenge process in influencing lender behaviour? | # of lender challenges  # of guarantees removed |  |  | X | X |  |
| Is the external audit exercise proportionate to the value of the Covid-19 Loan Guarantee Schemes? |  |  |  | X | X | X |
| How effective is the audit exercise in monitoring lenders compliance with the rules of the Covid-19 Loan Guarantee Schemes? | Proportion of lender portfolios with a “green” or “amber” fraud rating | X | X | X | X |  |
| In what ways has the external audit process altered lenders’ internal processes? |  |  |  |  | X |  |
| How effective have the relationship management processes been in encouraging lender cooperation with the schemes? |  |  |  | X | X |  |
| How has the post event assurance plan supported a reduction in future financial crime risk? |  |  |  | X | X |  |
| How effective has the portfolio screening process been in supporting lenders to identify potentially fraudulent facilities? | # flags identified | X |  | X | X | X |
| **Repayments** | | | | | | |
| How effective have the approaches used by lenders been in securing repayment from businesses in difficulty when compared to BAU portfolio of SME lending? | Value of repayments made  Incidence of arrears  Value of arrears | X | X | X | X |  |
| How effective have the processes to identify and remove erroneous facilities from the guarantee scheme? | Incidence of facilities removed from guarantee schemes | X |  | X | X |  |
| How effective have the debt recovery pilots been in securing repayments? (To be assessed in Y3) | Value of repayments from pilots | X |  | X | X |  |
| How appropriate are the debt recovery pilots to different types of lenders? (To be assessed in Y3) |  |  | X | X | X | X |
| What type of learning have the debt recovery pilots generated for lender, BBB and the Government? (To be assessed in Y3) |  |  |  | X | X | X |
| What was the burden for lenders to participate in the debt recovery pilots? (To be assessed in Y3) | Resources devoted to pilots (above BAU) for pilots |  |  | X | X |  |
| **Counter fraud work and enforcement** | | | | | | |
| Have all relevant organisations relating to fraud detection been involved in the working groups / boards for fraud detection activities? |  |  | X | X | X | X |
| Have sufficient resources been devoted to lenders customers’ fraud detection? | Value of fraud detection work | X |  | X | X | X |
| How effective is the data collected (CIFAS) in detecting duplicate cases? | Number of duplicate cases detected through CIFAS |  |  | X | X |  |
| How effective were other reputable fraud bureaus to identify potential cases of fraud? |  |  |  | X | X | X |
| Were appropriate data sources and variables used for the data analytics work? |  |  | X | X | X | X |
| How effective has the data analytics work been in identifying potential cases of fraud, error or misstatement? | Number/value of potential fraud / error / misstatement cases identified | X | X | X | X |  |
| In what ways have lenders used the data analytics work in identifying potential cases of fraud? |  | X |  |  | X |  |
| Did the initial fraud research and fraud risk assessments set appropriate parameters for the schemes to be assessed against? |  |  | X | X | X |  |
| How effective were the different governance structures in promoting coordinated fraud enforcement activity? |  |  | X | X |  | X |
| Were all relevant organisations involved in the working groups / boards used for fraud enforcement activity? |  |  | X | X |  | X |
| Did the working groups / boards work together to coordinate the required actions? |  |  |  | X |  | X |
| How did the processes used to recover monies from suspected fraud cases compare to business-as-usual activities for suspected fraud cases from commercial lending? |  |  |  | X | X | X |
| How appropriate is the process for identifying which fraud cases would be investigated by NATIS and INSS? | # of cases referred to NATIS / INSS |  |  | X |  | X |
| How effective were the processes used by lenders to report suspected criminal fraud cases to NATIS / INSS? |  |  |  |  | X |  |
| How effective have NATIS criminal investigations been in securing arrests for fraudulent activity? | # investigations / arrests | X | X | X |  | X |
| How effective have INSS civil investigations been in securing disqualifications for directors? | # investigations / disqualifications | X | X | X |  | X |
| How effective have the civil bulk objections been in influencing lender behaviour towards customers? |  |  |  | X |  | X |
| How effective have civil bulk objections been in securing recoveries? | #/£ objections submitted and successful recoveries | X |  | X | X | X |
| How effective have the processes been in recovering monies that were suspected of being fraudulently obtained? | #/£ of monies recovered from firms with different characteristics | X | X | X | X | X |
| How effective were the different governance structures in promoting coordinated fraud enforcement activity? |  |  | X | X | X | X |

# 

# Annex 2 – Quantitative survey

This annex provides technical details of the survey of Covid-19 Loan Guarantee Scheme borrowers and non-borrowers undertaken in the second year of the evaluation. It covers the sampling, fieldwork, and approach to weighting as well as a copy of the questionnaire to aid the interpretation of the findings.

## Summary of methodology

To support the evaluation, Ipsos undertook a quantitative survey (with telephone interviews as the primary data collection method) of 440 borrowers and 521 non-borrowers from 18 August to 14 October 2022. The data have been weighted to be statistically representative of the loan populations (under the Covid-19 Loan Guarantee Schemes) as well as the overall business population (weighting is explained in detail below). Businesses that reported that they did not experience any challenges (positive or negative) caused by the pandemic and public-sector organisations were outside the scope of the survey.

Survey and questionnaire development

Ipsos, with input from London Economics, developed the questionnaire and all other survey instruments (for example the interview script, reassurance email and interviewer briefing materials). BBB and BEIS had final approval of the questionnaire. The questionnaire for Year 2 of the study was based on the Year 1 questionnaire, with some questions removed in order to reduce the average length of the survey interviews.

The initial development of the survey for the first year of the evaluation took place over several stages from April to September 2021, including:

* Stakeholder engagement, including a virtual workshop with the project steering group
* A pilot survey, consisting of 143 interviews (105 Covid-19 Loan Guarantee Scheme borrowers, 38 non-borrowers)
* A number of iterations pre and post pilot to reflect initial findings and further input from stakeholders and the group

A copy of the final questionnaire used for the Year 2 study is included below.

Sampling

The sample frame used in Year 2 of the study consisted of:

* Recontact sample: participants in Year 1 of the study, who consented to being contacted to take part in Year 2
* Fresh sample: new sample leads invited to take part in the study for the first time

Both of these contained a mixture of borrowers and non-borrowers. Borrower sample, for both the recontact and fresh contacts, was primarily provided by BBB, who shared a random sample of businesses who had taken out loans, as well as contacts from a previous Ipsos study who had been identified as being borrowers.

For the control group of non-borrowers, sample was selected from three sources:

* For the BBLS and CBILS non-borrowers sample frames, the Dun & Bradstreet (D&B) business database was used.
* For the CLBILS non-borrower sample frame, the Inter-Departmental Business Register (IDBR) was used for businesses with a turnover threshold over £45 million – though only a small number of these respondents were used as part of the CBILS control group in the Year 2 study (see below).
* For non-borrowers of all three Covid-19 Loan Guarantee Schemes, recontact sample from the 2020 BBB Business Finance Surveys was also used.

Non-borrowers were selected to be representative of the overall population of businesses that were eligible for the three Covid-19 Loan Guarantee Schemes. They were similar to borrowers in that they have all faced challenges or opportunities because of the Covid-19 pandemic, thereby increasing the likelihood that both groups of businesses have faced similar financial and operational issues during the reference period of the evaluation.

Ipsos carried out telephone tracing (matching the sample frame data to the Dun & Bradstreet database and to any publicly available data sourced from LinkedIn) to fill in the gaps where possible. The sample was also cleaned to remove any duplicate telephone numbers.

Given the small population of CLBILS borrowers and non-borrowers, extensive manual sample improvement was also carried out for these groups. This involved looking up relevant contact names and numbers online and on LinkedIn (on publicly available pages) wherever possible.

The sample was proportionately stratified by region and disproportionately stratified by size and sector. An entirely proportionately stratified sample would not allow sufficient subgroup analysis by size and sector. For example, it would effectively exclude all medium and large businesses from the selected sample, as they make up a very small proportion of BBLS and CBILS borrowers. Therefore, disproportionate sample targets were set for micro (1 to 9 employees), small (10 to 49 employees), medium (50 to 249 employees) and large (250 or more employees) businesses. Specific sectors were also boosted to ensure findings for all sector groupings could be reported.

Post-survey weighting corrected for the disproportionate stratification (see section on weighting).

Fieldwork

Ipsos carried out the fieldwork from 18 August to 14 October 2022. In total, interviews were completed with:

* BBLS borrowers: 242
* CBILS borrowers: 189
* CLBILS borrowers: 9
* Non-borrowers: 521

Given the algorithm used to assign businesses as BBLS and CBILS non-borrowers, it is possible for a business to be assigned to both. Of the 521 Control participants, 377 were assigned to the BBLS control group, whilst 225 were assigned to the CBILS control group. As outlined in the weighting section below, the CBILS control group contains a small number of CLBILS controls. These were included as part of the CBILS control group as CBILS and CLBILS borrowers were also grouped together for analysis purposes, given the small number of CLBILS borrowers in the Year 2 sample.

The average interview length was 18 minutes for fresh sample and 9 minutes for the recontact sample from Year 1. This was due to some survey information being carried over from the previous survey for those participating last year (for example confirming use of loans, sector, financial reporting, etc.).

Screening of respondents

In Year 1, interviewers screened all sampled organisations at the beginning of the call to identify the right individual to take part and ensure the business was eligible for the survey. At this point, the following organisations would have been removed as ineligible:

* Organisations that identified themselves as part of the public sector
* Non-borrowers with a turnover under £8,000
* Non-borrowers who said they did not face any challenges or opportunities as a result of the pandemic.

Interviewers specifically asked for the senior individual with the most responsibility for financial decisions in the organisation. The interviewer briefing included guidance on likely job roles and job titles for these individuals, which would differ based on the type and size of the organisation.

For UK businesses that were part of a multinational group, interviewers requested to speak to the relevant person in the UK who dealt with financial decisions at the company level.

For respondents from the fresh sample, all of the above steps would have been taken again as part of the Year 2 study. For recontact respondents, the same person from each organisation was contacted again, with a suitable replacement found if they had left their post.

Maximising participation

For this survey, several steps were undertaken to maximise participation in the survey and reduce non-response bias:

* Each organisation loaded in the main survey sample was called multiple times, or until an interview was achieved, a refusal given, or information obtained to make a judgment on the eligibility of that contact.
* Each piece of sample was called at different times of the day, throughout the working week, to make every possible attempt to achieve an interview. Evening and weekend interviews were also offered if the respondent preferred these times.
* An option to complete the survey online was included for businesses who preferred to take part in this way. Some of the CBILS borrowers and all of the CLBILS borrowers with a direct email address were emailed a link to the survey. All businesses who started the online survey but did not complete it also received a follow up phone call encouraging them to finish the survey. A total of 7 respondents completed the survey entirely online as part of the Year 2 study.
* Year 1 participants were sent an advanced email about the study, as well as a pre-publication version of the report to encourage participation.
* Interviewers could send a reassurance email to prospective respondents if the respondent requested this.
* Ipsos set up an email inbox and free (0800) phone number for respondents to be able to contact to set up appointments or, in the case of the phone number, take part there and then.
* Where email addresses were available for the sample for organisations, several warm-up and reminder emails were also sent to the hardest to reach groups across the course of fieldwork to let businesses know that an Ipsos interviewer would attempt to call them. Where possible, manual searches for personal email addresses and direct contact names were also undertaken.

Fieldwork monitoring

Ipsos is a member of the interviewer Quality Control Scheme recognised by the Market Research Society. In accordance with this scheme, at least 10 per cent of the interviews were listened to and the data entry checked on screen for these interviews.

Fieldwork outcomes and response rate

Fieldwork outcomes and co-operation rates were monitored throughout fieldwork, and interviewers were given regular guidance on how to avoid common reasons for refusal. Table 20 shows the final outcomes and the adjusted response rate calculations.

##### Table 20 : Sample outcomes for borrowers and non-borrowers

| Outcome | Borrowers | Non-borrowers |
| --- | --- | --- |
| Completed interviews | 440 | 521 |
| Refused | 119 | 434 |
| Unusable numbers[[115]](#footnote-116) | 287 | 1,166 |
| Unusable leads with working numbers[[116]](#footnote-117) | 1,137 | 2,875 |
| Working numbers with unknown eligibility[[117]](#footnote-118) | 456 | 1,014 |
| Screened out[[118]](#footnote-119) | 1 | 120 |
| **Total** | **2,440** | 6,130 |

Table 21 below shows the sample outcomes for the recontact and fresh samples.

##### Table 21 : Sample outcomes for recontact and fresh samples

| Outcome | Recontact | Fresh |
| --- | --- | --- |
| Completed interviews | 666 | 295 |
| Refused | 118 | 435 |
| Unusable numbers[[119]](#footnote-120) | 68 | 1,385 |
| Unusable leads with working numbers[[120]](#footnote-121) | 272 | 3,740 |
| Working numbers with unknown eligibility[[121]](#footnote-122) | 411 | 1,059 |
| Screened out[[122]](#footnote-123) | 15 | 106 |
| **Total** | **1,550** | 7,020 |

Cooperation rates, fieldwork challenges and expected impact on the survey reliability

The cooperation rate[[123]](#footnote-124) was 79% for Borrowers and 55% for Non-borrowers, representing an increase on Year 1 (48% and 29% respectively). This is related to a large proportion of the completed interviews from respondents who had participated in Year 1. The cooperation rate amongst the recontact sample was 85%, compared to 40% for the fresh sample (which is similar to the Year 1 figure).

Year 2 of the survey took place after the lifting of coronavirus restrictions, so business operations were typically less impacted than during the Year 1 fieldwork making contact easier. However, the pandemic has had a lasting impact on how businesses communicate. Home working is commonplace and consequently the use of business numbers and generic office numbers is also declining, making it more challenging to contact business participants. In addition to this, the following challenges limited the volume of survey completes:

* The sample volume for CLBILS borrowers was lower than anticipated – as such there was a very small number of leads in the recontact sample, and no fresh leads for CLBILS.
* There were no named contacts provided in the borrower sample which made it more challenging to identify the relevant person and role.

## Data processing and weighting

There were a number of logic checks in the script, which checked the consistency and likely accuracy of answers. If respondents gave unusually high or low numeric answers (such as turnover or value of external finance sought) relative to the size of their organisation, the interviewer would read out the response they had just recorded and double-check this is what the respondent meant to say.

Coding

The verbatim responses to unprompted questions could be coded as “other” by interviewers when they did not appear to fit into the predefined code frame. These “other” responses were coded manually by Ipsos’ coding team, and where possible, were assigned to codes in the existing code frame. It was also possible for new codes to be added where enough respondents had given a similar answer outside of the existing code frame. The Ipsos research team verified the accuracy of the coding, by checking and approving each new code proposed.

Weighting

Weights are required for comparisons between BBLS and CBILS loan recipients and their respective control samples. Both the loan recipients and their corresponding controls were weighted to the loan recipient profile by sector, region, and turnover.

Identifying BBLS and CBILS controls

The first step was to identify control sample members for each of the BBLS and CBILS (the CBILS control group includes a small number of CLBILS controls but for brevity these will be referred to as CBILS throughout the weighting section of this annex). The BBLS and CBILS controls had been drawn as a single sample and needed to be allocated to control samples. This was based on turnover.

The longitudinal control sample were allocated to the same control groups as they had been in Year 1 to maintain consistency over time for purposes of analysis.

The fresh Year 2 control sample was allocated to groups based on the definitions used in Year 1. BBLS controls were defined as businesses not in receipt of a loan with a turnover less than £5 million. This cut off was suggested by the population data – 99% of BBLS recipients had a turnover less than £5 million, in addition, 97% of BBLS recipients in the sample had a turnover less than £5 million, hence BBLS controls should similarly have turnover less than this amount. Whilst BBLS should also have a lower bound turnover cut-off (their turnover should be greater than £8,000), there were a small number of BBLS recipients and a small number of businesses available as controls that reported a turnover less than this amount. For this reason, businesses with turnover less than £8,000 were retained and allocated as BBLS controls to make the BBLS control sample cover the same turnover range as observed among BBLS borrowers.

CBILS controls were defined as businesses not in receipt of a loan that had a turnover greater than £175,000 but less than £45 million. As with the BBLs, population data were used to identify a sensible cut-off; around 4% of CBILS loan recipients in both population data and our sample had a turnover less than £175,000, hence setting this value as the lower cut-off ensured the control sample would cover the same range of turnovers as the recipients.

This resulted in all potential BBLS and CBILS controls being used.

The groups weights were run using rim weighting. This uses an iterative procedure to adjust the sample to ensure the weighted profile of the sample matches the population for a set of weighting targets. The weighting was run separately for recipients and controls. The weighting targets were sector, region, and turnover. Both the recipients and their controls were weighted to the same set of targets meaning, once the weights are applied, the recipients and their controls have the same profile for sector, region, and turnover.

Two versions of these weight were needed: one for the longitudinal sample (i.e. those cases that had been interviewed in Year 1 and recontacted and interviewed a second time in Year 2) and one for the total Year 2 sample (the longitudinal sample plus any fresh sample members that were interviewed for the first time in Year 2). The weighting was carried out separately for both the longitudinal and total samples. The same set of weighting totals was used for each since the population figures for on region, sector and turnover profile of loan recipients had not been updated between the two waves, hence the same set of weighting totals had to be used each time.

Different turnover bands were used for BBLS and CBILS to reflect the range of turnovers covered by each group. The BBLS weighting used the following four grouped bands: <£50,000; £50,000-<£100,000; £100,000-<£250,000; £250,000+, whilst the CBILS weighting used three grouped bands (fewer bands were used because the CBILS sample size was smaller): <£1 million; £1 million-<£5 million; £5 million+.

The grouping of turnover bands means weighted frequencies of controls that use a finer breakdown of turnover (i.e. turnover for BBLS that includes categories that splits out the £250,000+ band into £250,000-<£500,000 and £500,000+ for example) may not exactly match the weighted frequencies of the recipients.

Weighting scheme for all respondents

A further set of weights was needed to adjust the combined BBLS and CBILS population (both borrowers and non-borrowers) into a single sample. This sample should be representative of the overall population of businesses that were eligible for BBLS and CBILS.

Two versions of this weight were needed – one for the longitudinal sample and one for the total Year 2 sample. As before, this involved running the weighting twice to the same set of totals.

The first step was to generate starter weights for BBLS recipients, CBILS recipients, and the combined BBLS and CBILS controls. For the BBLS and CBILS recipients this starter weight was the weight generated for the group analysis (see above) which weighted the recipient samples to their respective populations by sector, region, and turnover.

The combined BBLS and CBILS control population was weighted together in a single step to population estimates of non-recipient businesses.

BEIS provided a set of population estimates for businesses from the IDBR. These were used to identify the number of businesses by region, sector, and turnover.

The number of loan recipients was taken from BBB figures.[[124]](#footnote-125) The number of non-loan businesses was then calculated as the number of businesses minus the number of loan recipients. The combined BBLS and CBILS controls were weighted to these figures. These weights were the control sample starter weights.

The three starter weights (BBLS borrowers, CBILS borrowers, and joint BBLS/CBILS controls) were then each scaled to their corresponding populations. The recipient population sizes were each taken from BBB figures (based on the number of facilities). The control population size was the estimated size of the non-borrower population calculated by subtracting the BBB figures from the BEIS figures.[[125]](#footnote-126) In addition, the BEIS figures are taken from the IDBR, and as such they include VAT-registered businesses only. The sample contains a small number of non-VAT registered businesses. This means the BEIS population figures under-estimate the number of businesses with lower turnover (since these businesses are less likely to be VAT registered). Despite that, these figures remain the best estimate available of the population and are appropriate as weighting targets.

The three scaled starter weights are then combined into a single weight. The scaling step means each of the three groups (BBLS borrowers, CBILS borrowers, and joint BBLS/CBILS controls) are in their correct population proportions when the weights are combined. These weights are then re-scaled to give a mean weight of one and ensure that the weighted sample size matches the unweighted sample size. A small amount of trimming was carried out to remove a small number of outliers that had high weights. The trimming helps to reduce the variability of the weights which reduces the impact of weighting on the design effects.

Recontact rates

All respondents were asked whether they agree to be recontacted again for further research in Year 3 of the study. Overall, 82% of businesses said that they are willing to be contacted (a detailed breakdown is provided in the table below).

##### Table 22: Proportion of business willing to be recontacted (by Ipsos)

|  | Total interviewed | Number agreed to be recontacted | Recontact rate |
| --- | --- | --- | --- |
| BBL borrowers | 242 | 198 | 82% |
| CBIL borrowers | 189 | 162 | 86% |
| CLBIL borrowers | 9 | 7 | 78% |
| Non-borrowers | 521 | 418 | 80% |
| **Overall** | **961** | **785** | **82%** |

## Questionnaire

**Evaluation of the BBLS, CBILS and CLBILS Loan Beneficiary and Non-Beneficiary Survey**

**Key**

* Anything that appears static on the interviewer screen in black
* **QUESTION/NEW SCREEN LABELS IN BOLD CAPS**
* Any scripting instructions and text substitutions in red
* Any interviewer instructions / text that should be removed for web survey in green

FOR WORD INSERTS USE THROUGHOUT:

IF SAMPLE= CLBIL: **Coronavirus Large Business Interruption Loan Scheme**

IF SAMPLE= CBIL: **Coronavirus Business Interruption Loan Scheme**

IF SAMPLE= BBLL: **Bounce Back Loan Scheme**

IF NO EMPLOYEES OR MICRO BUSINESS INDICATED: ASK TO SPEAK TO OWNER/ MANAGING DIRECTOR.

IF SMALL/MEDIUM SIZED OR LARGE BUSINESS: ASK TO SPEAK TO FINANCE DIRECTOR

ADD IF NECESSARY: **This may be** [INSERT INDIVIDUAL NAME FROM SAMPLE]

[SCREEN 1]

SHOW ALL:

**It’s XX calling from Ipsos an independent research organisation. I’m calling about taking part in a survey that we are conducting on behalf of the UK Government’s British Business Bank. The survey should take around 20 minutesto complete, depending on your answers. You will be asked questions about your business, the impact of Covid-19,the market(s) in which you operate and general business factors.**

[SCREEN 2]

SHOW IF FRESH NEW CBIL/BBIL:

READ OUT IF CATI ONLY

**Your business has been selected to take part in a survey because you applied for external finance from the** [INSERT LOAN FROM SAMPLE: **Bounce Back Loan Scheme/Coronavirus Business Interruption Loan Scheme/Coronavirus Large Business Interruption Loan Scheme**] **last year We are conducting the survey on behalf of the UK Government’s British Business Bank, part of the Department for Business, Energy & Industrial Strategy (BEIS).**

SHOW IF RECONTACT:

READ OUT IF CATI ONLY

**You may remember that we spoke to you last autumn and you kindly said that you would be willing to participate in future research. We are conducting the survey on behalf of the UK Government’s British Business Bank, part of the Department for Business, Energy & Industrial Strategy (BEIS).**

SHOW IF FRESHCONTROL:

READ OUT IF CATI ONLY

**Your business has been selected to take part in a survey we are conducting on behalf of the UK Government’s British Business Bank, part of the Department for Business, Energy & Industrial Strategy (BEIS).**

[SCREEN 3]

**[**CATI: **I] [**WEB: **We] can reassure you that your answers and other information you provide will be treated in the strictest confidence and answers will not be attributed to you or your business in the data we pass on to the British Business Bank unless you give explicit permission to do so.**

**Anonymised findings from the survey will be published on the British Business Bank website in 2023.**

**IF NECESSARY/**INFO BUTTON FOR ONLINE SURVEY:

**The British Business Bank is the UK government’s economic development bank. Established in November 2014, its mission is to make finance markets for smaller businesses work more effectively, enabling those businesses to prosper, grow and build UK economic activity. Its remit is to design, deliver and efficiently manage UK-wide smaller businesses’ access to finance programmes for the UK government.**

**The British Business Bank’s core programmes supported nearly £8bn of finance to almost 95,000 smaller businesses by end of January 2021. Since March 2020, the British Business Bank has also launched four new Coronavirus business loan schemes, delivering more than £72bn of finance to over 1.5m businesses.**

**This survey will inform how the Bank can help businesses learn about and access finance more easily.**

REASSURANCES IF NECESSARY:

* SHOW FOR LOAN RECIPIENTS (FRESH): **Your business has been selected at random from the list of** [INSERT LOAN FROM SAMPLE **Bounce Back Loan Scheme/Coronavirus Business Interruption Loan Scheme/Coronavirus Large Business Interruption Loan Scheme**] **customers. Your details were provided by your lender to the British Business Bank who manage the government-backed guarantee.**
* SHOW FOR RECONTACT SAMPLE (if CLBIL, CBIL or BBLL): **Your business has been selected because you took part in a survey for the British Business Bank in autumn last year and agreed to be contacted about future research.**
* SHOW FOR CONTROL GROUPS (CONTROL OR FRESHCONTROL): **Your business has been selected at random from** [D&B sample:] **Dun and Bradstreet, a commercial business database** [IDBR sample]: **the Office for National Statistics Inter-Departmental Business Register.**
* SHOW FOR ALL: **We work strictly within the Market Research Society Code of Conduct.**
* SHOW FOR ALL: **British Business Bank is interested in the views of all different types of businesses.**
* SHOW FOR ALL: **We need to talk to a wide range of businesses in this survey and you will not be asked irrelevant questions.**
* SHOW FOR ALL: **The survey is not technical, and you don’t need any specific finance-related knowledge to take part.**
* SHOW FOR ALL: **We can share some of the questions with you by email, to help you find the right person to take part.**
* SHOW FOR ALL: **Should you wish to get verification on the survey, the contact at Ipsos is [David Thompson] on [08081413076], and the contact at British Business Bank is [Chris Warner] on [**+44 (0)20 3905 1494**].**
* SHOW FOR ALL: **Further information on British Business Bank evaluations can be accessed online at**  <https://www.british-business-bank.co.uk/about-our-evaluations/>
* SHOW FOR ALL: **Last year’s report for this research can be found online at:** <https://www.british-business-bank.co.uk/wp-content/uploads/2022/06/Evaluation_of_BBLS_CBILS_and_CLBILS___Yr1_Report__accessible_.pdf>

NOTE FOR DP: IF RESPONDENT REQUESTS SEND ADVANCE EMAIL WITH FURTHER INFORMATION/ADVANCE NOTICE OF FINANCIAL QUESTIONS THAT THEY MAY PREFER TO LOOK UP IN ADVANCE.

CAN YOU PLEASE LOG HOW MANY PEOPLE REQUEST AND ADVANCE EMAIL IN THE OUTCOME FILE?

IF REFUSED

REF: Are you happy for us to let the British Business Bank know that you do not want to participate in this survey?

READ: The British Business Bank would like to use this information to ensure that other government departments know you do not wish to participate in this research and do not contact you further. The only information we will pass on to BBB is your business’ name and company registration number.

|  |  |
| --- | --- |
| Yes | 1 |
| No | 2 |

[SCREEN 3]

Q\_VOLUNTARY.

ASK ALL

**Before we start, I want to clarify that participation in the survey is voluntary and you can change your mind at any time. Please note that there are questions which ask you to describe your ethnic origin, age, health condition and gender identity, however you are free to not answer. Are you happy to proceed with the interview?** IF NECESSARY: **If you would like to read the Privacy Notice beforehand you can access it online at** <https://ipsos.uk/LoanScheme>

ASK ALL

ASK IF CATI

**S1** **Can I just check the business name that we have for you is** [INSERT TRADING NAME]**, is this correct?** IF NO: **Can you please tell me the correct business name?**

ASK IF WEB

**S1** **The business name that we have for you is** [INSERT TRADING NAME]**, is this correct?** IF NO: **Please can you provide us with the correct business name?**

INTERVIEWER NOTE FOR LOAN RECIPIENTS: IF THE RESPONDENT SAYS THEY HAVE MORE THAN ONE BUSINESS, AND THAT IT DOESN’T INCLUDE THE ONE NAMED HERE, SAY THAT FOR THE PURPOSE OF THIS SURVEY WE ARE INTERESTED IN ONE OF THEIR BUSINESSES FOR WHICH THEY SOUGHT EXTERNAL FINANCE THROUGH THE [INSERT FRESHNEW:**Bounce Back Loan Scheme /Coronavirus Business Interruption Loan Scheme/Coronavirus Large Business Interruption Loan Scheme**].

INTERVIEWER NOTE FOR CONTROL GROUP: IF THE RESPONDENT SAYS THEY HAVE MORE THAN ONE BUSINESS, AND THAT IT DOESN’T INCLUDE THE ONE NAMED HERE, SAY THAT FOR THE PURPOSE OF THIS SURVEY WE ARE INTERESTED IN ONE OF THEIR BUSINESSES WITH [BBLturnover in last financial year between with at least £30,000

|  |  |
| --- | --- |
| Yes | 1 |
| No – WRITE IN CORRECT NAME | 2 |
| Don’t know | 98 |

ASK ALL

**We will be focussing on** [INSERT BUSINESS NAME FROM SAMPLE IF CODE 1 AT S1 OR FROM SCRIPT IF CODE 2 AT S1] **throughout this interview.**

ASK ALL

**S2 [**CATI: **Can I just check, are] [**WEB: **Are] you able to answer questions about the business’s financial performance and its finance needs?**

|  |  |  |
| --- | --- | --- |
| Yes | 1 | CONTINUE |
| No – transfer | 2 | TRANSFER AND RETURN TO INTRO FOR CATI SCREEN OUT FOR WEB |
| No – they are unavailable | 3 | ASK FOR NAME OF CORRECT RESPONDENT TO CALL. THANK AND CLOSE |

FRESHCONTROL

**S3 Over the past 18 months, did your business face any challenges or opportunities as a result of the Covid-19 pandemic?**

**PROMPT IF NECESSARY: By this we mean putting staff on furlough, accessing a government or local authority grant, experiencing a fall in demand, facing any operational challenges, increase in costs or unexpected business expenses, and/or business constraints resulting from social distancing and/or lockdowns. This could also include an unexpected rise in demand as a result of the pandemic.**

MULTICODE ONLY

INTERVIEWER IF ANSWER IS NO: PLEASE PROBE FULLY AND EXPLORE ANY ISSUES BUSINESSES MIGHT HAVE FACED. EVEN IF THEY DID NOT NEED FINANCIAL HELP, PUTTING STAFF ON FURLOUGH COUNTS AS AN ISSUE

|  |  |  |
| --- | --- | --- |
| Yes – major challenge(s) | 1 | CONTINUE |
| Yes – major opportunity(ies) | 2 | CONTINUE |
| Yes – minor challenge(s) | 3 | CONTINUE |
| Yes – minor opportunity(ies) | 4 | CONTINUE |
| No | 5 | THANK AND CLOSE IF CONTROL GROUP |
| Don’t know | 98 | THANK AND CLOSE IF CONTROL GROUP |

ASK ALL

**S4 What was the approximate turnover of your business in the latest completed financial year?**

INTERVIEWER ADD IF NECESSARY / INFO BUTTON ON ONLINE SURVEY: **Turnover is the total income received by the business from all sales of goods and services charged to third parties.** ENTER NUMBER. ALLOW ZERO, DK AND REFUSED

DATASHEET

TYPE IN AMOUNT IN £

ALLOWED RANGE 0-999,999,999

INTERVIEWER NOTE: PLEASE READ BACK FIGURE TO RESPONDENT AND DOUBLE CHECK CORRECT NUMBER OF ZEROS

IF RESPONDENT IS UNSURE ASK THEM TO GIVE A BEST ESTIMATE

|  |
| --- |
| £ |

Don’t know 98

Refused 99

IF CONTROL OR FRESHCONTROL GROUP: THANK AND CLOSE IF TURNOVER IS UNDER £8,000

ASK IF DON’T KNOW TURNOVER (98) AT S4

**S5 AAWould it have been…?** READ OUT UNTIL GET AN ANSWER. SINGLE CODE ONLY

|  |  |
| --- | --- |
| Less than £8,000 | SCREEN OUT IF CONTROL GROUP, CONTINUE IF RECIPIENT  1 |
| £8,000 or more, but below £50,000 | 2 |
| Less than £50,000 | 3 |
| £50,000 or more, but below £100,000 | 4 |
| £100,000 or more, but below £250,000 | 5 |
| £250,000 or more, but below £500,000 | 6 |
| £500,000 or more, but below £1 million | 7 |
| £1 million or more, but below £5 million | 8 |
| £5 million or more, but below £10 million | 9 |
| £10 million or more, but below £25 million | 10 |
| £25 million or more, but below £45 million | 11 |
| £45 million or more, but below £100 million | 12 |
| £100 million or more, not more than £500m | 13 |
| More than £500 million | 14 |
| Don’t know | 98 |
| Refused | 99 |

ASK IF DON’T KNOW (CODE 98) AT S5

**S6\_AA [**CATI: **Could you tell me] [**WEB: **Do you know] if your business’ turnover in the latest completed financial year was?** F DON’T KNOW PROMPT FROM SAMPLE

|  |  |
| --- | --- |
| Less than £1 million | 1 |
| More than £1 million but not more than £45 million | 2 |
| More than £45 million, but not more than £500 million | 3 |
| More than £500 million | 4 |
| Don’t know | 98 |
| Refused | 99 |

IF FRESH – REPEAT S4-S6 AND ASK:

**S5S6\_BB.. And, what was the approximate turnover of your business in the 2020-2021 financial year?**

**ASK IF FRESH RE**PEAT S4-S6 AND ASK:

**CC: Finally, what was the approximate turnover of your business in the last completed financial year ending prior to the Covid-19 pandemic (i.e. before 23 March 2020) …?**

REPEAT OPTIONS FROM S4, THEN S5, S6

**NOTE S5S\_BB DELETED AT WAVE 2**

**NOTE S7 DELETED AT WAVE 2**

ASK IF FRESH CONTROL**S8**

**Did you apply for external finance from these other** **Government schemes available to business during the Covid-19 pandemic…?:**

**MULTICODE OK, ROTATE**

1. the Bounce Back Loan Scheme (BBLS)
2. the Coronavirus Business Interruption Loan Scheme (CBILS)
3. the Coronavirus Large Business Interruption Loan Scheme (CLBILS)

INTERVIEWER NOTE: AT THIS POINT, WE WOULD LIKE TO SCREEN OUT BUSINESSES THAT WERE ALLOCATED TO THE CONTROL GROUP FOR A GIVEN SCHEME AND WERE UNSUCCESSFUL WITH THEIR APPLICATION FOR THAT SCHEME. FOR EXAMPLE, IF A BUSINESS IS ALLOCATED TO THE CONTROL GROUP FOR CBILS AND WAS REJECTED FROM CBILS, THEY WOULD BE SCREENED OUT. UNSUCCESSFUL APPLICATIONS TO BBLS WOULD NOT LEAD TO THE BUSINESS BEING SCREENED OUT IN THIS CASE.

SINGLE CODE ONLY. READ OUT FOR EACH OPTION.

SCRIPTING INSTRUCTION: PLEASE SCREEN OUT ANY WHO WAS SUCCESSFUL AND RECEIVED TO DIFFERENT LOANS (code 4) – I.e. BBL= 4 and CBIL =4, TWO LOANS OF THE SAME TYPE (e.g. CBIL + CBIL) ARE ALLOWED

|  |  |  |
| --- | --- | --- |
| No, did not apply | 1 | CONTINUE IF CONTROL GROUP (S6DV=1-3) |
| Yes, applied but later withdrew my application | 2 | CONTINUE IF CONTROL GROUP (S6DV=1-3) |
| Yes, application was not successful | 3 | IF CONTROL GROUP CLOSE |
| Yes, and my application was successful | 4 | IF CONTROL GROUP ALLOW TO CONTINUE BASED ON THE SCHEME THEY SELECTED ONLY IF CRN IN THE SAMPLE |
| Don’t know | 98 | CLOSE IF CONTROL GROUP (S6DV=1-3) |
| Refused | 99 | CLOSE IF CONTROL GROUP (S6DV=1-3) |

NUMBERS IN THE SAMPLE, THEY WILL NO LONGER SCREEN OUT BUT WILL BE ALLOWED TO CONTINUE AS ONE OF THE RECIPIENT GROUPS.

FOR THE REMAINING QUESTIONNAIRE, THEY NEED TO BE TREATED AS RECIPIENTS AND BE SHOWN ALL OF THE RELEVANT QUESTIONS, FOR SUBS, WE’LL USE WORDING BASED ON THE SCHEME THEY SELECTED AT S8.

SCRIPTING INSTRUCTION: FOR CONTROL SAMPLE, PLEASE SCREEN OUT ANY WHO WAS SUCCESSFUL AND RECEIVED TWO DIFFERENT LOANS (code 4) – I.e. BBL= 4 and CBIL =4, TWO LOANS OF THE SAME TYPE (e.g. CBIL + CBIL) ARE ALLOWED, RECIPIENT SAMPLE TAKE INFO FROM SAMPLE INSTEAD

ASK ALL

**S9 What is the current trading status of your business?** MULTICODE **OK** 1-2 AND 6. READ OUT.

|  |  |
| --- | --- |
| Continuing to trade in the same goods, services and/or markets as before the start of the Covid-19 pandemic | 1 |
| Continuing to trade but in new goods, services and/or markets as before the start of the Covid-19 pandemic | 2 |
| Has temporarily closed or temporarily paused trading [EXCLUSIVE] | 3 |
| In the process of closing down permanently [EXCLUSIVE] | 4 |
| Permanently closed [EXCLUSIVE] | 5 |
| Other [PLEASE TYPE IN] | 6 |
| Don’t know | 98 |
| Refused | 99 |

ASK ALL THAT ARE TEMPORARILY OR PERMANENTLY CLOSED (CODE 3 TO 5) AT S9

**S10 To what extent do you feel the decision to close your business is attributable to the Covid-19 pandemic?** REVERSE SCALE 1-5. SINGLE CODE ONLY. READ OUT.

|  |  |
| --- | --- |
| Completely | 1 |
| A great deal | 2 |
| A fair amount | 3 |
| Not very much | 4 |
| Not at all | 5 |
| Don’t know | 98 |
| Refused | 99 |

ASK IF FRESH SAMPLE

**S11 Is your business … IF CLOSED (S9=5): Was your business…** SINGLE CODE ONLY. READ OUT / SHOW A TO E**?**

|  |  |  |
| --- | --- | --- |
| 1. A private sector business | 1 | CONTINUE |
| 1. A public sector organisation | 2 | CLOSE |
| 1. A social enterprise or profit with purpose enterprise (run primarily for social objectives or with any surpluses being used to further these objectives) | 3 | CONTINUE |
| 1. A voluntary sector/non-profit-making organisation | 4 | CONTINUE |
| 1. Other type of organisation [PLEASE TYPE IN] | 5 | CONTINUE |
| Don’t know | 98 | CONTINUE |
| Refused | 99 | CONTINUE |

ASK ALL

ASK IF FRESH SAMPLE

**S12 [**CATI: **Can I check] was your business’ last financial year (i.e. full, finalised accounting period) April 2021 to March 2022?** SINGLE CODE ONLY

|  |  |
| --- | --- |
| Yes - | 1 |
| No | 2 |
| Don’t know | 98 |
| Refused | 99 |

ASK IF FINANCIAL YEAR NOT APRIL 2021 TO MARCH 2022 OR DON’T KNOW (CODE 2 OR 98) AT S12

**S13 Can [**CATI: **I] [**WEB: **you] confirm in which month and year did the business’ last full, finalised accounting period end?** IF NECESSARY / INFO BUTTON FOR ONLINE SURVEY: **The accounting period is the period for which the full financial statements are prepared and balanced. Generally, the accounting period is 12 months long, but it can be shorter or longer.** INTERVIEWER NOTE: WE ARE INTERESTED IN THE LAST FINANCIAL YEAR EVEN IF THE BUSINESS IS STILL TO FILE A FINANCIAL STATEMENT FOR THAT YEAR. CODE MONTH AND YEAR

SINGLE CODE ONLY: MONTH

1. January
2. February
3. March
4. April
5. May
6. June
7. July
8. August
9. September
10. October
11. November
12. December
13. Don’t know
14. Refused

SINGLE CODE ONLY YEAR

1. 2020
2. 2021

98. Don’t know

99. Refused

ASK IF CLOSED (CODE 4 OR 5 AT S9) AND FINANCIAL YEAR NOT APRIL 2021 TO MARCH 2022OR DON’T KNOW (CODE 2 OR 98) AT S12 OR YES FOR LONGITUDINAL SAMPLE S12=1

**S14 And [**CATI: **can I check is] [**WEB: **is] your business’ financial year 12 months?**

**IF CLOSED (S9=5): Was your business’ financial year 12 months?**

SINGLE CODE ONLY

|  |  |
| --- | --- |
| Yes - 12 months | 1 |
| No – longer/shorter than 12 months WRITE IN NUMBER OF MONTHS IF NOT 12 MONTHS | 2 |
| Don’t know | 98 |
| Refused | 99 |

SCRIPT CHECK: IF RESPONDENT SAYS LESS THAN 12 MONTHS, THE ANSWER AT S13 CANNOT BE MARCH TO CURRENT MONTH MINUS ONE

ASK ALL

**S15AA How many people did your business employ across all sites in the UK, either full or part time, including yourself at the end of your latest completed financial year? Please include working directors, partners, managers, people who work away from the site Do not include outside contractors, agency staff or self-employed contractors.** WRITE IN EXACT NUMBER OR ACCEPT BANDED REPLY IF NOT SURE. [RANGE = 1-99,999]

|  |
| --- |
|  |

Don’t know 98

Refused 99

ASK IF DON’T KNOW (CODE 98) AT S15

**S16AA Which of the following best describes the total number of people employed at the end of your latest completed financial year, including yourself?** READ OUT. SINGLE CODE ONLY

|  |  |
| --- | --- |
| SHOW TO BBLS/CBILS SAMPLE OR CONTROL GROUP: Just yourself | 1 |
| SHOW TO BBLS/CBILS SAMPLE OR CONTROL GROUP : 2-4 | 2 |
| SHOW TO BBLS/CBILS SAMPLE OR CONTROL GROUP: 5-9 | 3 |
| SHOW TO BBLS/CBILS SAMPLE OR CONTROL GROUP: 10-24 | 4 |
| SHOW TO BBLS/CBILS SAMPLE OR CONTROL GROUP: 25-49 | 5 |
| SHOW TO CLBILS SAMPLE OR CONTROL GROUP: 1-49 | 6 |
| 50-249 | 7 |
| SHOW TO BBLS/CBILS OR CONTROL GROUP: 250 or more | 8 |
| SHOW TO CLBILS SAMPLE ONLY OR CONTROL GROUP: 250-999 | 0 |
| SHOW TO CLBILS SAMPLE ONLY OR CONTROL GROUP: 1,000-2,499 | 10 |
| SHOW TO CLBILS SAMPLE ONLY OR CONTROL GROUP: 2,500-4,999 | 11 |
| SHOW TO CLBILS SAMPLE ONLY OR CONTROL GROUP: 5,000 or more | 12 |
| Don’t know | 98 |
| Refused | 99 |

ASK IF FRESH SAMPLE

REPEATS S15-16 FOR:

**S1516BB. How many people did you employ in the financial year of 2020-2021?**

REPEAT ALL OPTIONS AT S15 AND S16

ASK IF FRESH SAMPLE

REPEATS S15-16 FOR:

**CC. Finally, how many people did you employ at the end of your latest completed financial year ending prior to the Covid-19 pandemic (i.e. 23 March 2020)?**

REPEAT ALL OPTIONS AT S15 AND S16

ASK ALL NEW SAMPLE

**S17 What is the legal status of your business? IF CLOSED (S9=5): What was the legal status of your business… ?** SINGLE CODE ONLY

IF SOLE PROPRIETORSHIP/TRADER (CODE 1) THEN ASK: **Can [**CATI: **I] [**WEB: **you] just confirm that there are** [IF CLOSED **(S9=5): were**] **no other owners involved in running the business except yourself?** IF THERE ARE OTHER OWNERS THEN PLEASE RE-CODE AS A PARTNERSHIP (CODE 4 ). IF SOLE PROPRIETORSHIP/TRADER (CODE 1) AS WELL AS SAID THEY HAD TWO OR MORE EMPLOYEES AT S15/16\_AA (CODE 2-12) THEN PLEASE CHECK WITH THE RESPONDENT THAT BOTH ANSWERS ARE CORRECT AND RE-CODE AS NECESSARY

|  |  |
| --- | --- |
| Sole Proprietorship/sole trader | 1 |
| Private limited company, limited by shares (LTD.) | 2 |
| Public Ltd Company (PLC) | 3 |
| Partnership | 4 |
| Limited liability partnership | 5 |
| Private company limited by guarantee | 6 |
| Friendly Society or a co-operative | 8 |
| Other (PLEASE TYPE IN) | 11 |
| Don’t know | 98 |
| Refused | 99 |

**ASK IS FRESH SAMPLES18 We have** [DESCRIPTION OF BUSINESS ACTIVITY FROM SAMPLE] **as a broad description of your company’s activity. Does this sound about right to you?** SINGLE CODE ONLY

INTERVIEWER NOTE: SEE SECTOR CRIB SHEET

|  |  |
| --- | --- |
| Yes | 1 |
| No | 2 |
| Don’t know | 98 |
| Refused | 99 |

ASK IF NOT CORRECT OR DON’T KNOW (CODE 2) AT S18

**S19 What is your main business activity**? **IF CLOSED (S9=5): What was your main business activity?**  PROBE AS NECESSARY

* What is [**IF CLOSED S9=5):** was] the main product or service of the business?
* What exactly is [**IF CLOSED S9=5):** was] made or done in the business?
* What material or machinery does [**IF CLOSED S9=5):** did] this involve using?

INTERVIEWER NOTE: SEE SECTOR CRIB SHEET. WRITE IN FULL DETAILS (2 DIGIT SIC CODING).

|  |
| --- |
|  |

**ASK IF FRESH SAMPLES20 How many years has your business been** [IF CLOSED S9=5): **was**  **your business] = trading? This includes all ownerships and all legal statuses.** INTERVIEWER ADD IF NECESSARY/ SHOW AS INFO BUTTON FOR ONLINE SURVEY **In the case of a past acquisition, refer to when the acquiring enterprise was registered. In the case of a merger, please consider the largest enterprise in terms of employment.** SINGLE CODE ONLY

|  |  |
| --- | --- |
| Less than one year | 1 |
| 1 year | 2 |
| 2 years | 3 |
| 3 years | 4 |
| 4 years | 5 |
| 5 years | 6 |
| 6-9 years | 7 |
| 10-15 years | 8 |
| 16-20 years | 9 |
| More than 20 years | 10 |
| Don’t know | 98 |
| Refused | 99 |

**SECTION A EXPERIENCE OF USING FINANCE AND BBB LOANS**

SHOW ALL IF FRESH RECIPIENTS)

**The next few questions are about the external finance you have obtained through the** [INSERT FROM SAMPLE: **Bounce Back Loan Scheme/Coronavirus Business Interruption Loan Scheme/Coronavirus Large Business Interruption Loan Scheme**] **and other types of finance your business might be using.**

SHOW TO FRESH CONTROL GROUP:

**The next few questions are about the types of external finance your business might be using.**

ASK ALL FRESH CONTROL GROUPS

**A2.**

**Have you applied for any external finance or used personal funds from owner(s) and/or any director(s) between 23 March 2020 until autumn last year (2021)?**

**Please only think about any external finance you applied for and include the use of personal funds from owner(s) and/or any director(s).**

MULTI CODE OK FOR 1-2.

|  |  |
| --- | --- |
| Yes – I applied for external finance | 1 |
| Yes- I used personal funds | 2 |
| No | 3 |
| Don’t know | 98 |
| Refused | 99 |

ASK ALL FRESH CONTROL GROUPS WHO HAVE APPLIED FOR EXTERNAL FINANCE AND/OR PERSONAL FUNDS AT A2 (A2 = 1 AND/OR 2)

**A2b. And was the need to apply for external finance or use of personal funds for your business prompted by the Covid-19 pandemic?**

SINGLE CODE ONLY.

|  |  |
| --- | --- |
| Yes | 1 |
| No | 2 |
| Don’t know | 98 |
| Refused | 99 |

ASK ALL FRESH CONTROL GROUPS WHO HAVE APPLIED FOR EXTERNAL FINANCE AT A2 (code 1)

**A3. Were you successful in your application for external finance?**

IF YES **Was this fully or partially sufficient for your business needs?**

READ OUT. SINGLE CODE ONLY.

|  |  |
| --- | --- |
| Yes, I obtained finance fully sufficient for all my business’ needs | 1 |
| Yes, I obtained finance partially sufficient for my business’s needs | 2 |
| No, I was not successful in the application | 3 |
| Don’t know | 98 |
| Refused | 99 |

ASK FRESH CONTROL GROUP IF A3=1 OR 2

OR FRESH RECIPIENTS FOR WHOM INFO IS NOT AVAILABLE IN THE SAMPLE

**A7 Can [**CATI: **I] [**WEB: **you] confirm in which month and year you obtained the external finance** you accessed between March 2020 and autumn 2021. Please think about the source of finance that provided you with the most funding.

[IF RECIPIENT [INSERT FROM SAMPLE: **Bounce Back Loan Scheme/Coronavirus Business Interruption Loan Scheme/Coronavirus Large Business Interruption Loan Scheme].**

**READ OUT TO ALL /** LEAVE AS NOTE IN WEB: **‘Obtained’ refers to when the facility was approved.**

SINGLE CODE ONLY MONTH

1. January
2. February
3. March
4. April
5. May
6. June
7. July
8. August
9. September
10. October
11. November
12. December
13. Don’t know
14. Refused

SINGLE CODE ONLY YEAR

1. 2020
2. 2021

98. Don’t know

99. Refused

ASK ALL FRESH CONTROLS WHO ACCESSED FINANCE [A2=1] OR FRESH RECIPIENTS WHERE THERE IS NO DATE IN THE SAMPLE.

A8 **And much money did you apply for? If you don’t know the exact amount, please estimate it as best as you can.** TYPE IN AMOUNT IN POUNDS

ALLOWED RANGE £0-£999,999,999

INTERVIEWER NOTE: PLEASE READ BACK FIGURE TO RESPONDENT AND DOUBLE CHECK CORRECT NUMBER OF ZEROS

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| £ |  |  |  |  |  |  |  |  |  |

Don’t know 98 Refused 99

ASK IF DON’T KNOW OR REFUSED (CODE 2 OR 3) AT A8

**A8b Would you say it was?** PROMPT FROM BANDS. SINGLE CODE ONLY

|  |  |
| --- | --- |
| **Less than £5,000** | 1 |
| **£5,000 to £9,999** | 2 |
| **£10,000 to £24,999** | 3 |
| **£25,000 to £49,999** | 4 |
| **£50,000 to £99,999** | 5 |
| **£100,000 to £499,999** | 6 |
| **£500,000 to £999,999** | 7 |
| **£1 million to less than £5 million** | 8 |
| **£5 million to less than £10 million** | 9 |
| **£10 million to less than £25 million** | 10 |
| **£25 million to less than £50 million** | 11 |
| **£50 million to less than £100 million** | 12 |
| **£100 million to less than £200 million** | 13 |
| **£200 million or more** | 14 |
| Don’t know | 98 |
| Refused | 99 |

SHOW ALL LOAN RECIPIENTS FRESHNEW

**CATI: I now want to ask you about the external finance you obtained through the** [INSERT FROM SAMPLEFRESHNEW: **Bounce Back Loan Scheme/Coronavirus Business Interruption Loan Scheme/Coronavirus Large Business Interruption Loan Scheme**]**.**

**WEB: You will now be asked about the external finance you obtained through the** [INSERT FROM SAMPLEFRESHNEW: **Bounce Back Loan Scheme/Coronavirus Business Interruption Loan Scheme/Coronavirus Large Business Interruption Loan Scheme**]**.**

ASK ALL FRESHNEW

**A18 How did your business use the external finance obtained from the** [INSERT FROM SAMPLE: **Bounce Back Loan Scheme/Coronavirus Business Interruption Loan Scheme/Coronavirus Large Business Interruption Loan Scheme]**? ROTATE A TO L MULTICODE OK.

ASK ALL WHO SELECT MORE THAN ONE (CODE 1 TO 13) AT A18 AA or A18\_BB. If One code at A18 then autopunch A19

**A19** **Which was the main use of the finance?** ONLY SHOW THOSE SELECTED AT A19.

SINGLE CODE ONLY. ROTATE 1-12. FOR ONLINE, SHOW AS YES/NO QUESTION PROMPT IF NECESSARY.

|  |  |  |
| --- | --- | --- |
| A | Pay staff salaries | 1 |
|  |  |  |
|  |  |  |
| D | Working capital/cash flow/day to day costs/expenses | 3 |
| E | Change business model, e.g. moving to online service provision | 4 |
| F | Introduce new or different goods and services as a result of new demand created by the Covid-19 pandemic | 5 |
| G | Invest in digital capability, such as digital platforms or communications, or to develop new products or services | 6 |
| H | Other adjustments to working practices (e.g. ensure workplace is Covid-19safe) | 7 |
| I | Provide financial security and/or headroom, e.g. in case more funds are needed | 8 |
| J | Make any debt repayments | 9 |
| K | Purchase of materials and/or goods | 10 |
| L | Consolidation of existing debt – i.e. bringing existing debts together into one new dent | 11 |
| M | Something else (PLEASE TYPE IN) | 12 |
|  | Don’t know | 98 |
|  | Refused | 99 |

**NOTE A20 DELETED IN W2**

**NOTE A23 DELETED IN W2**

ASK IF FRESH**A24. Between 23 March 2020 and March 2021, did your business use any of the following Government support for businesses and organisations?**

ROTATE ORDER 1 TO 9MULTICODE OK. FOR ONLINE, SHOW AS YES/NO QUESTION.

READ OUT 1 TO 9.

|  |  |
| --- | --- |
| Furloughing staff through the Coronavirus Job Retention Scheme [INTERVIEWER ADD IF REQUIRED / SHOW AS INFO BUTTON FOR ONLINE SURVEY: Under this scheme, the Government pays part of the wages of any workers temporarily asked to stop working and placed on leave due to the impact of Covid-19 on their employer. Furloughed workers are those whose employers cannot cover staff costs due to Covid-19, and as such they have been asked to stop working, but have not been made redundant] | 1 |
| Deferral of VAT payments | 2 |
| Deferral of Self-Assessment payments | 3 |
| HMRC Time to Pay [INTERVIEWER ADD IF REQUIRED / SHOW AS INFO BUTTON FOR ONLINE SURVEY: This allows payments for some taxes to be deferred] | 4 |
| Self-employed Income Support Scheme [INTERVIEWER ADD IF REQUIRED / SHOW AS INFO BUTTON FOR ONLINE SURVEY: This supports those who lose some or all of their income due to Covid-19] | 5 |
| 12-month business rates holiday for hospitality, leisure, retail businesses | 6 |
|  |  |
| Cash grants for small businesses, loans directly funded by Government or types of support – related to the Covid-19 pandemic | 7 |
| Cash grants for small businesses, loans directly funded by Government or types of support – unrelated to the Covid-19 pandemic | 8 |
| None of these | 97 |
| Don’t know | 98 |
| Refused | 99 |

ASK IF FRESH

**A25. Now thinking about the business environment more generally. To what extent do you think that each of the following has presented an obstacle to the running of your business as usual up to autumn last year (August - November 2021)?**

ROTATE ORDER.

SCALE: Major obstacle, minor obstacle and no obstacle at all

ALLOW DON’T KNOW AND REFUSED. READ OUT A TO G.

|  |  |
| --- | --- |
| A Changes in market demand | 1 |
| B Supply chain disruptions | 2 |
| C Issues with late payment | 3 |
| D Access to external finance | 4 |
| E Availability of staff | 5 |
| F Changes you [IF ONLINE: I]need to make to my business to make it ‘Covid-19 compliant’ e.g. forced closure or adhering to social distancing/public health restrictions | 6 |
|  |  |

SECTION C SELF REPORTED IMPACTS OF THE COVID-19 LOAN GUARANTEE SCHEME

**NOTE C1 DELETED IN W2**

ASK ALL LOAN RECIPIENTS

**C2 If you had not been able to access funding from the [INSERT FROM SAMPLE: Coronavirus Bounce Back Loan Scheme/Coronavirus Business Interruption Loan Scheme/Coronavirus Large Business Interruption Loan Scheme],**

**AA:how likely or unlikely is it that your business would have permanently closed before the end of 2021?**

**IF FRESH: BB: and how likely or unlikely is it that your business would have permanently closed before the end of 2020?**

**(Or before the end of last year)**

SINGLE CODE ONLY. READ OUT CODES.

|  |  |
| --- | --- |
| Definitely would have closed | 1 |
| Very likely | 2 |
| Fairly likely | 3 |
| Fairly unlikely | 4 |
| Very unlikely | 5 |
| Definitely would not have closed | 6 |
| Don’t know | 98 |
| Refused | 99 |

ASK ALL LOAN RECIPIENTS (

**SECTION D MARKETS AND COMPETITORS**

SHOW ALL

**The next few questions are asking about your business’ competitors, and your exporting or importing plans.**

**NOTE D1 DELETED IN W2**

ASK ALL RECIPIENTS (BBLS, CBILS, CLBILS)

**D2 Now thinking about your competitors, how would you describe the nature of the competition in your main market/s (defined with respect to the type of goods and services you sell and the geographic area in which you sell them) over the past year? Please think about your circumstances since Autumn 2021. Would you say that there was…?**  REVERSE SCALE. SINGLE CODE ONLY. READ OUT SCALE

|  |  |
| --- | --- |
| Very intense competition | 1 |
| Intense competition | 2 |
| Moderate competition | 3 |
| Weak competition | 4 |
| No competition at all | 5 |
| Don’t know | 98 |
| Refused | 99 |

**NOTE D3 DELETED IN W2**

**ASK ALL RECIPIENTS**

**D4 Thinking about your business over the past year (i.e. since Autumn 2021), if your business was to permanently cease trading do you think any of your competitors would take up your sales?** REVERSE SCALE.SINGLE CODE ONLY. READ OUT SCALE.

|  |  |
| --- | --- |
| Yes, all of our sales | 1 |
| Yes, some of our sales | 2 |
| No, no-one would take our sales | 3 |
|  |  |
| Don’t know | 98 |
| Refused | 99 |

**NOTE D5 DELETED IN W2**

**NOTE D6 DELETED IN W2**

**NOTE D7 DELETED IN W2**

SECTION E RECONTACT AND DATA LINKING

READ OUT TO ALL

**These final questions will help us understand the different types of people who are running or managing a business, how different businesses have been impacted by the Covid-19 pandemic and how they made use of different external finances types available.**

**Individual details will be kept strictly confidential by Ipsos. It will not be possible to identify an individual from the results and personal information will not be passed on to the British Business Bank.**

**[**SOLE TRADERS ONLY: **Please note that there is a question which asks you to describe your ethnic origin, age, health condition and gender identity, however you are free to not answer.]**

ASK IF FRESH SOLD TRADERS OR MISSING LONGITUDINAL SOLE TRADERS

(CODE 1) AT S17

**E1 What is your sex?**

SINGLE CODE ONLY

|  |  |
| --- | --- |
| Female | 1 |
| Male | 2 |
| Other | 3 |
| Prefer not to say | 4 |

ASK IF FRESH SOLD TRADERS OR MISSING LONGITUDINAL SOLE TRADERS

(CODE 1) AT S17

**E2 What is your ethnic group?**

SINGLE CODE ONLY.

|  |  |
| --- | --- |
| White | 1 |
| Multiple/ethnic groups | 2 |
| Asian/Asian British | 3 |
| Black/ African/Caribbean/Black British | 4 |
| Other ethnic group | 5 |
| Don’t know | 98 |
| Prefer not to say | 99 |

ASK IF FRESH SOLD TRADERS OR MISSING LONGITUDINAL SOLE TRADERS

(CODE 1 AT S17)

E3. **Please [CATI: could you tell us] [WEB: enter] the date you were born.**

**If you don’t know your date of birth, please estimate it as best as you can.**

ALLOW NUMERICAL ANSWER FOR DAY/MONTH/YEAR

ALLOW DK\_ Refused

ASK IF DK AT E3

**E4. How old were you on your last birthday?**

SINGLE CODE ONLY

|  |  |
| --- | --- |
| Under 24 | 1 |
| 25-29 | 2 |
| 30-34 | 3 |
| 35-39 | 4 |
| 40-49 | 5 |
| 50-59 | 6 |
| 60-69 | 7 |
| 70+ | 8 |
| Prefer not to say | 99 |
| Don’t know | 98 |

ASK IF FRESH SOLD TRADERS OR MISSING LONGITUDINAL SOLE TRADERS

(CODE 1 AT S17 )

**E5. Do you have any physical or mental health conditions or illnesses lasting or expected to last 12 months or more?**

|  |  |
| --- | --- |
| Yes | 1 |
| No | 2 |
| Don’t know | 98 |
| Prefer not to say | 99 |

ASK TURNOVER UNDER £45 MILLION (S4= LESS THAN £45 MILLION OR S5\_AA= 1-11 OR S6\_AA= 1-2 ) EXCEPT SOLE TRADERS (CODE 1 AT S17)

**E6 Thinking about the ownership of your business, approximately what percentage of your business would you say is owned by:**

1. women?
2. People who identify as being Asian/Black/Mixed/Multiple ethnic groups/another ethnic group other than White?
3. institutions (e.g. Venture Capital Funds)?

RECORD % AND CODE TO LIST BELOW FOR EACH. ALLOW OPTION FOR REFUSED. IF RESPONDENT SAYS THEY DON’T KNOW PLEASE PROMPT TO CODE

|  |  |  |  |
| --- | --- | --- | --- |
|  | Women | People who identify as being Asian/Black/Mixed/Multiple ethnic groups/another ethnic group other than White | Institutions (e.g. Venture Capital Funds) |
| None | 1 | 1 | 1 |
| More than one percent but less than 50% | 2 | 2 | 2 |
| 50% or more | 3 | 3 | 3 |
| 100% | 4 | 4 | 4 |
| Don’t know | 98 | 98 | 98 |
| Refused | 99 | 99 | 99 |

ASK TURNOVER OVER £45 MILLION (S4= MORE THAN £45 MILLION OR S5= 12-14 OR S6= 3-4 ) EXCEPT SOLE TRADERS (CODE 1 AT S17)

**E7. Thinking about the senior leadership team in your business, approximately what percentage of the senior leadership team would you say…**

1. Are women?
2. Identify as being Asian/Black/Mixed/Multiple ethnic groups/another ethnic group other than White?

RECORD % AND CODE TO LIST BELOW FOR EACH. ALLOW OPTION FOR REFUSED. IF RESPONDENT SAYS THEY DON’T KNOW PLEASE PROMPT TO CODE

|  |  |  |
| --- | --- | --- |
|  | Women | People who identify as being Asian/Black/Mixed/Multiple ethnic groups/another ethnic group other than White |
| None | 1 | 1 |
| More than one percent but less than 50% | 2 | 2 |
| 50% or more | 3 | 3 |
| 100% | 4 | 4 |
| Don’t know | 98 | 98 |
| Refused | 99 | 99 |

ASK ALL

**E8. On behalf of Ipsos and the British Business Bank, we would like to thank you very much for your time.**

**The British Business Bank may want to do some follow up research on this subject within the next few months. This would involve an in-depth interview lasting c. 45-60 minutes with one of our researchers. Would you be happy to take part in the follow up interviews? You do not have to commit to anything now, just indicate a willingness to be contacted again.** SINGLE CODE ONLY

**We can assure you that everything you say will be treated in the strictest confidence and we’ll combine your responses with those from the other participating businesses in a way which will ensure that the British Business Bank won’t be able to identify you from our report. You would only be re-contacted for British Business Bank research and not for any other purpose.**

|  |  |
| --- | --- |
| Yes – Ipsos can contact me | 1 |
| No | 2 |

ASK ALL

**E9 The British Business Bank may also want to do some follow up research on this or other subjects within the next three years. Would you be happy to take part in further research within the next three years?** MULTI CODE OK

**REPEAT IF NECESSARY:**

**We can assure you that everything you say will be treated in the strictest confidence and we’ll combine your responses with those from the other participating businesses in a way which will ensure that the British Business Bank won’t be able to identify you from our report. You would only be re-contacted for British Business Bank research and not for any other purpose.**

|  |  |
| --- | --- |
| Yes – Ipsos can contact me | 1 |
| Yes – Another research agency can contact me | 2 |
| Yes – British Business Bank can contact me | 3 |
| No EXCLUSIVE | 4 |

ASK IF AGREE TO RECONTACT (CODE 1, 2 AND/OR 3) AT E8 and/or E9

**E10 You may be contacted via telephone or email. Please could you confirm your email address and/or your preferred telephone number?**

|  |  |
| --- | --- |
| Yes [COLLECT EMAIL] | 1 |
| Yes [COLLECT TELEPHONE NO] | 3 |
| Refused | 99 |

ASK ALL

**E11. We would like to check your postcode as this allows us to classify your business by region or nation. We have your business postcode as** [POSTCODE FROM SAMPLE]. **Is this correct?**

|  |  |
| --- | --- |
| Yes | 1 |
| No | 2 |

ASK IF POSTCODE IS INCORRECT (CODE 2) AT E10

**E12. What is your postcode**? PROBE, AS NECESSARY. WRITE IN TWICE TO VERIFY

|  |
| --- |
|  |

ASK ALL

**E13.**

The British Business Bank or London Economics may want to undertake further analysis of the survey results by linking your answers to other available data.

[READ OUT IF NECESSARY / SHOW AS INFO BUTTON FOR ONLINE SURVEY: This may include analysing the data by local authority, information to categorise your business and other information about your loan held by the British Business Bank or held by commercial sources such as your credit score, turnover, size or other types of finance or support accessed by your business in previous years.]

**Are you happy for your survey responses to be used in this way?**

READ OUT IF NECESSARY / SHOW AS INFO BUTTON FOR ONLINE SURVEY: The British Business Bank commissioned another research organisation, London Economics to undertake an economic impact analysis of the Coronavirus loans the Bank provided to businesses. The extra information would only be used for aggregate level analysis. At no point would your business be identified in any reporting of this analysis.

READ OUT IF NECESSARY / SHOW AS INFO BUTTON FOR ONLINE SURVEY: Your data will not be shared with credit rating agencies. It will be used only for research purposes by the British Business Bank and London Economics. Any matching to other datasets will not affect your credit scores or your business in any other way.

SINGLE CODE ONLY

|  |  |
| --- | --- |
| Yes - British Business Bank can undertake the analysis using credit scores and other available data | 1 |
| Yes – London Economics can undertake the analysis using credit scores and other available data | 2 |
| No [EXCLUSIVE] | 3 |

**ASK ALL**

**E15. Finally, with your consent we would like to email you a summary of the research findings once published. Please confirm whether you would like to receive this report?**

|  |  |
| --- | --- |
| Yes (same email address) [FEED IN EMAIL ADDRESS FROM INTRODUCTION/ REASSURANCES/ DATA SHEET] | 1 |
| Yes (different address) [OPEN BOX FOR EMAIL ADDRESS] | 2 |
| No | 3 |

**Thank you for taking the time to participate in this study. You can access the privacy notice here: <link>. This explains the purposes for processing your personal data as well as your rights under data protection regulations to access your personal data, withdraw consent, object to processing of your personal data and other required information.**

**If you do have any further comments or queries relating to this project, please contact [Insert contact name].**

THANK AND CLOSE

# Annex 3 – Impact Evaluation Methodology

## Analysis of business survival

This annex section describes the approach used to quantify the impact of the Covid-19 Loan Guarantee Schemes on business survival.

Calculating the observed closure rate of businesses

As mentioned in the section on the Covid-19 Loan Guarantee Schemes’ impact on business survival, the observed closure rate of businesses is estimated using BBB Portal Data. This exercise is based on estimating closures resulting from liquidations due to insolvency, so it will not include all business closures (for example voluntary liquidations for reasons other than insolvency).

The estimated closure rate from liquidations is computed in two steps:

1. The first step consists in estimating the share of borrowers that have defaulted on obligations. A business was defined as having defaulted if one or more of its BBLS/CBILS/CLBILS facilities had a default date on or before 31st December 2021.

Although it is possible for a business to have multiple facilities which may not all be in default, for the purpose of the analysis of closure rates, the default state needs to be assigned at the level of the company rather than the facility. Therefore, a business is assumed to be in default if at least one of its facilities had been in default by 31st December 2021.

Not all these businesses will cease trading. For instance, some may re-structure their debt, or enter administration without ceasing to trade etc. Therefore, to approximate the share of businesses that ceased trading, it is necessary to estimate the likelihood with which defaulting businesses enter liquidation.

1. The second step therefore consists in estimating the probability with which businesses enter liquidation, conditional on being in default. The following states are assumed to indicate that liquidation proceedings have taken place:
   * Demanded – the lender is claiming on the guarantee entered with HM Government. It is assumed that lenders would only claim on the guarantee after liquidation proceedings have taken place.
   * Settled – the claim has been settled.

Liquidation proceedings were assumed to have taken place for a business if it had one or more facilities in either the ‘demanded’ or ‘settled’ states, given that these facilities had a default date on or before 31st December 2021.

The probability with which businesses enter liquidation (the liquidation rate) was then calculated by dividing the number of liquidated businesses by the number of defaulting businesses.

It should be noted that, if the outstanding balance of a loan was recovered following a liquidation, the loan state would be marked as ‘repaid’ in the management information data, but these businesses are not included as they could not be distinguished from businesses that have fully repaid their loan. Therefore, the estimated number of liquidated businesses should be treated as a lower bound (another reason for this may be that, in some cases, the loan state may not have been updated). The estimated closure rate is computed by multiplying the estimated default and liquidation rates.

Assigning companies to one of the Covid-19 Loan Guarantee Schemes

When a company took out only one facility, it is assigned to the scheme of the facility. However, for borrowers that took out a facility in more than one Covid-19 Loan Guarantee Scheme, businesses were assigned to the scheme based on the following rules:

* When the date drawn was available for each facility, a business was assigned to the scheme of the facility that was drawn first.
* If date drawn was missing for at least one facility, a business was assigned to the scheme in which it had a repaid facility, assuming that there were not repaid facilities in both schemes. If there were repaid facilities in both schemes, a business was assigned to the scheme in which all its facilities were repaid, assuming all facilities had only been repaid in one scheme.
* If no loan has been repaid, some but not all loans under both schemes were repaid, or all loans under both schemes were repaid, a business was assigned to BBLS if the total CBILS loan amount was larger than the total BBLS amount. This assumes that these businesses are likely to have refinanced a BBLS loan to obtain a larger amount of funds through the CBILS scheme. For these businesses, the loan that was used to meet their immediate financial needs was the first loan they received, i.e. the BBLS loan.
* If no loan has been repaid, some but not all loans under both schemes were repaid, or all loans under both schemes were repaid, a business was assigned to the CBILS if the total CBILS loan amount was less than or equal to the total BBLS amount. This assumes that these businesses are likely to have refinanced a CBILS loan using a BBLS loan to obtain more advantageous terms and conditions. For these businesses, the loan that was used to meet their immediate financial needs was the CBILS loan.

Possible impact of fraud on estimated closure rates of businesses

It should be noted that the closure rate may be biased by fraud – an issue likely to be most prevalent among BBLS businesses.[[126]](#footnote-127) For instance, there is anecdotal evidence that BBLS loans were in some cases taken out by fictional companies, which should not be included in the calculations, as they will upwardly bias the closure rate if they tend not to be repaid (as this would incorrectly inflate the number of insolvent businesses), and they would downwardly bias the closure rate if they tended to be repaid (as this would incorrectly inflate the number of solvent businesses). BEIS has estimated that 8% of BBLS loan volume related to fraudulent loans,[[127]](#footnote-128) but it is unclear whether these would bias estimated closure rates upwards or downwards, or to what extent. Therefore, no adjustment has been made to the estimated closure rate. In addition, some borrower business closures may have been delayed by ongoing fraud investigations. These could lower the estimated impact of BBLS on business survival (as a result of an increased observed closure rate).

Estimating the number of pre-pandemic jobs among borrowers that would have permanently closed in the absence of the Covid-19 Loan Guarantee Schemes

Overall, the approach used to estimate the number of pre-pandemic jobs among borrowers that would have permanently closed if the Covid-19 Loan Guarantee Schemes had not been in place is similar to that outlined in the section “Impact on business survival” in the Year 2 impact evaluation chapter.

First, the proportion of pre-pandemic jobs among borrowers that would have permanently closed in the absence of the Covid-19 Loan Guarantee Schemes is estimated using two components. The first component is calculated as the total pre-pandemic employment of borrowers that report that they would have permanently closed before the end of December 2021 if they had not been able to access funding from the Covid-19 Loan Guarantee Schemes. This is then divided by total pre-pandemic employment of surveyed businesses. As for the estimates of counterfactual business closure rates, a lower- and upper-bound was calculated.

Second, an estimate of total pre-pandemic employment among BBLS and CBILS/CLBILS borrowers is calculated as the product of a) the total number of BBLS or CBILS/CLBILS borrowers and b) the average pre-pandemic employment per BBLS or CBILS/CLBILS borrower. Average pre-pandemic employment is taken per borrower and is estimated based on the quantitative survey. This number is used to scale the proportion of pre-pandemic jobs among businesses that would have permanently closed in the absence of the Covid-19 Loan Guarantee Schemes.

Third, the observed proportion of pre-pandemic jobs among businesses that permanently closed is assumed to be equal to the observed closure rate of businesses that used the Covid-19 Loan Guarantee Schemes (as described above). This approach implicitly assumes that businesses that permanently closed during the period had average employment levels among all businesses. This assumption is unlikely to substantially affect estimates, given its low magnitude. This estimate is needed in order to exclude jobs among borrowers that permanently closed during the pandemic, as the Covid-19 Loan Guarantee Schemes did not enable these businesses to survive.

Based on the above quantities, the formula for estimating the number of pre-pandemic jobs among borrowers that would have permanently closed in the absence of the Covid-19 Loan

Guarantee Schemes is:

## Econometrics methodology and results

This section describes the econometric approaches used to quantify the impacts of the Covid-19 Loan Guarantee Schemes on business turnover and employment in the second year of the pandemic. Firstly, it describes the econometric approach used to estimate impacts in each case. Secondly, it discusses the data used in the data used in each part of the analysis. Finally, it provides supplementary econometric results.

Methodological Approach

The key challenge in identifying the effect of the Covid-19 Loan Guarantee Schemes on businesses is that there may be differences between businesses that participated in the Covid-19 Loan Guarantee Schemes (borrowers, or the ‘treatment group’) and businesses that did not participate in the Covid-19 Loan Guarantee Schemes or non-borrowers other than simply whether they participated in the Covid-19 Loan Guarantee Schemes.

For example, one might expect that businesses heavily disrupted by the pandemic (for example many businesses in the hospitality sector were forced to halt most of their operations due to lockdown restrictions) would be more likely to access the Covid-19 Loan Guarantee Schemes than businesses whose activities were less affected by the pandemic.

These differences have the potential to impact business performance (measured by turnover and employment). As a result, a simple comparison between the treatment and non-borrower groups of turnover and employment before and after the pandemic could result in incorrectly estimating the effect of the Covid-19 Loan Guarantee Schemes.

To tackle this problem, propensity score matching (PSM)[[128]](#footnote-129) is implemented to identify a set of ‘control’ businesses that did not participate in the Covid-19 Loan Guarantee Schemes, but closely resemble the treated businesses and minimise these differences. Then, a comparison is made between this set of control businesses and the treated businesses is made using fixed effects analysis. These models were estimated using STATA. Further detail on these two parts of the methodology is presented in the text that follows.

Propensity Score Matching (PSM)

Propensity score matching involves matching the treatment businesses to similar businesses in the non-borrower group on the basis of a ‘propensity score’ in order to construct a ‘control’ group of non-borrowers that is more comparable to borrowers than the initial unmatched sample of non-borrowers. The propensity score is the probability of a business being in the treatment group, estimated based on its characteristics. The propensity score is calculated using a logit model. The logit model is a standard economic model used when the outcome of interest is binary (whether a business received a loan under the Covid-19 Loan Guarantee Schemes or not). This model is represented by the following equation for business *i*:

* is a dummy variable that takes the value 1 if the business is in the treatment group and 0 otherwise.
* is the cumulative standard logistic distribution, which is defined such that .
* is a vector of characteristics of the business, and are the associated coefficients for these characteristics. These characteristics must be unaffected by the business’ decision of whether to participate in the Covid-19 Loan Guarantee Schemes. Details on the characteristics included in the Propensity Score Matching can be found in the discussion of the data.

Once the propensity scores have been calculated, each loan business is matched to the non-borrower with the closest propensity score (i.e. the ‘nearest neighbour’).

The matching algorithm also specifies a maximum allowable discrepancy in the propensity score between the treatment business and its matched non-borrower (referred to as a calliper). This ensures a minimum quality of match between the borrower and non-borrower groups but leads to the exclusion of loan businesses that are not similar enough in propensity score to any non-borrowers. The calliper is equal to one fifth of a standard deviation of the propensity scores.

The algorithm also allows for replacement, i.e. one non-borrower can be matched to multiple different businesses in the treatment group. The advantage of this is that the closest match is always used (thereby reducing bias of estimates), however this means that some non-borrowers can be used multiple times reducing the overall sample size (thereby increasing variance of estimates).

Additionally, two further restrictions are applied. Firstly, treatment businesses with a propensity score outside the range of propensity scores observed among non-borrowers are excluded. For example, if a business in the treatment group has a propensity score above the largest propensity score among non-borrowers, then it will be excluded. This is important as for these loan businesses, there is no suitably similar non-borrower with which to match it. Secondly, treatment businesses are only matched to non-borrowers which have turnover (or employment) data populated in the same years. This helps to ensure that the similarity of the treatment and control group (measured by pre-pandemic characteristics) is maintained across the three years of the analysis.[[129]](#footnote-130)

The underlying goal of PSM is to identify a set of treatment and control businesses such that the only significant differences between the two is that one group received the treatment, and the other did not. The PSM substantially reduces the differences between the loan and non-borrower samples. This is by approximately 70% for the BBLS sample and 66% for the CBILS/CLBILS sample. The tables that follow show the differences in prevalence of characteristics included in the PSM for the borrower and non-borrower groups, before and after the PSM.

##### Table 23: Balance table – BBLS

| Characteristic | Feature | Difference in prevalence between borrower and non-borrower groups  (Full Sample) | Difference in prevalence between borrower and non-borrower groups  (After PSM) |
| --- | --- | --- | --- |
| Business Interruption | Changes for Covid-19 compliance | 2.07% | 0.34% |
|  | Access to External Finance | 2.41% | 1.03% |
|  | Issues with Late Payment | 8.62% | 0.17% |
|  | Changes in Market Demand | 12.04% | 3.10% |
|  | Availability of Staff | 9.61% | 1.38% |
|  | Supply Chain Disruption | 12.26% | 0.17% |
| Turnover | less than 50,000 | 23.72% | 1.38% |
|  | 50,000 or more, but below 100,000 | 2.17% | 2.07% |
|  | 100,000 or more, but below 250,000 | 6.59% | 0.69% |
|  | 250,000 or more, but below 500,000 | 9.87% | 1.90% |
|  | 500,000 or more, but below 1 million | 10.19% | 2.93% |
|  | 1 million or more, but below 5 million | 1.01% | 3.62% |
|  | 5 million or more, but below 10 million | 0.25% | 0.52% |
| Staff | 1 | 20.17% | 0.86% |
|  | 2 to 4 | 7.80% | 1.03% |
|  | 5 to 9 | 10.26% | 1.90% |
|  | 10 to 24 | 2.13% | 1.90% |
|  | 25 to 49 | 1.14% | 0.17% |
|  | 50 to 249 | 0.72% | 0.34% |
|  | 250 to 999 | 0.44% | 0.00% |
| Region | East / Midlands | 3.25% | 0.17% |
|  | London | 1.17% | 3.62% |
|  | North / Yorkshire | 1.42% | 0.69% |
|  | Northern Ireland | 3.03% | 1.55% |
|  | Scotland | 0.37% | 2.59% |
|  | South | 0.00% | 0.00% |
|  | Wales | 2.44% | 1.72% |
| Sector | Business services | 4.90% | 3.62% |
|  | Construction | 3.14% | 0.34% |
|  | Distribution | 4.38% | 6.21% |
|  | Other Services | 2.33% | 0.52% |
|  | Production | 0.30% | 1.72% |
| Age | 5 years or less | 7.39% | 0.86% |
|  | 6 to 9 years | 2.55% | 3.79% |
|  | 10 to 15 years | 6.07% | 3.97% |
|  | 16 to 20 years | 0.87% | 2.59% |
|  | More than 20 years | 16.88% | 1.55% |
| Average |  | 5.51% | 1.65% |

Source: London Economics’ analysis of survey data

##### Table 24: Balance table – CBILS/CLBILS

| Characteristic | Feature | Difference in prevalence between borrower and non-borrower groups  (Full Sample) | Difference in prevalence between borrower and non-borrower groups  (After PSM) |
| --- | --- | --- | --- |
| Business Interruption | Changes for Covid-19 compliance | 4.70% | 1.75% |
|  | Access to External Finance | 4.08% | 0.75% |
|  | Issues with Late Payment | 9.28% | 5.25% |
|  | Changes in Market Demand | 11.64% | 0.25% |
|  | Availability of Staff | 0.99% | 0.50% |
|  | Supply Chain Disruption | 8.52% | 2.25% |
| Turnover | less than 50,000 | 0.71% | 0.00% |
|  | 50,000 or more, but below 100,000 | 1.12% | 0.00% |
|  | 100,000 or more, but below 250,000 | 6.19% | 1.00% |
|  | 250,000 or more, but below 500,000 | 2.89% | 0.50% |
|  | 500,000 or more, but below 1 million | 7.48% | 1.75% |
|  | 1 million or more, but below 5 million | 6.74% | 3.00% |
|  | 5 million or more, but below 10 million | 0.45% | 0.50% |
|  | 10 million or more, but below 25 million | 5.16% | 2.25% |
|  | 25 million or more, but below 45 million | 1.69% | 0.25% |
|  | 45 million or more, but below 100 million | 4.66% | 1.00% |
|  | 100 million or more, not more than 500million | 5.02% | 0.25% |
|  | More than 500 million | 0.31% | 0.00% |
| Staff | 1 | 2.51% | 0.50% |
|  | 2 to 4 | 0.31% | 2.00% |
|  | 5 to 9 | 6.90% | 1.25% |
|  | 10 to 24 | 2.71% | 3.25% |
|  | 25 to 49 | 6.97% | 3.25% |
|  | 50 to 249 | 6.88% | 3.00% |
|  | 250 to 999 | 4.38% | 0.75% |
|  | 1,000 to 2,499 | 2.08% | 0.00% |
|  | 2,500 to 4,999 | 0.89% | 0.00% |
|  | 5,000 or more | 0.15% | 0.00% |
| Region | East / Midlands | 0.70% | 1.00% |
|  | London | 0.65% | 0.25% |
|  | North / Yorkshire | 0.79% | 3.00% |
|  | Northern Ireland | 3.75% | 0.50% |
|  | Scotland | 2.39% | 1.00% |
|  | South | 2.12% | 0.50% |
|  | Wales | 1.59% | 2.25% |
| Sector | Business services | 11.92% | 1.25% |
|  | Construction | 1.75% | 0.25% |
|  | Distribution | 0.28% | 0.75% |
|  | Other Services | 12.61% | 3.00% |
|  | Production | 2.72% | 1.25% |
| Age | 5 years or less | 1.13% | 0.50% |
|  | 6 to 9 years | 0.06% | 0.00% |
|  | 10 to 15 years | 9.47% | 3.00% |
|  | 16 to 20 years | 4.17% | 4.00% |
|  | More than 20 years | 12.57% | 6.50% |
| Average |  | 4.09% | 1.43% |

Source: London Economics’ analysis of survey data.

Fixed effects estimation

Under the fixed effects approach, outcomes are compared before and in the two years after the Covid-19 Loan Guarantee Schemes were introduced to account for pre-existing differences in performance (as measured by turnover and employment) between the treatment and control groups that may not have been eliminated by the propensity score matching process.[[130]](#footnote-131)

The difference between outcomes before the pandemic and in the second year of the pandemic for control businesses is captured by the coefficient for the variable “Post-intervention (Year 2)”. The difference between outcomes before the pandemic and in the second year of the pandemic for treatment businesses is captured by the variables “Post-intervention (Year 2)” and “Borrower, post-intervention (Year 2)”. More specifically, the net effect is obtained by adding together the two coefficients.[[131]](#footnote-132) Therefore, the impact of the scheme in the second year of the pandemic is captured by the variable “Borrower, post-intervention (Year 2)”.

The core specification for the fixed effects model is described by the following equation:

* denotes the outcome variable (i.e. either log employment or log turnover)[[132]](#footnote-133). The years included in the analysis are the last financial year before the pandemic and the latest two financial years.
* is a constant term.
* is a dummy variable indicating whether the firm is in the treatment group.
* are time dummies for the different years in the analysis. These capture general variations in business outcomes across the period of study that are common to all businesses.
* are a set of dummies controlling for participation in other support schemes.
* are firm-level fixed effects.
* is the idiosyncratic error term. This captures factors which are not observed, and which change both across businesses and across time. Standard errors are clustered at the sector level to account for potential correlation in error terms across businesses in the same industry.
* *,* and are individual vectors of coefficients. consists of the estimates for the effect of the Covid-19 Loan Guarantee Schemes**.**

Wider impacts analysis

In order to quantify the indirect impact of the Covid-19 Loan Guarantee Schemes on turnover and employment (of borrowers and non-borrowers), a different estimation strategy is used in comparison to the estimation of the direct impacts. The core specification for the wider impacts model is described by the following equation:

* denotes the outcome variable (i.e. either log employment or log turnover). The years included in the analysis are the last financial year before the pandemic and the latest two financial years.
* is a constant term.
* are time dummies for the different years in the analysis. These capture general variations in business outcomes across the period of study that are common to all businesses.
* is a dummy variable indicating whether the firm is in the treatment group.
* are a set of dummies controlling for participation in other support schemes.
* denotes the value (per firm)[[133]](#footnote-134) of loans extended under the loan guarantee schemes to the sector of the firm.
* denotes the value (per firm)[[134]](#footnote-135) of CJRS support to the sector of the firm.
* is a vector of control variables.
* are firm-level fixed effects.
* is the idiosyncratic error term. This captures factors which are not observed, and which change both across businesses and across time. Standard errors are clustered at the sector level to account for potential correlation in error terms across businesses in the same industry.
* *,* ***, ,*** and are individual vectors or scalars of coefficients.

The estimation procedure differs from the estimation of the direct impacts of the schemes in a number of ways. Firstly, the coefficient of interest is and relates to the indirect impacts of the schemes on outcomes of firms (both borrowers and non-borrowers).

Moreover, the model is not estimated on a matched sample of treated and control firms, but rather on the entire sample of survey respondents, with the use of survey weights to ensure that the sample is representative of the whole business population. This is required because the indirect impacts of the schemes can affect any business in the UK economy.

Also, only one equation is estimated for each outcome measure rather than separate equations for each scheme. This is, again, because the indirect benefits from each scheme may potentially impact any business in the economy.

Finally, because this model is no longer estimated on a matched sample, a larger number of control variables[[135]](#footnote-136) are included in this model to ensure that the coefficient of interest does not capture the influence of factors other than the scheme on firm-level outcomes.

Data

The quantification of the impacts of the Covid-19 Loan Guarantee Schemes uses both data collected from participants and non-participants in the Covid-19 Loan Guarantee Schemes and external data. This section discusses the data processing and describes the variables used in each aspect of the econometric analysis.

##### Table 25: Variables used in the PSM

| Variable | Explanation | Source |
| --- | --- | --- |
| Scheme | Indicates under which Covid-19 Loan Guarantee Scheme borrowers received the loan, and which Covid-19 Loan Guarantee Scheme control businesses were assigned to | BBB management information and survey data |
| Treatment | Indicates whether a business was a borrower of one of the Covid-19 Loan Guarantee Schemes | BBB management information and survey data |
| Region | Businesses operating in the same part of the UK will be more likely to be similar and experience similar local economic conditions to each other than businesses in different parts of the UK. As a result, it would be expected that the region a business is based in may influence its decision to participate in the Covid-19 Loan Guarantee Schemes. | Survey data |
| Sector | Businesses operating in the same sector will be more likely to face similar challenges and trading conditions.[[136]](#footnote-137) | Survey data |
| Size prior to the pandemic | Businesses of different sizes will have different considerations in terms of the kinds of challenges they face and their response to the pandemic. Two different measures of size were used (number of staff and turnover), measured at the end of the last financial year before the pandemic. This information was collected as part of the survey.[[137]](#footnote-138) | Survey data |
| Age | More established businesses are likely to be impacted differently than nascent businesses and similarly are likely to have different responses to the adversity of the pandemic. As part of the survey businesses were asked how many years[[138]](#footnote-139) their business had been trading.[[139]](#footnote-140) For the propensity score matching, the first 6 bands (i.e. up to and including 5 years) were combined in order to boost the sample size for this category. | Survey data |
| Business obstacles (interruptions) | The different kinds of obstacles faced by businesses because of the pandemic are likely to have affected their response strategy and business performance (as measured by turnover and employment). As a result, it is useful to include these obstacles in the PSM to help ensure that the trajectory of the treatment and control groups absent the intervention is the same (common trends). The obstacles included are market demand, supply chain disruption,[[140]](#footnote-141) late payment, access to external finance, availability of staff and changes needed for Covid-19 compliance.  This data was collected as part of the survey, in which each business was asked whether each of the obstacles was a major obstacle, a minor obstacle or no obstacle at all.  These responses were then converted into a series of dummy variables indicating whether each obstacle was identified as major. | Survey data |

##### Table 26: Variables used the fixed effects regression

| Variable | Explanation | Source |
| --- | --- | --- |
| Business outcomes (turnover[[141]](#footnote-142) and employment) | These were collected related to the last financial year before the pandemic and the two financial years following the onset of the pandemic.[[142]](#footnote-143) A log transformation was then applied to these variables for the fixed effects regression. | Survey data |
| Treatment | See Table 25 above | Survey data |
| Region | See Table 25 above | Survey data |
| Sector | See Table 25 above | Survey data |
| Use of the CJRS | Respondents were asked whether they furloughed staff using CJRS between 23rd March 2020 and March 2021. | Survey data |
| Use of other support schemes | Information on use of other support schemes was collected as part of the survey. Businesses were asked whether they used several different support schemes for businesses between 23rd March 2020 and the end of March 2021.  The support schemes asked about were deferral of VAT payments, deferral of Self-Assessment payments, HMRC Time to Pay, SEISS, 12-month business rates holiday for hospitality, leisure, retail businesses, Statutory Sick Pay relief packages and Cash grants for small businesses, loans directly funded by government or types of support (separately related and unrelated to the Covid-19 pandemic).  In the difference-in-differences model these variables were combined into two dummy variables, one indicating whether deferral of VAT payments was used and another indicating whether any of the other support schemes were used. | Survey data |

##### Table 27 : Variables used in the wider impacts analysis

| Variable | Explanation | Source |
| --- | --- | --- |
| Business outcomes (turnover and employment) | These measure business performance from the last financial year before the pandemic to the latest financial year. Measured in logs. | Survey data |
| Per-firm value of BBLS, CBILS and CLBILS loans (by sector) | Captures the effects of scheme loans on businesses within the same sector. | BBB Management Information, BEIS Business Population Estimates |
| Per-firm value of BBLS, CBILS, CLBILS and CJRS support for all other sectors | Two versions of this variable were included as a robustness check, one version that included CJRS and one version which excluded CJRS. | BBB Management Information, BEIS Business Population Estimates, HMRC |
| Per-firm value of CJRS claims by sector | Included as a control variable related to possible wider impacts of the CJRS scheme. | HMRC, BEIS Business Population Estimates |
| Treatment | See Table 25 above. | Survey data |
| Business obstacles (interruptions) | See Table 25 above. | Survey data |
| Use of the CJRS | See Table 26 above. | Survey data |
| Use of other support schemes | See Table 26 above. | Survey data |

Main econometric results (Year 2 impact evaluation)

The “Post-intervention” variables in the model measure the change in turnover (or employment) among non-borrowers in each year of the pandemic relative to the last year before the pandemic. The “Borrower, post-intervention” variables reflect the additional change in turnover (or employment) experienced by the borrowing business sample only. They are the coefficients of interest as they isolate the impact of receiving a BBLS (or CBILS/CLBILS) loan on turnover (or employment) in each year.

The variables “Used CJRS”, “Used VAT Deferral” and “Used Other Support” are included in some of the models to assess the robustness of results. These variables are intended to minimise the risk that impacts of these business support measures are incorrectly attributed to the Covid-19 Loan Guarantee Schemes.

*Turnover*

As discussed in the main report, the econometric analysis does not identify a robust statistically significant impact of the schemes on borrowers’ turnover in the second year of the pandemic. Indeed, the coefficient on the variable “Borrower, post intervention (Year 2)” is not statistically significant when controlling for other business support measures.

The estimated coefficient for the variable “Post-intervention (Year 2)” is negative across models but is only statistically significant for BBLS and in the model without controls for participation in other schemes. This suggests that businesses had lower turnover in the second year of the pandemic than the year before the pandemic. For context, DBT business population statistics suggest that total business turnover declined from 4.35 trillion at the start of 2020 to 4.16 trillion at the start of 2022.[[143]](#footnote-144) The coefficients are smaller in magnitude than the corresponding coefficients for Year 1, which suggests that business turnover of survey respondents recovered somewhat between the first year and the second year of the pandemic. This is consistent with the results of the Bank of England’s Decision Maker Panel survey, which found that the (negative) impact of Covid on sales was largest in Q2 2020 and then decreased over time.[[144]](#footnote-145)

The CJRS, designed to protect jobs during the pandemic, enabled employers to reclaim up to 80% of the wage costs of employees they could not afford to pay during the pandemic, up to £2,500 per month per employee.[[145]](#footnote-146) The coefficient related to CJRS use is statistically significant and negative for the BBLS model, but this does not imply that CJRS results in reduced turnover.[[146]](#footnote-147) Instead, it may reflect the fact that businesses using CJRS were more likely to scale down their activities. The magnitude of the effect is approximately 13%.[[147]](#footnote-148) In the CBILS/CLBILS model, the estimates related to other support schemes were statistically insignificant.

##### Table 28: Estimated impact of the Covid-19 Loan Guarantee Schemes on turnover

| Variable | BBLS | | CBILS/CLBILS | |
| --- | --- | --- | --- | --- |
|  | [1] | **[2]** | **[3]** | **[4]** |
| Post-intervention (Year 2) | -0.120\*\*  (0.037) | -0.041  (0.052) | -0.129  (0.129) | -0.167  (0.183) |
| Borrower, post intervention (Year 2) | 0.001  (0.014) | 0.022  (0.021) | 0.131\*\*  (0.041) | 0.117  (0.062) |
| Post-intervention (Year 1) | -0.272\*  (0.105) | -0.196  (0.122) | -0.236\*\*  (0.069) | -0.275\*  (0.107) |
| Borrower, post intervention (Year 1) | -0.005  (0.053) | 0.020  (0.046) | 0.038  (0.070) | 0.023  (0.080) |
| Used CJRS |  | -0.138\*\*  (0.048) |  | 0.005  (0.134) |
| Used VAT Deferral |  | -0.001  (0.065) |  | 0.031  (0.045) |
| Used Other Support |  | -0.016  (0.050) |  | 0.062  (0.062) |
| Constant | 12.652\*\*\*  (0.040) | 12.652\*\*\*  (0.040) | 14.713\*\*\*  (0.039) | 14.713\*\*\*  (0.038) |
| Observations | 2,157 | 2,157 | 1,505 | 1,505 |
| R-squared | 0.088 | 0.094 | 0.054 | 0.055 |
| Business fixed effects | Yes | Yes | Yes | Yes |

Note: Standard errors clustered at the sector level in parentheses. \*\*\* p-value<0.01, \*\* p-value<0.05, \* p-value<0.1. Source: London Economics’ analysis of survey data.

*Employment*

As discussed in the main report, the econometric analysis does not identify a statistically significant impact of the schemes on borrowers’ employment in the second year of the pandemic. Indeed, the coefficient on the variable “Borrower, post intervention (Year 2)” is not statistically significant.

The inclusion of variables related to participation in other business support schemes such as the CJRS and VAT deferral do not change the statistical significance of the estimated impacts (i.e. the coefficient on the variable “Borrower, post-intervention (Year 2)”. The estimated coefficient on CJRS use is statistically significant and negative in the BBLS model. In this model, CJRS use is associated with approximately 6%[[148]](#footnote-149) lower employment. The estimated coefficient related to the use of VAT Deferral is negative and significant in the CBILS/CLBILS model, with use of this scheme associated with approximately 5%[[149]](#footnote-150) lower employment.

##### Table 29: Estimated impact of the Covid-19 Loan Guarantee Schemes on employment

| Variable | BBLS | | CBILS/CLBILS | |
| --- | --- | --- | --- | --- |
|  | [1] | **[2]** | **[3]** | **[4]** |
| Post-intervention (Year 2) | -0.004  (0.019) | 0.039\*\*  (0.012) | 0.144  (0.121) | 0.260  (0.177) |
| Borrower, post intervention (Year 2) | -0.038  (0.039) | -0.028  (0.041) | -0.216  (0.127) | -0.186  (0.126) |
| Post-intervention (Year 1) | -0.046  (0.027) | -0.003  (0.035) | -0.061\*\*\*  (0.011) | 0.052  (0.071) |
| Borrower, post intervention (Year 1) | -0.025  (0.026) | -0.013  (0.022) | 0.000  (0.021) | 0.035  (0.017) |
| Used CJRS |  | -0.062\*\*\*  (0.012) |  | -0.122  (0.062) |
| Used VAT Deferral |  | 0.004  (0.025) |  | -0.049\*  (0.021) |
| Used Other Support |  | -0.026  (0.033) |  | -0.030  (0.044) |
| Constant | 1.539\*\*\*  (0.009) | 1.539\*\*\*  (0.009) | 2.845\*\*\*  (0.013) | 2.846\*\*\*  (0.014) |
| Observations | 2,183 | 2,183 | 1,511 | 1,511 |
| R-squared | 0.023 | 0.031 | 0.025 | 0.034 |
| Business fixed effects | Yes | Yes | Yes | Yes |

Note: Standard errors clustered at the sector level in parentheses. \*\*\* p-value<0.01, \*\* p-value<0.05, \* p-value<0.1. Source: London Economics’ analysis of survey data.

*Wider impacts*

##### Table 30: Estimated wider impact of the Covid-19 Loan Guarantee Schemes on turnover (models [1] and [2]) and employment (models [3] and [4]).

| Variables | [1] | [2] | [3] | [4] |
| --- | --- | --- | --- | --- |
| Value of Covid Loan Guarantee Schemes (per firm, thousands) in sector | 0.004 (0.003) | 0.016\*\*\* (0.003) | 0.003\* (0.001) | 0.003\* (0.001) |
| Value of CJRS support (per firm, thousands) in sector |  | -0.011\*\* (0.004) |  | 0.000 (0.001) |
| Post-intervention (Year 2) | 0.157\*\* (0.048) | 0.113\*\* (0.033) | 0.001 (0.035) | 0.002 (0.034) |
| Borrower, post-intervention (Year 2) | -0.154\* (0.060) | -0.148\* (0.062) | -0.056 (0.042) | -0.056 (0.042) |
| Post-intervention (Year 1) | 0.026 (0.033) | -0.036 (0.041) | -0.007 (0.017) | -0.006 (0.017) |
| Borrower, post-intervention (Year 1) | -0.157\*\* (0.038) | -0.156\*\* (0.040) | -0.042\*\* (0.014) | -0.042\*\* (0.014) |
| Market Demand Major Interruption | -0.212\*\*\* (0.031) | -0.213\*\*\* (0.028) | 0.004 (0.023) | 0.004 (0.023) |
| Supply Chain Major Interruption | -0.015 (0.019) | -0.019 (0.027) | -0.013 (0.025) | -0.013 (0.025) |
| Late Payment Major Interruption | -0.090 (0.072) | -0.092 (0.074) | -0.031 (0.030) | -0.031 (0.030) |
| External Finance Major Interruption | -0.340 (0.183) | -0.374 (0.197) | -0.078 (0.060) | -0.078 (0.061) |
| Staff Major Interruption | 0.065 (0.053) | 0.073 (0.064) | -0.008 (0.044) | -0.009 (0.043) |
| Covid Compliance Major Interruption | -0.077\*\*\* (0.014) | -0.057\*\* (0.017) | -0.021 (0.025) | -0.021 (0.023) |
| Used CJRS | -0.086\* (0.035) | -0.075 (0.036) | -0.037\*\* (0.010) | -0.037\*\* (0.012) |
| Used VAT Deferral | -0.033\*\* (0.012) | -0.042\*\* (0.011) | -0.008 (0.012) | -0.008 (0.011) |
| Used Other Support | -0.095\* (0.044) | -0.089 (0.043) | -0.035 (0.024) | -0.035 (0.024) |
| Constant | 12.266\*\*\* (0.010) | 12.266\*\*\* (0.009) | 1.590\*\*\* (0.008) | 1.590\*\*\* (0.008) |
| Observations | 4,200 | 4,200 | 4,451 | 4,451 |
| R-squared | 0.147 | 0.153 | 0.032 | 0.032 |

Note: Standard errors clustered at the sector level in parentheses. \*\*\* p-value<0.01, \*\* p-value<0.05, \* p-value<0.1. Source: London Economics’ analysis of survey data.

Additional econometric results (Year 2 impact evaluation)

##### Table 31: Estimated impact of the Covid-19 Loan Guarantee Schemes on turnover – by sector

| Variable | BBLS | CBILS/CLBILS |
| --- | --- | --- |
| Business services, post intervention (Year 2) | -0.025 (0.115) | 0.058 (0.206) |
| Construction, post intervention (Year 2) | -0.005 (0.097) | -0.233 (0.460) |
| Distribution, post intervention (Year 2) | -0.001 (0.100) | 0.043 (0.157) |
| Other Services, post intervention (Year 2) | -0.154 (0.180) | -0.584 (0.470) |
| Production, post intervention (Year 2) | 0.047 (0.105) | -0.203 (0.179) |
| Business services, Borrower, post intervention (Year 2) | 0.058 (0.136) | 0.064 (0.243) |
| Construction, Borrower, post intervention (Year 2) | -0.002 (0.208) | 0.195 (0.454) |
| Distribution, Borrower, post intervention (Year 2) | 0.049 (0.112) | 0.211 (0.177) |
| Other Services, Borrower, post intervention (Year 2) | -0.009 (0.209) | 0.308 (0.432) |
| Production, Borrower, post intervention (Year 2) | -0.014 (0.150) | 0.277 (0.184) |
| Business services, post intervention (Year 1) | -0.087 (0.056) | -0.151 (0.116) |
| Construction, post intervention (Year 1) | -0.081 (0.105) | -0.446\*\* (0.181) |
| Distribution, post intervention (Year 1) | -0.109 (0.091) | -0.113 (0.129) |
| Other Services, post intervention (Year 1) | -0.623\*\* (0.312) | -0.372 (0.273) |
| Production, post intervention (Year 1) | -0.089 (0.107) | -0.366\*\* (0.172) |
| Business services, Borrower, post intervention (Year 1) | -0.035 (0.078) | -0.159 (0.122) |
| Construction, Borrower, post intervention (Year 1) | 0.058 (0.124) | 0.166 (0.178) |
| Distribution, Borrower, post intervention (Year 1) | -0.072 (0.089) | -0.018 (0.097) |
| Other Services, Borrower, post intervention (Year 1) | 0.214 (0.352) | 0.047 (0.248) |
| Production, Borrower, post intervention (Year 1) | 0.053 (0.114) | 0.259 (0.185) |
| Used CJRS | -0.126 (0.085) | -0.011 (0.102) |
| Used VAT Deferral | -0.053 (0.057) | 0.020 (0.061) |
| Used Other Support | -0.011 (0.071) | 0.048 (0.061) |
| Constant | 12.651\*\*\* (0.019) | 14.714\*\*\* (0.023) |
| Observations | 2,157 | 1,505 |
| R-squared | 0.130 | 0.089 |
| Business fixed effects | Yes | Yes |

Note: Standard errors clustered at the sector level in parentheses. \*\*\* p-value<0.01, \*\* p-value<0.05, \* p-value<0.1. Source: London Economics’ analysis of survey data.

##### Table 32: Estimated impact of the Covid-19 Loan Guarantee Schemes on employment – by sector

| Variable | BBLS | CBILS/CLBILS |
| --- | --- | --- |
| Business services, post intervention (Year 2) | 0.024 (0.042) | 0.078 (0.092) |
| Construction, post intervention (Year 2) | 0.140\*\* (0.067) | 0.344\*\* (0.147) |
| Distribution, post intervention (Year 2) | -0.005 (0.112) | 0.544 (0.515) |
| Other Services, post intervention (Year 2) | 0.097 (0.167) | 0.169\* (0.097) |
| Production, post intervention (Year 2) | 0.033 (0.088) | -0.053 (0.121) |
| Business services, Borrower, post intervention (Year 2) | 0.003 (0.061) | -0.109 (0.130) |
| Construction, Borrower, post intervention (Year 2) | -0.196 (0.168) | -0.510 (0.344) |
| Distribution, Borrower, post intervention (Year 2) | -0.017 (0.129) | -0.440 (0.427) |
| Other Services, Borrower, post intervention (Year 2) | -0.136 (0.176) | 0.018 (0.115) |
| Production, Borrower, post intervention (Year 2) | 0.116 (0.123) | 0.198 (0.127) |
| Business services, post intervention (Year 1) | 0.039\* (0.021) | 0.035 (0.079) |
| Construction, post intervention (Year 1) | 0.016 (0.046) | 0.117 (0.103) |
| Distribution, post intervention (Year 1) | -0.036 (0.048) | 0.105 (0.087) |
| Other Services, post intervention (Year 1) | -0.086\*\* (0.043) | 0.001 (0.085) |
| Production, post intervention (Year 1) | 0.019 (0.031) | 0.084 (0.093) |
| Business services, Borrower, post intervention (Year 1) | -0.069\*\* (0.032) | 0.037 (0.060) |
| Construction, Borrower, post intervention (Year 1) | -0.000 (0.060) | 0.027 (0.047) |
| Distribution, Borrower, post intervention (Year 1) | 0.005 (0.051) | -0.020 (0.036) |
| Other Services, Borrower, post intervention (Year 1) | 0.037 (0.058) | 0.144\* (0.081) |
| Production, Borrower, post intervention (Year 1) | 0.035 (0.034) | 0.043 (0.066) |
| Used CJRS | -0.061\*\*\* (0.024) | -0.137 (0.088) |
| Used VAT Deferral | -0.007 (0.024) | -0.049 (0.035) |
| Used Other Support | -0.019 (0.022) | -0.047 (0.038) |
| Constant | 1.538\*\*\* (0.006) | 2.845\*\*\* (0.015) |
| Observations | 2,183 | 1,511 |
| R-squared | 0.050 | 0.066 |
| Business fixed effects | Yes | Yes |

Note: Standard errors clustered at the sector level in parentheses. \*\*\* p-value<0.01, \*\* p-value<0.05, \* p-value<0.1. Source: London Economics’ analysis of survey data.

##### Table 33: Estimated impact of the Covid-19 Loan Guarantee Schemes on turnover – by region

| Variable | BBLS | CBILS/CLBILS |
| --- | --- | --- |
| East / Midlands, post intervention (Year 2) | -0.068 (0.045) | -0.471 (0.338) |
| London, post intervention (Year 2) | -0.153 (0.247) | 0.236 (0.244) |
| North / Yorkshire, post intervention (Year 2) | 0.076 (0.120) | -0.124 (0.217) |
| Northern Ireland, post intervention (Year 2) | -0.168 (0.169) | -0.335\*\* (0.075) |
| Scotland, post intervention (Year 2) | -0.305\*\* (0.072) | 0.318\*\*\* (0.066) |
| South, post intervention (Year 2) | 0.097 (0.088) | -0.308 (0.277) |
| Wales, post intervention (Year 2) | -0.213 (0.259) | -0.514\*\*\* (0.057) |
| East / Midlands, Borrower, post intervention (Year 2) | 0.123 (0.128) | 0.325\*\* (0.097) |
| London, Borrower, post intervention (Year 2) | -0.065 (0.246) | -0.369\*\* (0.103) |
| North / Yorkshire, Borrower, post intervention (Year 2) | -0.176 (0.084) | 0.010 (0.367) |
| Northern Ireland, Borrower, post intervention (Year 2) | 0.364 (0.332) | 1.398\*\*\* (0.184) |
| Scotland, Borrower, post intervention (Year 2) | 0.533\* (0.209) | -0.558\*\* (0.177) |
| South, Borrower, post intervention (Year 2) | -0.250 (0.146) | 0.448 (0.269) |
| Wales, Borrower, post intervention (Year 2) | 0.314 (0.262) | 0.088 (0.144) |
| East / Midlands, post intervention (Year 1) | -0.060 (0.040) | -0.343 (0.197) |
| London, post intervention (Year 1) | -0.626 (0.480) | -0.023 (0.150) |
| North / Yorkshire, post intervention (Year 1) | -0.082 (0.117) | -0.520\*\* (0.145) |
| Northern Ireland, post intervention (Year 1) | -0.120 (0.126) | -0.336 (0.158) |
| Scotland, post intervention (Year 1) | -0.433\* (0.195) | -0.224\* (0.100) |
| South, post intervention (Year 1) | -0.193\* (0.074) | -0.274\*\*\* (0.050) |
| Wales, post intervention (Year 1) | 0.145 (0.081) | -0.217 (0.157) |
| East / Midlands, Borrower, post intervention (Year 1) | -0.011 (0.094) | 0.014 (0.085) |
| London, Borrower, post intervention (Year 1) | 0.328 (0.364) | -0.438\*\* (0.102) |
| North / Yorkshire, Borrower, post intervention (Year 1) | -0.035 (0.082) | 0.342\* (0.147) |
| Northern Ireland, Borrower, post intervention (Year 1) | -0.065 (0.059) | 0.212 (0.123) |
| Scotland, Borrower, post intervention (Year 1) | 0.310 (0.204) | -0.048 (0.069) |
| South, Borrower, post intervention (Year 1) | -0.163 (0.123) | 0.088 (0.080) |
| Wales, Borrower, post intervention (Year 1) | -0.182\*\* (0.064) | 0.055 (0.192) |
| Used CJRS | -0.110\* (0.041) | 0.005 (0.131) |
| Used VAT Deferral | -0.006 (0.055) | 0.030 (0.043) |
| Used Other Support | -0.034 (0.050) | 0.093 (0.064) |
| Constant | 12.651\*\*\* (0.039) | 14.713\*\*\* (0.036) |
| Observations | 2,157 | 1,505 |
| R-squared | 0.136 | 0.098 |
| Business fixed effects | Yes | Yes |

Robust standard errors in parentheses. \*\*\* p-value<0.01, \*\* p-value<0.05, \* p-value<0.1. Source: London Economics’ analysis of survey data.

##### Table 34: Estimated impact of the Covid-19 Loan Guarantee Schemes on employment – by region

| Variable | BBLS | CBILS/CLBILS |
| --- | --- | --- |
| East / Midlands, post intervention (Year 2) | 0.098 (0.071) | 0.193\* (0.086) |
| London, post intervention (Year 2) | 0.077 (0.164) | 0.071 (0.057) |
| North / Yorkshire, post intervention (Year 2) | -0.015 (0.051) | 0.176 (0.173) |
| Northern Ireland, post intervention (Year 2) | -0.175 (0.098) | -0.175 (0.137) |
| Scotland, post intervention (Year 2) | -0.003 (0.013) | 0.087 (0.070) |
| South, post intervention (Year 2) | 0.090 (0.051) | 0.673\* (0.289) |
| Wales, post intervention (Year 2) | -0.195 (0.182) | -0.043 (0.179) |
| East / Midlands, Borrower, post intervention (Year 2) | -0.055 (0.078) | -0.167 (0.131) |
| London, Borrower, post intervention (Year 2) | -0.278 (0.205) | 0.004 (0.057) |
| North / Yorkshire, Borrower, post intervention (Year 2) | 0.060 (0.056) | -0.150 (0.175) |
| Northern Ireland, Borrower, post intervention (Year 2) | 0.437\*\*\* (0.071) | 0.506\* (0.211) |
| Scotland, Borrower, post intervention (Year 2) | 0.107 (0.147) | 0.119 (0.113) |
| South, Borrower, post intervention (Year 2) | -0.118 (0.058) | -0.508\* (0.207) |
| Wales, Borrower, post intervention (Year 2) | 0.224 (0.194) | -0.035 (0.189) |
| East / Midlands, post intervention (Year 1) | 0.020 (0.047) | 0.061 (0.088) |
| London, post intervention (Year 1) | -0.036 (0.059) | 0.120 (0.069) |
| North / Yorkshire, post intervention (Year 1) | 0.031 (0.037) | 0.024 (0.107) |
| Northern Ireland, post intervention (Year 1) | -0.085\* (0.037) | -0.115 (0.098) |
| Scotland, post intervention (Year 1) | 0.020 (0.021) | 0.046 (0.114) |
| South, post intervention (Year 1) | 0.005 (0.033) | 0.077 (0.071) |
| Wales, post intervention (Year 1) | -0.056 (0.077) | 0.092 (0.106) |
| East / Midlands, Borrower, post intervention (Year 1) | -0.016 (0.041) | 0.065\* (0.030) |
| London, Borrower, post intervention (Year 1) | -0.023 (0.026) | -0.075 (0.037) |
| North / Yorkshire, Borrower, post intervention (Year 1) | 0.001 (0.038) | 0.073 (0.069) |
| Northern Ireland, Borrower, post intervention (Year 1) | -0.044 (0.108) | 0.326 (0.164) |
| Scotland, Borrower, post intervention (Year 1) | -0.004 (0.044) | 0.118 (0.119) |
| South, Borrower, post intervention (Year 1) | -0.022 (0.028) | 0.019 (0.023) |
| Wales, Borrower, post intervention (Year 1) | -0.001 (0.070) | 0.028 (0.050) |
| Used CJRS | -0.066\*\*\* (0.012) | -0.135 (0.065) |
| Used VAT Deferral | -0.001 (0.018) | -0.066 (0.041) |
| Used Other Support | -0.027 (0.026) | -0.026 (0.036) |
| Constant | 1.538\*\*\* (0.009) | 2.846\*\*\* (0.010) |
| Observations | 2,183 | 1,511 |
| R-squared | 0.060 | 0.073 |
| Business fixed effects | Yes | Yes |

Note: Robust standard errors in parentheses. \*\*\* p-value<0.01, \*\* p-value<0.05, \* p-value<0.1. Source: London Economics’ analysis of survey data.

##### Table 35: Estimated impact of the Covid-19 Loan Guarantee Schemes on turnover – by protected characteristics among business ownership

| Variable | BBLS | CBILS/CLBILS |
| --- | --- | --- |
| Post intervention (Year 2) | -0.047 (0.063) | -0.044 (0.094) |
| Borrower, post intervention (Year 2) | 0.004 (0.003) | -0.026 (0.199) |
| Majority female representation[[150]](#footnote-151), post intervention (Year 2) | 0.017 (0.044) | -0.412\* (0.177) |
| Majority female representation, Borrower, post intervention (Year 2) | 0.026 (0.045) | 0.311 (0.383) |
| Majority ethnic minority representation, post intervention (Year 2) | 0.214 (0.143) | -0.301\*\* (0.079) |
| Majority ethnic minority representation, Borrower, post intervention (Year 2) | -0.231 (0.259) | 1.038 (0.510) |
| Post intervention (Year 1) | -0.162 (0.099) | -0.248\* (0.105) |
| Borrower, post intervention (Year 1) | 0.005 (0.041) | -0.070 (0.098) |
| Majority female representation[[151]](#footnote-152), post intervention (Year 1) | -0.154 (0.120) | -0.239\* (0.096) |
| Majority female representation, Borrower, post intervention (Year 1) | 0.033 (0.101) | 0.253\* (0.108) |
| Majority ethnic minority representation, post intervention (Year 1) | 0.322 (0.215) | -0.152 (0.092) |
| Majority ethnic minority representation, Borrower, post intervention (Year 1) | -0.218 (0.336) | 0.123 (0.406) |
| Used CJRS | -0.131\*\* (0.041) | 0.016 (0.124) |
| Used VAT Deferral | 0.011 (0.069) | 0.034 (0.071) |
| Used Other Support | -0.018 (0.065) | 0.082 (0.070) |
| Constant | 12.645\*\*\* (0.039) | 14.475\*\*\* (0.028) |
| Observations | 2,074 | 1,356 |
| R-squared | 0.103 | 0.095 |
| Business fixed effects | Yes | Yes |

Note: Robust standard errors in parentheses. \*\*\* p-value<0.01, \*\* p-value<0.05, \* p-value<0.1. Source: London Economics’ analysis of survey data.

##### Table 36 : Estimated impact of the Covid-19 Loan Guarantee Schemes on employment – by protected characteristics among business ownership

| Variable | BBLS | CBILS/CLBILS |
| --- | --- | --- |
| Post intervention (Year 2) | 0.033 (0.032) | 0.366 (0.271) |
| Borrower, post intervention (Year 2) | -0.024 (0.054) | -0.243 (0.185) |
| Majority female representation, post intervention (Year 2) | -0.006 (0.039) | -0.218 (0.222) |
| Majority female representation, Borrower, post intervention (Year 2) | 0.022 (0.081) | 0.061 (0.256) |
| Majority ethnic minority representation, post intervention (Year 2) | 0.027 (0.444) | -0.550\*\* (0.173) |
| Majority ethnic minority representation, Borrower, post intervention (Year 2) | -0.148 (0.414) | 0.541\*\*\* (0.032) |
| Post intervention (Year 1) | 0.001 (0.027) | 0.066 (0.094) |
| Borrower, post intervention(Year 1) | -0.022 (0.022) | 0.074\*\*\* (0.015) |
| Majority female representation, post intervention (Year 1) | -0.011 (0.020) | 0.001 (0.045) |
| Majority female representation, Borrower, post intervention (Year 1) | 0.003 (0.048) | -0.125\*\* (0.043) |
| Majority ethnic minority representation, post intervention (Year 1) | -0.029 (0.063) | -0.037 (0.093) |
| Majority ethnic minority representation, Borrower, post intervention (Year 1) | 0.058 (0.118) | 0.018 (0.182) |
| Used CJRS | -0.058\*\* (0.014) | -0.126 (0.078) |
| Used VAT Deferral | -0.001 (0.023) | -0.072 (0.035) |
| Used Other Support | -0.026 (0.031) | -0.033 (0.049) |
| Constant | 1.538\*\*\* (0.009) | 2.713\*\*\* (0.016) |
| Observations | 2,097 | 1,352 |
| R-squared | 0.035 | 0.050 |
| Business fixed effects | Yes | Yes |

Note: Robust standard errors in parentheses. \*\*\* p-value<0.01, \*\* p-value<0.05, \* p-value<0.1. Source: London Economics’ analysis of survey data.

# Annex 4 – Secondary Analysis Methodology

## Analysis of business survival

This annex section describes the approach used to quantify the impact of the Covid-19 Loan Guarantee Schemes on business survival using secondary data. As this analysis is intended as an assessment of the Year 1 survey-based analysis, any key differences are highlighted between both exercises.

Overview

The key difficulty in identifying the effect of the Covid-19 Loan Guarantee Schemes on business survival is estimating the ‘counterfactual’ likelihood with which borrowers would have permanently closed in the absence of the BBLS and CBILS/CLBILS.

The approach taken in the Year 1 survey-based analysis was to ask a sample of borrowers to self-assess their likelihood of closing in the absence of the Covid-19 Loan Guarantee Schemes. Another approach – implemented in this secondary analysis – is to estimate that likelihood as the closure rate among a group of selected non-borrowers.

A challenge with that approach is that there are likely to be differences between borrowers (the ‘treatment group’) and non-borrowers other than simply whether they participated in the Covid-19 Loan Guarantee Schemes.

For example, one might expect that firms with a business model heavily disrupted by the pandemic – for example in the hospitality sector – would be more likely to access the Covid-19 Loan Guarantee Schemes than businesses whose activities were less affected by the pandemic.

Yet, the same factors affecting businesses’ likelihood of accessing the Covid-19 Loan Guarantee Schemes may have also influenced their chances of survival during the pandemic. Therefore, simply estimating the counterfactual closure rate as the closure rate among the overall population of businesses that did not access the BBLS and CBILS/CLBILS (or a representative sample thereof) and comparing this to the observed closure rate among borrowers would incorrectly attribute the impact of these other factors to the Covid-19 Loan Guarantee Schemes. It is therefore important that the analysis accounts for factors influencing both the likelihood of being a borrower and that of surviving.

Calculating the counterfactual closure rate of borrowers

To tackle this problem, propensity score matching (PSM)[[152]](#footnote-153) is implemented to identify a set of non-borrowers that closely resemble the treatment businesses, based on a ‘propensity score’. The propensity score is the probability of a business being in the treatment group (i.e. being a borrower), estimated based on its characteristics (for example turnover, sector etc.). The underlying goal of PSM is to identify a subset of borrowers and some matched non-borrowers such that the only major difference between the two groups is that one group accessed one of the Covid-19 Loan Guarantee Schemes, and the other did not.

The counterfactual closure rate is estimated based on the closure rate among the ‘control’ group of non-borrowers matched to the borrower sample (also referred to as treatment group) via PSM. For the purpose of this analysis, a closure between 1st April 2020 and 31st March 2021 is identified based on the IDBR ‘deathdate’ variable (note, this variable indicates a business’s ‘death’ or closure and is not related to public health or human death).[[153]](#footnote-154)

The impact on business survival is then quantified as the difference between the closure rate in the borrower sample and that in the matched non-borrower sample. In line with the Year 1 survey analysis, this secondary analysis is conducted separately for the BBLS and CBILS/CLBILS. The models were estimated using Stata. Further detail on the methodology is presented in the rest of this annex.

Propensity Score Matching (PSM)

PSM involves matching borrowers to similar non-borrowers on the basis of a ‘propensity score’. The propensity score is the conditional probability of a business being a borrower (i.e. in the treatment group), given a set of characteristics (for example turnover, sector etc.). Propensity scores are estimated using a logit model. The logit model is a standard econometric model used when the outcome of interest is binary (for example whether a business received a loan under the Covid-19 Loan Guarantee Schemes or not). This model is represented by the following equation for business :

* is a dummy variable that takes the value 1 if the business is a borrower (i.e. in the treatment group) and 0 otherwise.
* is the cumulative standard logistic distribution, which is defined such that .
* is a vector of business characteristics, and are the associated coefficients for these characteristics. These characteristics must be unaffected by the business’ decision of whether to participate in the Covid-19 Loan Guarantee Schemes. Details on the business characteristics included in the Propensity Score Matching can be found in the discussion of the data.

Once the propensity scores have been calculated, each borrower is matched to the non-borrower(s) with the closest propensity score (i.e. the ‘nearest neighbour’).

The matching algorithm also specifies a maximum allowable discrepancy in the propensity score between a borrower and its matched non-borrower (referred to as a calliper). This ensures a minimum quality of match between the borrower and non-borrower groups but leads to the exclusion of borrowers that are not similar enough in propensity score to any non-borrowers. In line with the year 1 survey analysis, the calliper in this secondary analysis is equal to one fifth of the standard deviation of the propensity scores.

The algorithm also allows for replacement, i.e. one non-borrower can be matched to multiple different borrowers. The advantage of this is that the closest match is always used (thereby reducing bias of estimates), however the fact that some non-borrowers can be used multiple times reduces the overall sample size (thereby increasing variance of estimates).

A number of other restrictions are placed on the set of businesses used in the analysis.

* First, borrowers with a propensity score outside the range of propensity scores observed among non-borrowers are excluded.[[154]](#footnote-155) For example, if a borrower has a propensity score above the largest propensity score among non-borrowers, it will be excluded as there is no suitably similar non-borrower with which to match it.
* Second, borrowers are only matched to businesses that are active in the first year of the pandemic. This is to ensure that only active borrowers and non-borrowers are matched to one another and retained for the analysis. In this way, business closure rates are correctly defined with reference only to active firms.[[155]](#footnote-156)
* Third, both the BBLS and CBILS/CLBILS non-borrower groups exclude businesses in receipt of any of the Covid-19 Loan Guarantee Schemes (i.e. the control group used in the analysis of the BBLS will not include any businesses that borrowed under the CBILS/CLBILS, and vice versa).
* Finally, businesses with turnover greater than £5 million are excluded from both the BBLS borrower and non-borrower samples (99% of the BBLS borrower population had turnover under £5 million). No such turnover threshold was used to exclude any businesses from the CBILS/CLBILS borrower or non-borrower samples (indeed, there was a larger tail of businesses with high turnover in the CBILS borrower population distribution, and CLBILS borrowers had high turnover by definition).

PSM relies on two key assumptions. The first is the conditional independence assumption, which requires that given the observable firm characteristics used to calculate propensity scores, potential outcomes are independent of the treatment assignment. Put simply, this means that there must be no unobserved variables simultaneously influencing the treatment and the potential outcomes. This assumption is not directly testable, however the fact that information is available on both immutable characteristics of the businesses as well as their pre-pandemic growth[[156]](#footnote-157) means that this condition may be satisfied.

The second is the common support assumption. This requires that there are no combinations of relevant observed characteristics that can perfectly predict whether a business is a borrower or not. Given that participation in the Covid-19 Loan Guarantee Schemes is entirely voluntary and that the eligibility requirements are extremely broad this assumption should be satisfied.

The PSM substantially reduces the differences between the borrower and non-borrower groups, which suggests good matching quality. Indeed, the average difference in the prevalence of various characteristics included in the PSM fell by approximately 95% in the case of the BBLS (a fall of 5.5 percentage points from 5.8% to 0.3%) and 97% in the case of the CBILS/CLBILS (a fall of 8.0 percentage points from 8.3% to 0.3%). The tables that follow provide more detail on the differences in the prevalence of the various characteristics included in the PSM across the borrower and non-borrower groups, before and after the PSM.

##### Table 37: Balance table - BBLS

| Characteristic | Feature | Difference in prevalence between borrower and non-borrower groups (Full Sample) | Difference in prevalence between borrower and non-borrower groups (After PSM) |
| --- | --- | --- | --- |
| **Turnover** | Less than 25,000 | 6.4% | 0.1% |
|  | Between 25,000 and 50,000 | 5.3% | 0.1% |
|  | Between 50,000 and 75,000 | 10.7% | 0.1% |
|  | Between 75,000 and 100,000 | 6.5% | 0.1% |
|  | Between 100,000 and 125,000 | 5.5% | 0.2% |
|  | Between 125,000 and 150,000 | 3.2% | 0.0% |
|  | Between 150,000 and 175,000 | 1.1% | 0.2% |
|  | Between 175,000 and 200,000 | 0.2% | 0.0% |
|  | Between 200,000 and 250,000 | 0.2% | 0.1% |
|  | Between 250,000 and 350,000 | 1.9% | 0.4% |
|  | Between 350,000 and 500,000 | 3.7% | 0.4% |
|  | Between 500,000 and 1 million | 14.5% | 0.1% |
|  | Between 1 million and 5 million | 18.7% | 0.9% |
| **Employment** | 1 employee | 33.2% | 0.5% |
|  | 2-3 employees | 0.7% | 0.4% |
|  | 4-5 employees | 5.3% | 0.1% |
|  | 6-7 employees | 5.1% | 0.1% |
|  | 8-9 employees | 4.8% | 0.3% |
|  | 10-14 employees | 6.7% | 0.2% |
|  | 15-24 employees | 6.3% | 0.1% |
|  | 25-49 employees | 4.4% | 0.1% |
|  | 50-249 employees | 1.3% | 0.1% |
|  | More than 250 employees | 0.0% | 0.0% |
| **Region** | East / Midlands | 0.3% | 0.3% |
|  | London | 4.3% | 1.0% |
|  | North / Yorkshire | 1.9% | 0.1% |
|  | Northern Ireland | 0.9% | 0.1% |
|  | Scotland | 0.1% | 0.3% |
|  | South | 0.7% | 0.2% |
|  | Wales | 0.3% | 0.1% |
| **Sector** | Business Services | 17.9% | 0.4% |
|  | Construction | 7.1% | 0.4% |
|  | Distribution | 7.9% | 0.1% |
|  | Other Services | 0.3% | 0.4% |
|  | Primary/Manufacturing | 3.4% | 0.2% |
| **Turnover growth 2017/2018** | Decrease of more than 50% | 2.4% | 0.1% |
|  | Decrease of between 25% and 50% | 0.7% | 0.1% |
|  | Decrease of between 10% and 25% | 2.0% | 0.1% |
|  | Decrease of less than 10% | 3.4% | 0.2% |
|  | Increase of less than 5% | 20.3% | 0.7% |
|  | Increase of between 5% and 25% | 8.7% | 0.3% |
|  | Increase of between 25% and 50% | 4.4% | 0.2% |
|  | Increase of more than 50% | 4.8% | 0.1% |
| **Turnover growth 2018/2019** | Decrease of more than 50% | 1.4% | 0.3% |
|  | Decrease of between 25% and 50% | 0.8% | 0.1% |
|  | Decrease of between 10% and 25% | 3.3% | 0.1% |
|  | Decrease of less than 10% | 5.2% | 0.1% |
|  | Increase of less than 5% | 26.9% | 0.1% |
|  | Increase of between 5% and 25% | 7.4% | 0.1% |
|  | Increase of between 25% and 50% | 4.9% | 0.3% |
|  | Increase of more than 50% | 6.7% | 0.1% |
| **Employment growth 2017/2018** | Decrease of more than 50% | 0.8% | 0.2% |
|  | Decrease of less than 50% | 3.4% | 1.0% |
|  | No change | 17.5% | 1.9% |
|  | Increase of less than 50% | 10.7% | 0.2% |
|  | Increase of more than 50% | 4.1% | 0.6% |
| **Employment growth 2018/2019** | Decrease of more than 50% | 0.6% | 0.2% |
|  | Decrease of less than 50% | 4.9% | 0.7% |
|  | No change | 20.0% | 1.3% |
|  | Increase of less than 50% | 11.2% | 0.1% |
|  | Increase of more than 50% | 4.6% | 0.3% |
| **Age** | 2 Years or less | 4.8% | 0.3% |
|  | 3-5 Years | 7.4% | 0.9% |
|  | 6-10 Years | 2.3% | 0.0% |
|  | 11-15 Years | 2.6% | 0.5% |
|  | 16-20 Years | 2.3% | 0.4% |
|  | 21-40 Years | 3.8% | 0.9% |
|  | More than 40 Years | 1.2% | 0.4% |
| **Average** |  | **5.8%** | **0.3%** |

Source: London Economics’ analysis of IDBR data and BBB Portal Data.

##### Table 38: Balance table – CBILS/CLBILS

| Characteristic | Feature | Difference in prevalence between borrower and non-borrower groups (Full Sample) | Difference in prevalence between borrower and non-borrower groups (After PSM) |
| --- | --- | --- | --- |
| **Turnover** | Less than 25,000 | 6.6% | 0.0% |
|  | Between 25,000 and 50,000 | 7.0% | 0.0% |
|  | Between 50,000 and 75,000 | 13.8% | 0.0% |
|  | Between 75,000 and 100,000 | 10.0% | 0.1% |
|  | Between 100,000 and 125,000 | 9.5% | 0.1% |
|  | Between 125,000 and 150,000 | 5.7% | 0.1% |
|  | Between 150,000 and 175,000 | 3.1% | 0.1% |
|  | Between 175,000 and 200,000 | 1.4% | 0.1% |
|  | Between 200,000 and 250,000 | 1.4% | 0.2% |
|  | Between 250,000 and 350,000 | 0.0% | 0.4% |
|  | Between 350,000 and 500,000 | 3.1% | 0.2% |
|  | Between 500,000 and 1 million | 6.7% | 0.1% |
|  | Between 1 million and 5 million | 21.3% | 0.2% |
|  | Between 5 million and 25 million | 23.0% | 0.2% |
|  | Between 25 million and 100 million | 4.2% | 0.1% |
|  | More than 100 million | 0.3% | 0.1% |
| **Employment** | 1 employee | 46.1% | 0.1% |
|  | 2-3 employees | 11.1% | 0.1% |
|  | 4-5 employees | 2.0% | 0.1% |
|  | 6-7 employees | 3.3% | 0.0% |
|  | 8-9 employees | 3.6% | 0.3% |
|  | 10-14 employees | 6.9% | 0.1% |
|  | 15-24 employees | 9.7% | 0.1% |
|  | 25-49 employees | 12.5% | 0.2% |
|  | 50-249 employees | 16.5% | 0.1% |
|  | More than 250 employees | 2.6% | 0.2% |
| **Region** | East / Midlands | 1.1% | 0.2% |
|  | London | 5.8% | 0.0% |
|  | North / Yorkshire | 1.8% | 0.9% |
|  | Northern Ireland | 0.5% | 0.1% |
|  | Scotland | 0.1% | 0.0% |
|  | South | 2.5% | 0.9% |
|  | Wales | 0.1% | 0.2% |
| **Sector** | Business Services | 16.0% | 1.0% |
|  | Construction | 1.5% | 0.1% |
|  | Distribution | 6.9% | 0.2% |
|  | Other Services | 0.0% | 0.8% |
|  | Primary/Manufacturing | 7.8% | 0.1% |
| **Turnover growth 2017/2018** | Decrease of more than 50% | 3.9% | 0.2% |
|  | Decrease of between 25% and 50% | 2.1% | 0.1% |
|  | Decrease of between 10% and 25% | 0.9% | 0.4% |
|  | Decrease of less than 10% | 4.7% | 0.2% |
|  | Increase of less than 5% | 25.7% | 0.8% |
|  | Increase of between 5% and 25% | 16.3% | 1.1% |
|  | Increase of between 25% and 50% | 6.4% | 0.0% |
|  | Increase of more than 50% | 3.4% | 0.4% |
| **Turnover growth 2018/2019** | Decrease of more than 50% | 2.6% | 0.3% |
|  | Decrease of between 25% and 50% | 1.1% | 0.0% |
|  | Decrease of between 10% and 25% | 2.9% | 0.1% |
|  | Decrease of less than 10% | 7.6% | 0.1% |
|  | Increase of less than 5% | 31.6% | 0.6% |
|  | Increase of between 5% and 25% | 13.5% | 0.7% |
|  | Increase of between 25% and 50% | 6.9% | 0.4% |
|  | Increase of more than 50% | 4.5% | 0.1% |
| **Employment growth 2017/2018** | Decrease of more than 50% | 1.0% | 0.1% |
|  | Decrease of less than 50% | 5.1% | 0.7% |
|  | No change | 27.1% | 1.3% |
|  | Increase of less than 50% | 19.6% | 0.4% |
|  | Increase of more than 50% | 3.5% | 0.2% |
| **Employment growth 2018/2019** | Decrease of more than 50% | 0.9% | 0.1% |
|  | Decrease of less than 50% | 6.5% | 0.1% |
|  | No change | 29.3% | 0.6% |
|  | Increase of less than 50% | 20.2% | 0.5% |
|  | Increase of more than 50% | 3.6% | 0.1% |
| **Age** | 2 Years or less | 15.9% | 0.0% |
|  | 3-5 Years | 14.0% | 0.4% |
|  | 6-10 Years | 0.1% | 0.3% |
|  | 11-15 Years | 4.1% | 0.6% |
|  | 16-20 Years | 4.9% | 0.1% |
|  | 21-40 Years | 13.7% | 0.9% |
|  | More than 40 Years | 7.3% | 0.3% |
| **Average** |  | **8.3%** | **0.3%** |

Source: London Economics’ analysis of IDBR data and BBB Portal Data.

Calculating the weighted average closure rates

The impact of the BBLS or CBILS/CLBILS on business survival is estimated as the difference between the closure rate in the borrower sample and the closure rate in the matched non-borrower sample. Closure rates are calculated based on closures recorded in the IDBR between 1st April 2020 and 31st March 2021 among firms that were active in 2020.

The sample of borrowers was matched to the IDBR using their company registration number (CRN). Therefore, ordinary partnerships and sole proprietors – which do not have CRNs and are smaller on average[[157]](#footnote-158) – are not included in that sample. In order for the overall impact estimates to be as representative as possible of these smaller businesses, closure rates are computed in two steps. First, closure rates are calculated separately within each turnover band (a proxy for size), based on the weighting assigned to each business by the PSM. Second, the overall weighted average closure rate is calculated by weighting the closure rates within each turnover band according to the share of businesses in each turnover band among the population of borrowers.[[158]](#footnote-159) Thus, the contribution of smaller businesses to the estimated closure rates is based on their weight within the population rather than the sample.

##### Table 39 : Closure rates among BBLS borrowers and non-borrowers, by turnover band

| Turnover Band | Closure rate among BBLS non-borrowers | Closure rate among BBLS borrowers | Difference between borrowers and non-borrowers |
| --- | --- | --- | --- |
| Less than 50K | 13.2% | 6.1% | 7.1% |
| 50,001 to 100K | 11.4% | 6.0% | 5.4% |
| 100,001 to 250K | 9.5% | 3.9% | 5.6% |
| 250,001 to 500K | 7.3% | 1.5% | 5.8% |
| 500,001 to 1m | 6.0% | 1.1% | 4.8% |
| 1m to 5m | 4.4% | 1.2% | 3.2% |
| **Weighted average** | **9.9%** | **4.2%** | **5.7%[[159]](#footnote-160)** |

Source: London Economics’ analysis of IDBR data, BBB Management Information and BBB Portal Data.

##### Table 40 : Closure rates among CBILS/CLBILS borrowers and non-borrowers, by turnover band

| Turnover Band | Closure rate among CBILS/CLBILS non-borrowers | Closure rate among CBILS/CLBILS borrowers | Difference between borrowers and non-borrowers |
| --- | --- | --- | --- |
| Less than 50K | 12.8% | 3.7% | 9.1% |
| 50,001 to 100K | 12.8% | 2.7% | 10.2% |
| 100,001 to 250K | 7.9% | 2.1% | 5.8% |
| 250,001 to 500K | 6.7% | 0.4% | 6.2% |
| 500,001 to 1m | 5.3% | 0.5% | 4.8% |
| 1m to 5m | 4.4% | 0.3% | 4.1% |
| 5m to 25m | 2.1% | 0.4% | 1.7% |
| 25m to 50m | 1.4% | 0.3% | 1.2% |
| 50m to 200m | 0.8% | 0.0% | 0.8% |
| >200m | 0.0% | 0.0% | 0.0% |
| **Weighted average** | **4.9%** | **0.6%** | **4.4%[[160]](#footnote-161)** |

Source: London Economics’ analysis of IDBR data, BBB Management Information and BBB Portal Data.

Estimating the number of pre-pandemic jobs among borrowers that would have permanently closed in the absence of the Covid-19 Loan Guarantee Schemes

This sub-section outlines the approach used to estimate the number of pre-pandemic jobs among borrowers that would have permanently closed between April 2020 and March 2021 in the absence of the Covid-19 Loan Guarantee Schemes.

First, the proportion of pre-pandemic jobs among borrowers that would have permanently closed in the absence of the schemes is estimated by calculating the difference between the share of total pre-pandemic non-borrower employment among non-borrowers that permanently closed and the corresponding share among borrowers that permanently closed. This is similar to the method used to estimate the impact of the BBLS and CBILS/CLBILS on business closure rates (discussed above), except that closure rates are replaced with the share of pre-pandemic employment within firms that permanently closed between 1st April 2020 and 31st March 2021, as a proportion of total pre-pandemic employment.

Second, this proportion is scaled by an estimate of total pre-pandemic employment among borrowers. This is estimated as the average employment of borrowers within the sample multiplied by the total number of borrowers, based on BBB Management Information.

As a hypothetical example, if there were 100,000 borrowers with an average of 10 employees each, then total pre-pandemic employment among borrowers would be 1,000,000. Then, if 20% of total pre-pandemic non-borrower employment was among non-borrowers that permanently closed and 10% of total pre-pandemic borrower employment was among borrowers that permanently closed, then it is assumed that additional borrowers that would have closed in the absence of the schemes accounted for 10% (20% minus 10%) of total pre-pandemic borrower employment. Therefore, the number of pre-pandemic jobs among borrowers that would have permanently closed is calculated as 1,000,000 multiplied by 10%, which is 100,000.

As with the estimation of business closure rates, this calculation was undertaken separately within individual turnover bands , before being aggregated across all turnover bands. The calculation – undertaken separately for BBLS and CBILS/CLBILS – is as follows:

* refers to the average employment of borrowers within each turnover band , calculated using the IDBR;
* refers to the number of businesses within each turnover band as provided in BBB Management Information;
* refers to the share of pre-pandemic employment in firms that permanently closed between 1st April 2020 and 31st March 2021, as a proportion of total employment of firms active in the first year of the pandemic. This is also calculated within each turnover band , using the IDBR. The proportion of total pre-pandemic borrower employment among borrowers that would have closed in absence of the Covid-19 Loan Guarantee Schemes is estimated by subtracting the share of total pre-pandemic borrower employment among firms that permanently closed from the corresponding share for matched non-borrowers.

The total number of pre-pandemic jobs among borrowers that would have permanently closed in the absence of the Covid-19 Loan Guarantee Schemes is estimated at 197,000-256,000[[161]](#footnote-162) jobs in the case of BBLS; and 59,000-69,000[[162]](#footnote-163) in the case of CBILS/CLBILS.

Additional tables

##### Table 41: Difference in closure rates by sector and turnover band

| Sector | Turnover band | Difference in closure rate between BBLS borrower and non-borrower businesses | Difference in closure rate between CBILS/CLBILS borrower and non-borrower businesses |
| --- | --- | --- | --- |
| Business Services | Less than 50K | 5% | 9% |
|  | 50,001 to 100K | 8% | 11% |
|  | 100,001 to 250K | 7% | 8% |
|  | 250,001 to 500K | 6% | 6% |
|  | 500,001 to 1m | 4% | 5% |
|  | 1m to 5m | 1% | 4% |
|  | 5m to 25m |  | 2% |
|  | 25m to 50m |  | 1% |
|  | 50m to 200m |  | 0% |
|  | >200m |  | 0% |
|  | Weighted average | 6% | 4% |
| Construction | Less than 50K | 9% | 19% |
|  | 50,001 to 100K | 5% | 10% |
|  | 100,001 to 250K | 5% | 3% |
|  | 250,001 to 500K | 7% | 7% |
|  | 500,001 to 1m | 7% | 7% |
|  | 1m to 5m | 6% | 6% |
|  | 5m to 25m |  | 1% |
|  | 25m to 50m |  | 2% |
|  | 50m to 200m |  | 0% |
|  | >200m |  | 0% |
|  | Weighted average | 6% | 6% |
| Distribution | Less than 50K | 9% | 10% |
|  | 50,001 to 100K | 2% | 9% |
|  | 100,001 to 250K | 5% | 5% |
|  | 250,001 to 500K | 6% | 7% |
|  | 500,001 to 1m | 5% | 4% |
|  | 1m to 5m | 3% | 4% |
|  | 5m to 25m |  | 2% |
|  | 25m to 50m |  | 2% |
|  | 50m to 200m |  | 2% |
|  | >200m |  | 0% |
|  | Weighted average | 5% | 4% |
| Primary / Manufacturing | Less than 50K | 14% | 14% |
|  | 50,001 to 100K | 2% | 12% |
|  | 100,001 to 250K | 5% | 2% |
|  | 250,001 to 500K | 4% | 3% |
|  | 500,001 to 1m | 4% | 5% |
|  | 1m to 5m | 2% | 4% |
|  | 5m to 25m |  | 2% |
|  | 25m to 50m |  | 0% |
|  | 50m to 200m |  | 0% |
|  | >200m |  | 0% |
|  | Weighted average | 6% | 4% |
| Other Services | Less than 50K | 5% | -4% |
|  | 50,001 to 100K | 3% | 9% |
|  | 100,001 to 250K | 3% | 6% |
|  | 250,001 to 500K | 4% | 4% |
|  | 500,001 to 1m | 2% | 3% |
|  | 1m to 5m | 2% | 3% |
|  | 5m to 25m |  | 0% |
|  | 25m to 50m |  | 0% |
|  | 50m to 200m |  | 0% |
|  | >200m |  | 0% |
|  | Weighted average | 3% | 3% |

Weighted average calculated using PSM weight and turnover band, assuming a common turnover band distribution among borrowers across sectors.[[163]](#footnote-164) Firms with turnover greater than £5m are not included in the BBLS analysis. Otherwise, where a value is missing this is due to insufficient sample. Figures are rounded to the nearest whole number percentage. Source: London Economics’ analysis of IDBR data, BBB Management Information and BBB Portal Data.

##### Table 42: Difference in closure rates by region and turnover band

| Region | Turnover band | Difference in closure rate between BBLS borrower and non-borrower businesses | Difference in closure rate between CBILS/CLBILS borrower and non-borrower businesses |
| --- | --- | --- | --- |
| East / Midlands | Less than 50K | 10% | 16% |
|  | 50,001 to 100K | 7% | 10% |
|  | 100,001 to 250K | 7% | 4% |
|  | 250,001 to 500K | 5% | 5% |
|  | 500,001 to 1m | 5% | 4% |
|  | 1m to 5m | 4% | 5% |
|  | 5m to 25m |  | 1% |
|  | 25m to 50m |  | 3% |
|  | 50m to 200m |  | 0% |
|  | >200m |  | 0% |
|  | Weighted average | 7% | 4% |
| London | Less than 50K | 6% | 11% |
|  | 50,001 to 100K | 3% | 7% |
|  | 100,001 to 250K | 5% | 7% |
|  | 250,001 to 500K | 7% | 8% |
|  | 500,001 to 1m | 4% | 7% |
|  | 1m to 5m | 2% | 5% |
|  | 5m to 25m |  | 2% |
|  | 25m to 50m |  | 0% |
|  | 50m to 200m |  | 1% |
|  | >200m |  | 0% |
|  | Weighted average | 5% | 5% |
| North / Yorkshire | Less than 50K | 10% | 9% |
|  | 50,001 to 100K | 5% | 11% |
|  | 100,001 to 250K | 4% | 3% |
|  | 250,001 to 500K | 6% | 6% |
|  | 500,001 to 1m | 5% | 6% |
|  | 1m to 5m | 3% | 4% |
|  | 5m to 25m |  | 3% |
|  | 25m to 50m |  | 2% |
|  | 50m to 200m |  | 0% |
|  | >200m |  | 0% |
|  | Weighted average | 6% | 5% |
| Northern Ireland | Less than 50K | -3% | -25% |
|  | 50,001 to 100K | 10% | 20% |
|  | 100,001 to 250K | 4% | 9% |
|  | 250,001 to 500K | 2% | 5% |
|  | 500,001 to 1m | 8% | 3% |
|  | 1m to 5m | 2% | 1% |
|  | 5m to 25m |  | 2% |
|  | 25m to 50m |  | 0% |
|  | 50m to 200m |  | 0% |
|  | >200m |  |  |
|  | Weighted average | 4% | 2% |
| Scotland | Less than 50K | 5% | -16% |
|  | 50,001 to 100K | 4% | 8% |
|  | 100,001 to 250K | 6% | 9% |
|  | 250,001 to 500K | 3% | 8% |
|  | 500,001 to 1m | 8% | 7% |
|  | 1m to 5m | 2% | 2% |
|  | 5m to 25m |  | 2% |
|  | 25m to 50m |  | 0% |
|  | 50m to 200m |  | 3% |
|  | >200m |  | 0% |
|  | Weighted average | 5% | 4% |
| South | Less than 50K | 4% | 9% |
|  | 50,001 to 100K | 6% | 13% |
|  | 100,001 to 250K | 6% | 6% |
|  | 250,001 to 500K | 6% | 6% |
|  | 500,001 to 1m | 4% | 3% |
|  | 1m to 5m | 4% | 3% |
|  | 5m to 25m |  | 1% |
|  | 25m to 50m |  | 0% |
|  | 50m to 200m |  | 1% |
|  | >200m |  | 0% |
|  | Weighted average | 5% | 4% |
| Wales | Less than 50K | 10% | 0% |
|  | 50,001 to 100K | 3% | 15% |
|  | 100,001 to 250K | 4% | 12% |
|  | 250,001 to 500K | 9% | 7% |
|  | 500,001 to 1m | 4% | 9% |
|  | 1m to 5m | 4% | 3% |
|  | 5m to 25m |  | 2% |
|  | 25m to 50m |  | 0% |
|  | 50m to 200m |  | 0% |
|  | >200m |  | 0% |
|  | Weighted average | 6% | 5% |

Weighted average calculated using PSM weight and turnover band, assuming a common turnover band distribution among borrowers across regions.[[164]](#footnote-165) Firms with turnover greater than £5m are not included in the BBLS analysis. Otherwise, where a value is missing this is due to insufficient sample. Figures are rounded to the nearest whole number percentage. Source: London Economics’ analysis of IDBR data, BBB Management Information and BBB Portal Data.

## Econometrics methodology and results

This section describes the econometric approach used to quantify the impacts of the Covid-19 Loan Guarantee Schemes on business turnover and employment based on analysis of secondary data sources. As this exercise is intended as a secondary analysis of the Year 1 survey analysis, any key differences are highlighted between the Year 1 survey analysis and this exercise. Supplementary econometric results are provided thereafter.

Methodological Approach

As was the case in the analysis of business survival, propensity score matching (PSM)[[165]](#footnote-166) is implemented to identify a set of non-borrowers that closely resemble borrowers. Then, a comparison is made between borrowers and matched non-borrowers (i.e. the ‘treated’ and ‘control’ groups) both pre- and post-pandemic using difference-in-differences[[166]](#footnote-167) estimation. Both PSM and difference-in-differences estimation were performed using Stata. Further detail on these two components of the methodology is presented in this annex.

Propensity Score Matching (PSM)

PSM is implemented in the same manner as described above, with two key differences. First, businesses which permanently closed in between 1st April 2020 and 31st March 2021 are excluded from the PSM prior to the difference-in-difference analysis. This is to avoid double counting the impact of the schemes on businesses that ceased trading by including them in both the business survival and econometric analyses.

Secondly, in the case of the PSM used in the business survival analysis, a restriction was applied so that only businesses active in the first year of the pandemic were matched to one another. This was to ensure that the business closure rates are correctly defined with reference only to active firms. However, in the case of the econometric analysis of the Covid-19 Loan Guarantee Schemes’ impact on turnover and employment, this condition is unnecessarily restrictive because it would remove firms that may have been inactive in the first year of the pandemic but were not recorded as a business closure. Instead, to feature in the econometric analysis, businesses were required to have non-missing turnover and employment data in the first year of the pandemic.[[167]](#footnote-168)

Because of differences in data sources, the set of covariates available for use in the PSM differed across the Year 1 and secondary analyses. Specifically, two years of one-year pre-pandemic growth rates were available for the secondary analysis but not the Year 1 analysis, and information on business obstacles (for example whether businesses experienced changes in market demand, supply chain disruptions etc.) was available for the Year 1 analysis but not this exercise.

Once again, the PSM substantially reduces the differences between the borrower and non-borrower samples. Indeed, the average difference in the prevalence of various characteristics included in the PSM fell by approximately 94% in the case of the BBLS (a fall of 5.5 percentage points from 5.9% to 0.4%) and 96% in the case of the CBILS/CLBILS (a fall of 7.9 percentage points from 8.2% to 0.3%). The tables that follow provide more detail on the differences in the prevalence of the various characteristics included in the PSM across the borrower and non-borrower groups, before and after the PSM.

##### Table 43: Balance table - BBLS

| Characteristic | Feature | Difference in prevalence between borrower and non-borrower groups (Full Sample) | Difference in prevalence between borrower and non-borrower groups (After PSM) |
| --- | --- | --- | --- |
| **Turnover** | Less than 25,000 | 6.3% | 0.1% |
|  | Between 25,000 and 50,000 | 5.3% | 0.0% |
|  | Between 50,000 and 75,000 | 10.9% | 0.2% |
|  | Between 75,000 and 100,000 | 6.5% | 0.1% |
|  | Between 100,000 and 125,000 | 5.5% | 0.2% |
|  | Between 125,000 and 150,000 | 3.3% | 0.1% |
|  | Between 150,000 and 175,000 | 1.1% | 0.1% |
|  | Between 175,000 and 200,000 | 0.2% | 0.2% |
|  | Between 200,000 and 250,000 | 0.1% | 0.3% |
|  | Between 250,000 and 350,000 | 1.8% | 0.5% |
|  | Between 350,000 and 500,000 | 3.7% | 0.4% |
|  | Between 500,000 and 1 million | 14.8% | 0.4% |
|  | Between 1 million and 5 million | 18.8% | 1.2% |
| **Employment** | 1 employee | 33.0% | 0.3% |
|  | 2-3 employees | 1.0% | 0.2% |
|  | 4-5 employees | 5.3% | 0.4% |
|  | 6-7 employees | 5.2% | 0.0% |
|  | 8-9 employees | 4.8% | 0.1% |
|  | 10-14 employees | 6.7% | 0.0% |
|  | 15-24 employees | 6.3% | 0.1% |
|  | 25-49 employees | 4.4% | 0.0% |
|  | 50-249 employees | 1.3% | 0.0% |
|  | More than 250 employees | 0.0% | 0.0% |
| **Region** | East / Midlands | 0.5% | 0.5% |
|  | London | 4.6% | 1.1% |
|  | North / Yorkshire | 1.7% | 0.1% |
|  | Northern Ireland | 0.9% | 0.1% |
|  | Scotland | 0.2% | 0.4% |
|  | South | 0.8% | 0.0% |
|  | Wales | 0.3% | 0.2% |
| **Sector** | Business Services | 17.3% | 0.3% |
|  | Construction | 6.8% | 0.2% |
|  | Distribution | 7.8% | 0.1% |
|  | Other Services | 0.5% | 0.6% |
|  | Primary/Manufacturing | 3.4% | 0.2% |
| **Turnover growth 2017/2018** | Decrease of more than 50% | 2.3% | 0.1% |
|  | Decrease of between 25% and 50% | 0.6% | 0.1% |
|  | Decrease of between 10% and 25% | 2.2% | 0.2% |
|  | Decrease of less than 10% | 3.5% | 0.0% |
|  | Increase of less than 5% | 21.3% | 0.8% |
|  | Increase of between 5% and 25% | 9.0% | 1.3% |
|  | Increase of between 25% and 50% | 4.6% | 0.1% |
|  | Increase of more than 50% | 4.9% | 0.1% |
| **Turnover growth 2018/2019** | Decrease of more than 50% | 1.0% | 0.0% |
|  | Decrease of between 25% and 50% | 1.0% | 0.3% |
|  | Decrease of between 10% and 25% | 3.5% | 0.1% |
|  | Decrease of less than 10% | 5.4% | 0.1% |
|  | Increase of less than 5% | 28.6% | 0.3% |
|  | Increase of between 5% and 25% | 7.8% | 0.3% |
|  | Increase of between 25% and 50% | 5.0% | 0.2% |
|  | Increase of more than 50% | 6.9% | 0.5% |
| **Employment growth 2017/2018** | Decrease of more than 50% | 0.8% | 0.2% |
|  | Decrease of less than 50% | 3.3% | 1.2% |
|  | No change | 17.4% | 2.1% |
|  | Increase of less than 50% | 10.8% | 0.0% |
|  | Increase of more than 50% | 4.2% | 0.8% |
| **Employment growth 2018/2019** | Decrease of more than 50% | 0.6% | 0.1% |
|  | Decrease of less than 50% | 5.0% | 0.8% |
|  | No change | 20.3% | 1.6% |
|  | Increase of less than 50% | 11.2% | 0.7% |
|  | Increase of more than 50% | 4.7% | 0.0% |
| **Age** | 2 Years or less | 3.7% | 0.3% |
|  | 3-5 Years | 8.0% | 0.7% |
|  | 6-10 Years | 2.2% | 0.9% |
|  | 11-15 Years | 2.5% | 0.5% |
|  | 16-20 Years | 2.2% | 0.2% |
|  | 21-40 Years | 3.6% | 0.7% |
|  | More than 40 Years | 1.2% | 0.2% |
| **Average** |  | **5.9%** | **0.4%** |

Source: London Economics’ analysis of IDBR data and BBB Portal Data.

##### Table 44: Balance table – CBILS/CLBILS

| Characteristic | Feature | Difference in prevalence between borrower and non-borrower groups (Full Sample) | Difference in prevalence between borrower and non-borrower groups (After PSM) |
| --- | --- | --- | --- |
| **Turnover** | Less than 25,000 | 6.4% | 0.0% |
|  | Between 25,000 and 50,000 | 6.9% | 0.1% |
|  | Between 50,000 and 75,000 | 13.7% | 0.1% |
|  | Between 75,000 and 100,000 | 9.8% | 0.0% |
|  | Between 100,000 and 125,000 | 9.3% | 0.2% |
|  | Between 125,000 and 150,000 | 5.7% | 0.2% |
|  | Between 150,000 and 175,000 | 3.2% | 0.0% |
|  | Between 175,000 and 200,000 | 1.4% | 0.0% |
|  | Between 200,000 and 250,000 | 1.5% | 0.0% |
|  | Between 250,000 and 350,000 | 0.1% | 0.4% |
|  | Between 350,000 and 500,000 | 3.0% | 0.0% |
|  | Between 500,000 and 1 million | 6.5% | 0.0% |
|  | Between 1 million and 5 million | 21.1% | 0.8% |
|  | Between 5 million and 25 million | 23.0% | 0.5% |
|  | Between 25 million and 100 million | 4.2% | 0.1% |
|  | More than 100 million | 0.2% | 0.0% |
| **Employment** | 1 employee | 45.1% | 0.0% |
|  | 2-3 employees | 11.4% | 0.0% |
|  | 4-5 employees | 1.8% | 0.1% |
|  | 6-7 employees | 3.2% | 0.1% |
|  | 8-9 employees | 3.5% | 0.3% |
|  | 10-14 employees | 6.8% | 0.1% |
|  | 15-24 employees | 9.7% | 0.3% |
|  | 25-49 employees | 12.5% | 0.1% |
|  | 50-249 employees | 16.5% | 0.5% |
|  | More than 250 employees | 2.6% | 0.1% |
| **Region** | East / Midlands | 1.2% | 0.6% |
|  | London | 5.7% | 0.3% |
|  | North / Yorkshire | 1.7% | 0.3% |
|  | Northern Ireland | 0.5% | 0.2% |
|  | Scotland | 0.0% | 0.1% |
|  | South | 2.5% | 0.5% |
|  | Wales | 0.1% | 0.1% |
| **Sector** | Business Services | 15.1% | 0.4% |
|  | Construction | 1.3% | 0.6% |
|  | Distribution | 6.5% | 0.4% |
|  | Other Services | 0.3% | 0.1% |
|  | Primary/Manufacturing | 7.7% | 0.6% |
| **Turnover growth 2017/2018** | Decrease of more than 50% | 3.7% | 0.3% |
|  | Decrease of between 25% and 50% | 2.0% | 0.1% |
|  | Decrease of between 10% and 25% | 1.0% | 0.4% |
|  | Decrease of less than 10% | 4.8% | 0.0% |
|  | Increase of less than 5% | 26.3% | 1.0% |
|  | Increase of between 5% and 25% | 16.3% | 1.3% |
|  | Increase of between 25% and 50% | 6.4% | 0.0% |
|  | Increase of more than 50% | 3.5% | 0.1% |
| **Turnover growth 2018/2019** | Decrease of more than 50% | 2.2% | 0.0% |
|  | Decrease of between 25% and 50% | 0.9% | 0.2% |
|  | Decrease of between 10% and 25% | 3.0% | 0.5% |
|  | Decrease of less than 10% | 7.7% | 0.7% |
|  | Increase of less than 5% | 32.8% | 0.7% |
|  | Increase of between 5% and 25% | 13.7% | 0.3% |
|  | Increase of between 25% and 50% | 6.9% | 0.1% |
|  | Increase of more than 50% | 4.7% | 0.2% |
| **Employment growth 2017/2018** | Decrease of more than 50% | 1.1% | 0.0% |
|  | Decrease of less than 50% | 5.0% | 1.0% |
|  | No change | 26.8% | 1.8% |
|  | Increase of less than 50% | 19.5% | 0.1% |
|  | Increase of more than 50% | 3.5% | 0.7% |
| **Employment growth 2018/2019** | Decrease of more than 50% | 0.9% | 0.0% |
|  | Decrease of less than 50% | 6.5% | 0.8% |
|  | No change | 29.3% | 0.7% |
|  | Increase of less than 50% | 20.1% | 0.4% |
|  | Increase of more than 50% | 3.7% | 0.3% |
| **Age** | 2 Years or less | 14.2% | 0.0% |
|  | 3-5 Years | 14.4% | 0.5% |
|  | 6-10 Years | 0.3% | 0.6% |
|  | 11-15 Years | 3.9% | 0.5% |
|  | 16-20 Years | 4.6% | 0.3% |
|  | 21-40 Years | 13.3% | 1.0% |
|  | More than 40 Years | 7.2% | 0.5% |
| **Average** |  | **8.2%** | **0.3%** |

Source: London Economics’ analysis of IDBR data and BBB Portal Data.

Difference-in-differences estimation

Under the difference-in-differences approach, outcomes of borrowers and non-borrowers are compared both before and after the Covid-19 Loan Guarantee Schemes were introduced in order to account for the pre-existing differences in performance (as measured by turnover and employment) between the treatment and control groups that may not have been eliminated by the propensity score matching.[[168]](#footnote-169)

The core specification for the difference-in-differences model is described by the following equation:

……………………………………………………(1)

* denotes the outcome variable (i.e. either log employment or log turnover).[[169]](#footnote-170) The two periods included in the analysis are the last period available from the IDBR that was entirely before the pandemic[[170]](#footnote-171) (this is referred to as the ‘pre-pandemic’ or ‘pre-intervention’ period), and the first period predominantly after the onset of the pandemic (this is referred to as the first year of the pandemic, ‘post-pandemic’, ‘post-intervention’ or ‘post-treatment’ period).[[171]](#footnote-172) This allows a comparison before and after the Covid-19 Loan Guarantee Schemes were introduced;
* is a constant term;
* is a dummy variable indicating whether a given business was a borrower or a non-borrower (i.e. whether it received the ‘treatment’);
* indicates whether the observation is pre- or post-treatment;
* is a dummy controlling for participation in the CJRS scheme;
* denotes unobserved time invariant factors which may influence the outcome variable. The use of the fixed effects estimator accounts for this unobserved heterogeneity;
* is the idiosyncratic error term. This captures factors which are not observed, and which change both across businesses and across time. Standard errors are clustered at the sector level to account for potential correlation in error terms across businesses in the same industry;
* , , and are individual coefficients. is the estimate for the effect of the Covid-19 Loan Guarantee Schemes.

Testing for differences in pre-treatment trends

As mentioned in the main report, a key assumption underlying DiD is the common (or parallel) trends assumption: in the absence of the intervention (i.e. the Covid-19 Loan Guarantee Schemes), the turnover and employment of the treatment group should have followed a similar trend to that within the chosen control group. This sub-section explains why this assumption is likely to hold, and presents the outcome of statistical tests which offer further support for the choice of the control group against which borrowers are compared.

It is likely that the common trends assumption is satisfied because the PSM takes into account a number of variables likely to affect the trajectory of employment and turnover during the pandemic in the absence of the Covid-19 Loan Guarantee Schemes. For instance, matching on businesses’ sector (one of the variables included in the PSM) is likely to account for the influence of sector-specific factors on trends (for example sector-specific business models more or less likely to be disrupted by the pandemic). Moreover, businesses’ age provides information on their experience (for example older businesses may have had more experience weathering previous crises). Furthermore, growth in pre-pandemic turnover or employment could be indicative of a number of other factors potentially influencing trends in businesses’ in turnover and employment.[[172]](#footnote-173) As shown in the balance tables presented earlier in this annex, the PSM has substantially reduced differences between the treatment and control groups with respect to these characteristics.

Though logical reasoning suggests that the common trends assumption is likely to hold, statistical tests were conducted to further support (or challenge) the choice of the control group against which borrowers are compared. While it is not possible to test the common trend assumption after the intervention (given that the counterfactual outcome of the treated group cannot be observed), the absence of significant differences between the trends of treatment and control group outcomes before the intervention would alleviate some concerns about potential differences in outcome trends between these groups after the intervention that could have occurred in the absence of the policy intervention.

The tests consisted of estimating the time trend in the outcome variables (i.e. turnover and employment) within the control group prior to the intervention using a set of time dummies, and testing whether this time trend was statistically different among the treated group using a set of interaction terms between the time dummies and the treatment indicator. If the interaction terms were statistically significant, this would suggest that pre-treatment trends may have been different across the treated and control groups.[[173]](#footnote-174)

This test was run separately for turnover and employment, and on both the BBLS and combined CBILS/CLBILS samples. In neither case were any of the interactions between the pre-treatment time dummies and treatment indicator statistically significant at conventional levels, implying failure to reject the hypothesis of similar pre-treatment trends. This provides support for the choice of the control group against which borrowers are compared.

It should be noted that standard errors were clustered at the sector level to account for the possibility that unobservable factors (captured in the error term of the regression) may be correlated across firms operating in the same sector. However, these sectors are consolidated into five large groups of SIC sections, in line with the consolidated sector groupings used in the Year 1 survey analysis.[[174]](#footnote-175) As an additional check, standard errors were clustered based on more granular sectors – namely at the level of the SIC section. This level of clustering leads to lower standard errors and therefore a higher likelihood of rejecting the hypothesis that pre-treatments trends are similar across the control and treated groups. In this case, the interaction between the treatment indicator and the time dummy indicating the second year before the pandemic was negative and statistically significant in the models testing differences in pre-treatment trends in turnover (in both the case of BBLS and CBILS/CLBILS), suggesting that on average, the turnover of treated firms decreased relative to that of control businesses between third and second year prior to the pandemic. However, the interaction between the dummy indicating the first year prior to the pandemic and treatment indicator is not statistically significant, suggesting that while the trends between the third and second years prior to the pandemic may have differed across the two groups, the ‘average’ trend between third and first year before the pandemic was similar.

Furthermore, the difference in pre-treatment trends (1%-2%) is an order of magnitude lower than the estimated treatment effect (10%-12%), so even if bias due to non-parallel trends existed, its impact is likely to be small.

Therefore, although there appears to be a statistically significant difference in the trend from the third to second year prior to the pandemic between the two groups when standard errors are clustered at the level of the SIC section, the low magnitude of that difference relative to the estimated treatment impact, the lack of statistical significance of the interaction between the first pre-pandemic year dummy and the treatment dummy, the fact that none of the interactions are significant when standard errors are clustered at a higher level, and the logic for why both groups would have likely followed a similar trajectory in the absence of the intervention all provide support for the choice of the control group against which borrowers are compared.

Econometric Results

##### Table 45: Estimated impact of the Covid-19 Loan Guarantee Schemes on turnover – Secondary analysis of Year 1 impacts

| Variable | BBLS | BBLS | CBILS/CLBILS | CBILS/CLBILS |
| --- | --- | --- | --- | --- |
| Post-intervention | -0.082\*\*\* (0.018) | -0.088\*\*\* (0.018) | -0.092\*\*\* (0.012) | -0.114\*\*\* (0.009) |
| Borrower, post-intervention | 0.099\*\*\* (0.017) | 0.093\*\*\* (0.017) | 0.124\*\*\* (0.017) | 0.109\*\*\* (0.018) |
| Used CJRS in 2020 |  | 0.021\*\*\* (0.004) |  | 0.054\*\*\* (0.005) |
| Constant | 13.060\*\*\* (0.005) | 13.060\*\*\* (0.005) | 14.464\*\*\* (0.002) | 14.464\*\*\* (0.002) |
| Observations | 268,738 | 268,738 | 157,576 | 157,576 |
| R-squared | 0.007 | 0.007 | 0.009 | 0.010 |
| Fixed effects | Yes | Yes | Yes | Yes |

Note: \*\*\* p-value<0.01, \*\* p-value<0.05, \* p-value<0.1. Source: London Economics’ analysis of IDBR data, BBB Portal Data and HMRC Coronavirus Job Retention Scheme (CJRS) data.

##### Table 46: Estimated impact of the Covid-19 Loan Guarantee Schemes on employment – Secondary analysis of Year 1 impacts

| Variable | BBLS | BBLS | CBILS/CLBILS | CBILS/CLBILS |
| --- | --- | --- | --- | --- |
| Post-intervention | -0.034\*\*\* (0.005) | -0.039\*\*\* (0.005) | -0.053\*\*\* (0.005) | -0.060\*\*\* (0.007) |
| Borrower, post-intervention | 0.059\*\*\* (0.005) | 0.055\*\*\* (0.005) | 0.091\*\*\* (0.009) | 0.086\*\*\* (0.010) |
| Used CJRS in 2020 |  | 0.014\*\* (0.005) |  | 0.018\*\* (0.006) |
| Constant | 1.853\*\*\* (0.003) | 1.853\*\*\* (0.003) | 2.875\*\*\* (0.003) | 2.875\*\*\* (0.004) |
| Observations | 268,738 | 268,738 | 157,576 | 157,576 |
| R-squared | 0.006 | 0.006 | 0.011 | 0.011 |
| Fixed effects | Yes | Yes | Yes | Yes |

Note: \*\*\* p-value<0.01, \*\* p-value<0.05, \* p-value<0.1. Source: London Economics’ analysis of IDBR data, BBB Portal Data and HMRC Coronavirus Job Retention Scheme (CJRS) data.

The number of pre-pandemic jobs among borrowers that would have permanently closed in the first year of the pandemic in the absence of the Covid-19 Loan Guarantee Schemes was estimated as part of the business survival analysis. However, the Covid-19 Loan Guarantee Schemes may have also had an impact on employment among borrowers that would have survived even in the absence of the BBLS and CBILS/CLBILS. In order to calculate the number of potential additional job losses among all businesses in the absence of the Covid-19 Loan Guarantee Schemes, a separate econometric analysis of employment data was undertaken.

This analysis is separate to the analysis of business survival in the sense that it includes all borrowers, including both those that permanently closed in the first year of the pandemic and those that did not permanently close or would not have permanently closed in the absence of the scheme. The analysis in this section is therefore entirely separate to the estimate of the number of pre-pandemic jobs among borrowers that would have permanently closed in the first year of the pandemic in the absence of the Covid-19 Loan Guarantee Schemes (estimated as part of the business survival analysis).

This analysis is based on four components.

First, total employment among borrowers is estimated based on average post-pandemic employment within the sample, and the total number of borrowers, based on BBB Management Information.

Second, employment under the counterfactual scenario must be estimated for the borrower firms. This is done by dividing total estimated employment of borrowers in the first year of the pandemic by .[[175]](#footnote-176)

Third, the difference-in-difference estimate is applied to obtain the uplift in employment among the population of businesses as a result of the Covid-19 Loan Guarantee Schemes.

As in the case of the business survival analysis, this calculation undertaken separately within individual turnover bands , before being aggregated across all turnover bands. The calculation – undertaken separately for BBLS and CBILS/CLBILS – is as follows:

* refers to average employment of borrowers within each turnover band , calculated using the IDBR;
* refers to the number of businesses within each turnover band as provided in BBB Management Information;
* refers to the coefficient within the difference-in-difference regression, which is the estimate for the effect of the Covid-19 Loan Guarantee Scheme on employment;

The total number of jobs that could potentially have been lost in the absence of the Covid-19 Loan Guarantee Schemes is estimated at 407,000 jobs in the case of the BBLS; and 297,000 in the case of the CBILS/CLBILS. The estimates from the econometric analysis that includes businesses that permanently closed in the first year of the pandemic is also provided below. The coefficient on “Borrower, post-intervention” in the case of both BBLS and CBILS/CLBILS reflects the inclusion of businesses that permanently closed in the first year of the pandemic.

##### Table 47: Estimated impact of the Covid-19 Loan Guarantee Schemes on employment (including firms that permanently closed in the first year of the pandemic)

| Variable | BBLS | CBILS/CLBILS |
| --- | --- | --- |
| Post-intervention | -0.051\*\*\*  (0.009) | -0.085\*\*\*  (0.004) |
| Borrower, post-intervention | 0.062\*\*\*  (0.005) | 0.098\*\*\*  (0.014) |
| Used CJRS in 2020 | 0.021\*\*\*  (0.004) | 0.034\*\*\*  (0.006) |
| Constant | 1.840\*\*\*  (0.004) | 2.879\*\*\*  (0.003) |
| Observations | 299,872 | 165,214 |
| R-squared | 0.009 | 0.016 |
| Fixed effects | Yes | Yes |

Note: \*\*\* p-value<0.01, \*\* p-value<0.05, \* p-value<0.1. Source: London Economics’ analysis of IDBR data, BBB Portal Data and HMRC Coronavirus Job Retention Scheme (CJRS) data.

##### Table 48: Estimated impact of the Covid-19 Loan Guarantee Schemes on turnover – by sector – Secondary analysis of Year 1 impacts

| Variable | BBLS | CBILS / CLBILS |
| --- | --- | --- |
| Business services, post intervention | -0.087\*\*\* (0.013) | -0.125\*\*\* (0.015) |
| Construction, post intervention | -0.154\*\*\* (0.016) | -0.155\*\*\* (0.021) |
| Distribution, post intervention | -0.058\*\*\* (0.009) | -0.099\*\*\* (0.013) |
| Other Services, post intervention | -0.075\*\*\* (0.016) | -0.121\*\*\* (0.025) |
| Primary / Manufacturing, post intervention | -0.076\*\*\* (0.020) | -0.086\*\*\* (0.015) |
| Business services, Borrower, post intervention | 0.101\*\*\* (0.015) | 0.139\*\*\* (0.016) |
| Construction, Borrower, post intervention | 0.148\*\*\* (0.021) | 0.169\*\*\* (0.023) |
| Distribution, Borrower, post intervention | 0.057\*\*\* (0.011) | 0.084\*\*\* (0.013) |
| Other Services, Borrower, post intervention | 0.081\*\*\* (0.020) | 0.071\*\* (0.031) |
| Primary / Manufacturing, Borrower, post intervention | 0.097\*\*\* (0.022) | 0.076\*\*\* (0.016) |
| Used CJRS in 2020 | 0.020\*\*\* (0.007) | 0.053\*\*\* (0.008) |
| Constant | 13.060\*\*\* (0.002) | 14.464\*\*\* (0.002) |
| Observations | 268,738 | 157,576 |
| R-squared | 0.009 | 0.011 |
| Business fixed effects | Yes | Yes |

Note: \*\*\* p-value<0.01, \*\* p-value<0.05, \* p-value<0.1. Source: London Economics’ analysis of IDBR data, BBB Portal Data and HMRC Coronavirus Job Retention Scheme (CJRS) data.

##### Table 49: Estimated impact of the Covid-19 Loan Guarantee Schemes on employment – by sector – Secondary analysis of Year 1 impacts

| Variable | BBLS | CBILS/CLBILS |
| --- | --- | --- |
| Business services, post intervention | -0.039\*\*\* (0.007) | -0.058\*\*\* (0.008) |
| Construction, post intervention | -0.031\*\*\* (0.008) | -0.064\*\*\* (0.012) |
| Distribution, post intervention | -0.052\*\*\* (0.006) | -0.073\*\*\* (0.008) |
| Other Services, post intervention | -0.037\*\*\* (0.011) | -0.057\*\*\* (0.013) |
| Primary / Manufacturing, post intervention | -0.019\*\* (0.009) | -0.046\*\*\* (0.010) |
| Business services, Borrower, post intervention | 0.062\*\*\* (0.009) | 0.098\*\*\* (0.010) |
| Construction, Borrower, post intervention | 0.067\*\*\* (0.010) | 0.120\*\*\* (0.014) |
| Distribution, Borrower, post intervention | 0.055\*\*\* (0.008) | 0.075\*\*\* (0.009) |
| Other Services, Borrower, post intervention | 0.021 (0.013) | 0.052\*\*\* (0.016) |
| Primary / Manufacturing, Borrower, post intervention | 0.040\*\*\* (0.012) | 0.068\*\*\* (0.011) |
| Used CJRS in 2020 | 0.016\*\*\* (0.004) | 0.021\*\*\* (0.005) |
| Constant | 1.853\*\*\* (0.001) | 2.875\*\*\* (0.001) |
| Observations | 268,738 | 157,576 |
| R-squared | 0.007 | 0.013 |
| Business fixed effects | Yes | Yes |

Note: \*\*\* p-value<0.01, \*\* p-value<0.05, \* p-value<0.1. Source: London Economics’ analysis of IDBR data, BBB Portal Data and HMRC Coronavirus Job Retention Scheme (CJRS) data.

##### Table 50: Estimated impact of the Covid-19 Loan Guarantee Schemes on turnover – by region – Secondary analysis of Year 1 impacts

| Variable | BBLS | CBILS/CLBILS |
| --- | --- | --- |
| East / Midlands, post intervention | -0.086\*\*\* (0.019) | -0.114\*\*\* (0.011) |
| London, post intervention | -0.080\*\*\* (0.013) | -0.156\*\*\* (0.018) |
| North / Yorkshire, post intervention | -0.074\*\* (0.026) | -0.082\*\*\* (0.011) |
| Northern Ireland, post intervention | -0.033 (0.036) | -0.031\*\* (0.008) |
| Scotland, post intervention | -0.120\*\* (0.036) | -0.092\*\*\* (0.008) |
| South, post intervention | -0.106\*\*\* (0.020) | -0.111\*\*\* (0.018) |
| Wales, post intervention | -0.109\*\*\* (0.021) | -0.187\*\*\* (0.029) |
| East / Midlands, Borrower, post intervention | 0.085\*\*\* (0.017) | 0.101\*\*\* (0.017) |
| London, Borrower, post intervention | 0.098\*\*\* (0.019) | 0.152\*\*\* (0.012) |
| North / Yorkshire, Borrower, post intervention | 0.090\*\* (0.024) | 0.088\*\* (0.020) |
| Northern Ireland, Borrower, post intervention | 0.040 (0.026) | 0.034 (0.024) |
| Scotland, Borrower, post intervention | 0.131\*\*\* (0.027) | 0.065 (0.031) |
| South, Borrower, post intervention | 0.096\*\*\* (0.019) | 0.111\*\* (0.031) |
| Wales, Borrower, post intervention | 0.110\*\* (0.036) | 0.187\*\*\* (0.037) |
| Used CJRS in 2020 | 0.021\*\*\* (0.004) | 0.052\*\*\* (0.005) |
| Constant | 13.060\*\*\* (0.005) | 14.464\*\*\* (0.002) |
| Observations | 268,738 | 157,576 |
| R-squared | 0.008 | 0.011 |
| Business fixed effects | Yes | Yes |

Note: Robust standard errors in parentheses. \*\*\* p-value<0.01, \*\* p-value<0.05, \* p-value<0.1. Source: London Economics’ analysis of IDBR data, BBB Portal Data and HMRC Coronavirus Job Retention Scheme (CJRS) data.

##### Table 51: Estimated impact of the Covid-19 Loan Guarantee Schemes on employment – by region – Secondary analysis of Year 1 impacts

| Variable | BBLS | CBILS/CLBILS |
| --- | --- | --- |
| East / Midlands, post intervention | -0.026\*\*\* (0.005) | -0.059\*\*\* (0.009) |
| London, post intervention | -0.040\*\* (0.010) | -0.068\*\* (0.019) |
| North / Yorkshire, post intervention | -0.041\*\*\* (0.009) | -0.045\*\*\* (0.008) |
| Northern Ireland, post intervention | 0.003 (0.033) | 0.004 (0.015) |
| Scotland, post intervention | -0.080\*\*\* (0.010) | -0.059\*\* (0.015) |
| South, post intervention | -0.042\*\*\* (0.006) | -0.068\*\*\* (0.006) |
| Wales, post intervention | -0.050\*\* (0.013) | -0.095\*\*\* (0.019) |
| East / Midlands, Borrower, post intervention | 0.045\*\*\* (0.006) | 0.086\*\*\* (0.005) |
| London, Borrower, post intervention | 0.057\*\*\* (0.006) | 0.078\*\*\* (0.017) |
| North / Yorkshire, Borrower, post intervention | 0.060\*\* (0.015) | 0.081\*\*\* (0.014) |
| Northern Ireland, Borrower, post intervention | 0.031 (0.025) | 0.008 (0.024) |
| Scotland, Borrower, post intervention | 0.094\*\* (0.022) | 0.053\* (0.022) |
| South, Borrower, post intervention | 0.047\*\*\* (0.003) | 0.099\*\*\* (0.010) |
| Wales, Borrower, post intervention | 0.099\*\*\* (0.017) | 0.162\*\* (0.037) |
| Used CJRS in 2020 | 0.013\*\* (0.004) | 0.018\*\* (0.006) |
| Constant | 1.853\*\*\* (0.003) | 2.875\*\*\* (0.004) |
| Observations | 268,738 | 157,576 |
| R-squared | 0.007 | 0.012 |
| Business fixed effects | Yes | Yes |

Note: Robust standard errors in parentheses. \*\*\* p-value<0.01, \*\* p-value<0.05, \* p-value<0.1. Source: London Economics’ analysis of IDBR data, BBB Portal Data and HMRC Coronavirus Job Retention Scheme (CJRS) data.

Data

This section outlines the data sources as well as the processing and PSM exercises used to construct the datasets as part of this secondary analysis. In particular, the following datasets are discussed:

* Inter-Departmental Business Register (IDBR)
* BBB Portal and Management Information data
* HMRC Coronavirus Job Retention Scheme (CJRS) data

The rest of this section describes these raw datasets in more detail and discusses the processing and PSM exercises leading to the datasets used in the analysis.

*Inter-Departmental Business Register (IDBR)*

The analysis for this exercise is conducted at the enterprise level based on the Inter-Departmental Business Register (IDBR), which contains data on enterprises’ region, sector, turnover, employment, birth date, and closure date, amongst other variables. London Economics was provided with an extract from the IDBR taken in September in each of the years between 2017 and 2022 inclusive. A sample of borrowers is included alongside all businesses within the IDBR that did not borrow under the Covid-19 Loan Guarantee Schemes.

A separate file was provided to London Economics that linked CRNs – used to identify businesses in the BBB portal data and HMRC CJRS data – to enterprise identifiers ('ENTREF’) – used to identify businesses in the IDBR. This is used to link IDBR data to other data sources at the level of the CRN.

There were 43,712 unique enterprises in the borrower dataset, and 262,272 observations at the level of the enterprise-year, of which 243,338 displayed non-missing values for turnover and employment.

There were 2,390,337 unique enterprises in the dataset of non-borrowers, with 14,342,033 observations at the level of the enterprise-year[[176]](#footnote-177), of which 11,206,256 displayed non-missing values for turnover and employment.

*BBB portal data*

The portal data contains data linking facility reference numbers to company registration numbers (CRNs) and the associated Covid-19 Loan Guarantee Scheme (BBLS, CBILS or CLBILS). This data is described in more detail below.

The BBB portal data consisted of 55,312 unique CRNs of borrowers. Borrowers are assigned a unique scheme[[177]](#footnote-178) on the following basis:

* Firstly, when a CRN is associated with just one facility, that facility’s scheme is assigned to that CRN;
* Secondly, where a CRN is associated with multiple facilities, but where all of those facilities are associated with the same scheme, then that scheme is assigned to that CRN;
* Thirdly, where a CRN is associated with multiple facilities, but the schemes associated with the facilities are not all the same, the scheme is assigned in the following order:
  + Where the drawn week is available for each facility associated with a CRN, the scheme of the facility that was drawn first is assigned to that CRN;
  + Where the number of facilities that were repaid for a given scheme was equal to the total number of facilities that were repaid for that CRN (and there is at least one repaid facility) then the CRN was assigned to the scheme that had been repaid;
  + If more than one scheme has a repaid facility, but only one has all facilities repaid, then the CRN was assigned to that scheme;
  + For all remaining unassigned facilities (i.e. for CRNs where facilities under both remaining schemes – BBLS and CBILS – were repaid or neither were), loan amounts were compared. If the total BBLS loan amount associated with that CRN was less than (or equal to) the total CBILS loan amount associated with that CRN, then the CRN was assigned to BBLS. This assumes that these businesses are likely to have refinanced a BBLS loan to obtain a larger amount of funds through the CBILS scheme. For these businesses, the loan that was used to meet their immediate financial needs was the first loan they received, i.e. the BBLS loan.
  + If the total BBLS loan amount associated with that CRN was larger than the total CBILS loan amount associated with that CRN, then the CRN was assigned to CBILS. This assumes that these businesses are likely to have refinanced a CBILS loan using a BBLS loan to obtain more advantageous terms and conditions. For these businesses, the loan that was used to meet their immediate financial needs was the CBILS loan.

Based on these assignment rules, there were 34,478 CRNs associated with BBLS, 20,305 CRNs associated with CBILS, and 529 CRNs associated with CLBILS.

*BBB Management Information*

This analysis also drew on BBB Management Informationwhichprovided informationon the breakdown of the number of businesses that borrowed under each scheme (BBLS, CBILS and CLBILS) by firms’ turnover (in bands). This aggregate data is provided at the level of the turnover band within each scheme.

*HMRC Coronavirus Job Retention Scheme (CJRS) data*

The CJRS data from HMRC contains monthly data from December 2020 to August 2021 on whether businesses participated in the Coronavirus Job Retention Scheme (CJRS) in a given month, at the CRN level. This dataset is used to create a dummy variable indicating whether companies received CJRS support in the financial year 2020-2021. It should be noted that, given CJRS data was not available for every month of that financial year (only from December 2020 onwards), that dummy does not fully capture the extent of uptake of the CJRS by the businesses in the dataset.

This data was linked to the IDBR dataset based on CRN and the file linking CRNs to enterprise identifiers described above.

This dataset contained 776,892 unique CRNs associated with the CJRS either in the financial years 2020-2021 or 2021-2022. 752,111 of these CRNs were associated with the CJRS in 2020-2021.

*Further data processing*

After cleaning the data, matching CRNs to enterprise reference numbers, and merging the IDBR, CJRS and BBB Management Information datasets, the complete dataset contained 2,433,012 unique enterprises, of which 42,772 were unique enterprises associated with one of the Covid-19 Loan Guarantee Schemes. Of these 42,772 enterprises associated with one of the schemes, 24,254 enterprises were associated with BBLS, 18,058 with CBILS, and 460 with CLBILS.

This dataset was used to create two sub-datasets:

* + A sub-dataset comprising of BBLS borrowers and enterprises that were considered appropriate potential matches for an enterprise that borrowed under BBLS. Enterprises that were considered appropriate potential matches for a BBLS borrower were all those enterprises that satisfied the following two conditions:
    - The enterprise’s pre-pandemic turnover that was less than £5m.
    - The enterprise did not borrow under any of the Covid-19 Loan Guarantee schemes (i.e. CBILS/CLBILS borrowers were also excluded from this sub-dataset).
  + A sub-dataset comprising of CBILS and CLBILS borrowers and enterprises that were considered appropriate potential matches for an enterprise that borrowed under CBILS or CLBILS. Enterprises that were considered appropriate potential matches for a CBILS or CLBILS borrower were those enterprises that did not borrow under any of the Covid-19 Loan Guarantee schemes (i.e. BBLS borrowers were also excluded from this sub-dataset).

The BBLS sub-sample contained 2,361,882 unique enterprises, of which 22,856 were unique treated enterprises (all were treated under BBLS). The combined CBILS/CLBILS sub-sample contained 2,408,758 unique enterprises, of which 18,518 were unique treated enterprises (18,058 under CBILS and 460 under CLBILS).

*Creating a dataset of matched borrowers and non-borrowers*

Three similar but distinct PSM exercises were undertaken, namely for

* + the survival analysis
  + the econometric analysis of turnover and employment
  + the analysis to estimate the number of jobs saved by the schemes.

In each case, the PSM was undertaken for both the BBLS sub-sample and the combined CBILS/CLBILS sub-sample.

The PSM for the BBLS survival analysis matched 17,106 treated firms (all were treated under BBLS) to 132,717 control enterprises. The PSM for the combined CBILS/CLBILS survival analysis matched 16,384 treated firms (of which 15,995 were treated under CBILS, and 389 were treated under CLBILS) to 66,149 control enterprises. This PSM requires matched businesses to be active in the first year of the pandemic. This is to ensure that closure rates of firms are calculated with respect to active businesses.

The PSM for the BBLS turnover and employment econometric analysis matched 16,708 treated firms (all were treated under BBLS) to 117,661 control enterprises. The PSM for the combined CBILS/CLBILS turnover and employment econometric analysis matched 16,284 treated firms (of which 15,895 were treated under CBILS, and 389 were treated under CLBILS) to 62,504 control enterprises. This PSM uses a different condition in the matching compared to the PSM implemented for the business survival analysis (i.e. by requiring matched businesses to have non missing turnover and employment data in the first year of the pandemic, rather than for the firm to be active in the first year of the pandemic). This is to ensure that only businesses for which the outcome variables are non-missing are included in the matched sample. The sample for the turnover and employment analysis is smaller than in the case of the survival analysis because the PSM for the turnover and employment analysis also requires that businesses do not permanently close in the first year of the pandemic (note that this condition is relaxed for the estimate of the number of potential (additional) job losses in the absence of the Covid-19 Loan Guarantee Schemes, where a third PSM is used, as described in the next paragraph).

The sample with the largest size is that used to estimate of the number of potential (additional) job losses in the absence of the Covid-19 Loan Guarantee Schemes. The PSM used in this analysis uses a third set of conditions by requiring matched businesses to have non-missing turnover and employment data in the first year of the pandemic (rather than for the firm to be active in the first year of the pandemic) but also includes businesses that may have permanently closed in the first year of the pandemic in the analysis. This is to ensure that this estimate covers both avoided job losses due to business survival, and job losses avoided due to surviving borrower businesses having higher employment than in the absence of the Covid-19 Loan Guarantee Schemes. The PSM for the BBLS estimate matched 17,108 treated firms (all were treated under BBLS) to 132,828 control enterprises. The PSM for the combined CBILS/CLBILS estimate matched 16,385 treated firms (of which 15,996 were treated under CBILS, and 389 were treated under CLBILS) to 66,222 control enterprises.

*Variables used in the Propensity Score Matching*

In the case of turnover, employment, age and growth rates, these variables were coded into bands for the Propensity Score Matching. The bands differed from the bands used in the Year 1 survey analysis because the sample size of the secondary data sets was much larger than the survey data set. This allowed a more disaggregated set of bands for each variable, which was intended to improve the quality of matches between borrowers and non-borrowers.

The variables used in the PSM for the secondary analysis differ from the variables used in the PSM for the Year 1 survey analysis in two further key respects:

* The PSM for the secondary analysis includes data from two consecutive years of one-year pre-pandemic turnover and employment growth rates (which were not available in the Year 1 survey data);
* The PSM for the secondary analysis excludes variables denoting business obstacles that were included in the Year 1 survey analysis but for which no appropriate secondary data was identified.

##### Table 52 : Variables used in the PSM

| Variable | Explanation | Source |
| --- | --- | --- |
| Scheme | Indicates under which Covid-19 Loan Guarantee Scheme borrowers received the loan, and which Covid-19 Loan Guarantee Scheme control businesses were assigned to | BBB portal data |
| Treatment | Indicates whether a business was a borrower under one of the Covid-19 Loan Guarantee Schemes | IDBR |
| Region | Businesses operating in the same part of the UK will be more likely to be similar and experience similar local economic conditions to each other than businesses in different parts of the UK. As a result, it would be expected that the region a business is based in may influence its decision to participate in the Covid-19 Loan Guarantee Schemes.[[178]](#footnote-179) | IDBR |
| Sector | Businesses operating in the same sector will be more likely to face similar challenges and trading conditions.[[179]](#footnote-180) | IDBR |
| Size prior to the pandemic | Businesses of different sizes will have different considerations in terms of the kinds of challenges they face and their response to the pandemic. Two different measures of size were used (number of staff and turnover), measured in the September extract of the IDBR that referred to the last period available that was entirely before the pandemic,[[180]](#footnote-181) respectively for each of turnover and employment.[[181]](#footnote-182) [[182]](#footnote-183) | IDBR |
| Age | More established businesses are likely to be impacted differently than nascent businesses and similarly are likely to have different responses to the adversity of the pandemic. The IDBR includes data on the birthdate of businesses, which was used to calculate business age in 2019.[[183]](#footnote-184) | LE calculation based on the IDBR |
| Growth rates prior to the pandemic | Businesses that are growing at different rates may have different considerations in terms of the kinds of challenges they face and their response to the pandemic. For example, a business experiencing rapid growth prior to the pandemic may be impacted differently than a business that was shrinking prior to the pandemic. For each of the two different measures of business size that were used (employment and turnover), one-year growth rates were calculated for each of the two years immediately preceding the last pre-pandemic year.[[184]](#footnote-185) | LE calculation based on the IDBR |

Source: London Economics’ analysis

*Variables used in the difference-in-differences analysis*

Compared to the Year 1 survey analysis, secondary data sources were not available on the use of VAT deferral or the use of other support apart from participation in the CJRS.[[185]](#footnote-186) Use of other support (apart from CJRS) has therefore not been included as a control variable in the Year 1 secondary analysis. Similarly, secondary data on the protected characteristics of the ownership of businesses in the IDBR was not available, so analysis of the impact of the Covid-19 Loan Guarantee Schemes on the turnover and employment has not been analysed by protected characteristic among business ownership.

The region and sector variables used in the difference-in-difference regression (for the analysis by region and sector) were analysed using the same disaggregation as the Year 1 survey analysis.

##### Table 53 : Variables used in the fixed effects regression

| Variable | Explanation | Source |
| --- | --- | --- |
| Business outcomes (turnover and employment) | These were based on September extracts from the IDBR. The data used related to the last period available to London Economics from the IDBR that was entirely before the pandemic (this is referred to as the ‘pre-pandemic’ or ‘pre-intervention’ period), and the first period predominantly after the onset of the pandemic (this is referred to as the first year of the pandemic, ‘post-pandemic’, ‘post-intervention’ or ‘post-treatment' period).[[186]](#footnote-187) | IDBR |
| Treatment | See Table 52 above | IDBR |
| Region | See Table 52 above | IDBR |
| Sector | See Table 52 above | IDBR |
| Use of the CJRS | Data was included on whether a company took part in the CJRS during the financial year 2020-2021[[187]](#footnote-188) | HMRC CJRS data |

Source: London Economics’ analysis

# Annex 5 – BICS Methodology

The Business Insights and Conditions Survey (BICS)[[188]](#footnote-189) is a voluntary fortnightly survey of businesses. It was set up by the Office for National Statistics in March 2020 in response to the Covid-19 pandemic, aiming to “deliver real-time information to help assess the impact of issues and events affecting the economy and UK businesses”.[[189]](#footnote-190) Users of the BICS include, among others, government departments, devolved administrations as well as business and marketing analysts. It originally asked questions around the impact of the pandemic on turnover, exporting and importing, operational performance and access to finance. As circumstances and the key challenges businesses faced changed throughout the pandemic, questions covered a wider range of issues, such as supply chains, innovation, regulation changes relating to the end of the EU transition period, prices of and access to goods and materials.

The sample size of the BICS was approximately 24,000 businesses for Waves 1 to 16, increasing to around 38,000 from Wave 17 onwards.[[190]](#footnote-191) With a response rate of approximately 25%, there are generally between 6,000 and 10,000 observations per wave.

Weighted estimates are unavailable for Waves 1 to 6. Therefore, it is suggested by the ONS that ‘comparisons between waves cannot be made for Waves 1 to 6.’[[191]](#footnote-192) From Wave 7 onwards, three different weights are provided: weighting by count, weighting by turnover and weighting by employment. During this analysis, weighting by count is used to best ensure that the findings are representative of all businesses in the UK.

Questions asked in the BICS are often added, removed and amended to take into account changing circumstances. As a result, almost all questions are not asked consistently across all waves and questions are often asked on an irregular basis. Therefore, it is difficult to produce comparable analysis across long time series. Questions are generally analysed in this report by taking the mean of the percentage of respondents which answered each response to the question in all waves in which a) the question was asked and b) there is data available on whether the business used a government-backed loan.

Access to government support groupings

Within the section on access to government support (entitled “Use and importance of government support”), businesses are split into three ‘government support groups’: government support including a loan, government support without a government loan and no support. The first group of businesses is referred to as ‘borrowers’ and the latter two as ‘non-borrowers’.

Businesses are placed in the ‘government support including a loan’ category if they answered ‘government-backed accredited loans or finance agreements’ to the following question:

*Has your business received funds from any of the following schemes?*

1. Coronavirus Job Retention Scheme
2. Government-backed accredited loans or finance agreements
3. Not received any funds from these schemes

Businesses are placed in the ‘government support without a loan’ category if they did not answer that they have received ‘government-backed accredited loans or finance agreements’ to the question above, but did answer that they received at least one of the following types of support:

* Business grants funded by the UK government or any devolved government
* Coronavirus Job Retention Scheme
* Business rates holiday
* Defer VAT payments
* HMRC Time to Pay

Businesses are placed in the ‘no support’ category if they did not receive funds from any of the schemes outlined above.

Use of a government loan in other questions

Regarding most topics, the analysis of questions is broken down by whether the business was a borrower (i.e. whether it used a government-backed loan). Three categories are used for whether the business was a borrower: used a loan, did not use a loan and not sure (respondents in this group are dropped from the analysis). For Waves 5 to 16, this category is based on answers to the following question:

*Has your business received funds from any of the following schemes?*

1. Coronavirus Job Retention Scheme
2. Government-backed accredited loans or finance agreements
3. Not received any funds from these schemes

If option b) is ticked, then the business is placed in the borrower category, otherwise the business is placed in the non-borrower category. For Wave 17 onwards, due to changes in the survey, the following question is used:

*Has your business received any government-backed loans or finance agreements during the coronavirus (COVID-19) pandemic?*

1. Yes
2. No
3. Not sure

If option a) is ticked, then the business is placed in the borrower category. If option b) is ticked, then the business is placed in the non-borrower category. Lastly, if option c) is ticked, then the business is placed in the ‘not sure’ group. The ‘not sure’ is not presented in the analysis due to a small sample size.

Waves 1-4 cannot be used for analysis by loan recipient group as the question regarding businesses’ use a government-backed loan does not enter the survey until Wave 5. After Wave 33, the question starts to only be asked in every other wave, so some waves after this point also cannot be used.

# Annex 6 – Product Market Displacement

This annex outlines how the observed measure of market competition was estimated, first by describing the data source used (the Business Structure Database)[[192]](#footnote-193) and then the calculations required to obtain the HHIs. It then shows how the HHIs and the survey questions were mapped to displacement factors used to calculate product market displacement.

Calculating the Herfindahl–Hirschman Index (HHI)

To calculate the HHIs the Business Structure Database (BSD) is used, which provides a snapshot of data from the IDBR. The BSD is released yearly, based on an extract of the IDBR taken in March.[[193]](#footnote-194) With regards to turnover, most data in the IDBR is based on survey data or VAT returns, and is broadly updated annually in September, referring to the preceding calendar year.[[194]](#footnote-195) Therefore, for most businesses, there is likely to be a two-year lag between the year the BSD is released and the reference year of turnover data. For example, the 2021 BSD uses the March 2021 extract of the IDBR, which, in most cases, is likely to use turnover data updated in September 2020 referring to the 2019 calendar year. This two-year lag is also found in the literature.[[195]](#footnote-196) Therefore, turnover from the 2021 BSD is used in this analysis to most accurately calculate HHIs referring to 2019.

The Herfindahl–Hirschman Index (HHI) is used as a measure of sector-level market competition. It is defined as the sum of the squares of the (percentage) market shares of all firms operating in that sector. For example, in a market with four firms of equal size the HHI would be calculated as:

A market with a HHI of less than 1,500 is considered a competitive marketplace, a HHI of 1,500 to 2,500 is moderately concentrated, and a HHI of 2,500 or greater is highly concentrated.

In this context, each firm’s market share is calculated by expressing its turnover as a percentage of the total turnover in the firm’s sector. Sectors are defined using the SIC 2007 classification, at the 5-digit level – the most granular level available within the BSD. HHIs are calculated within the most granular sectors available because firms are more likely to compete within more narrowly defined sectors (based on the SIC 2007 classification). For example, the 2-digit sector ‘specialised construction activities’ contains a number of 5-digit sectors, including ‘painting’ and ‘plumbing, heat and air-conditioning installation’. A painting and a plumbing business are less likely to compete against one another than two plumbing businesses, so calculating the HHIs at the 2-digit level would give an inaccurate estimate of the competition that either firm faces.

However, whilst the HHIs calculated using the BSD are available at the 5-digit SIC sector level, the survey-based measure of market competitiveness used is at the SIC section level. Therefore, an average of the HHIs across all 5-digit sectors within each SIC section is calculated. These averages are weighted based on the distribution of the number of firms across 5-digit sectors.

Measuring product market displacement

Table 54 shows how the HHIs and the responses to the relevant survey questions were mapped to quantitative figures (or ‘displacement factors’). Intuitively, higher displacement factors are mapped to outcomes with more intense competition and/or UK-based competition.

Given there is little evidence in the literature on an appropriate HHI cut-off for assigning a displacement factor of 0% or 25%, two different thresholds were used. Results for product market displacement are therefore presented as a range.

##### Table 54: Adjustments for product market displacement – based on HHI calculations and survey responses

| Question / Calculation | Response / Value | Displacement factor |
| --- | --- | --- |
| Herfindahl–Hirschman Index calculated at the sector-level. | HHI under 1 (or 100) | 100% displacement |
| HHI of at least 1 (or 100) and less than 1,500 | 75% displacement |
| HHI of at least 1,500 and less than 2,500 | 50% displacement |
| HHI of at least 2,500 and less than 10,000 | 25% displacement |
| HHI of 10,000 | 0% displacement |
| Thinking about your business in January 2020, before the Covid-19 outbreak, if your business was to permanently cease trading do you think any of your competitors would take up your sales? | Yes, all of our sales | 100% displacement |
| Yes, some of our sales | 50% displacement |
| No, no-one would take our sales | 0% displacement |
| And would this mainly be competitors based…? | Only in UK | 100% displacement |
| Outside the UK | 0% displacement |
| Both | x% displacement, where x is the share of sales located in the UK |

British Business Bank plc  
Steel City House  
West Street  
Sheffield S1 2GQ

t. +44 (0)114 206 2131

e. info@british-business-bank.co.uk

[british-business-bank.co.uk](http://www.british-business-bank.co.uk)

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www.british-business-bank.co.uk

1. Experian (2023) Experian UK SME Credit Trends Index (January to March 2023) [↑](#footnote-ref-2)
2. Experian (2023) Experian UK SME Credit Trends Index (January to March 2023) [↑](#footnote-ref-3)
3. Specifically, up to December 2021 in the case of the business survival analysis, and the latest completed financial year as of the survey fieldwork (August to October 2022) in the case of the analysis of turnover and employment (see Approach for more detail on reference periods). [↑](#footnote-ref-4)
4. This refers to the counterfactual closure rate, not to be confused with the survival impact which also takes the observed closure rate of borrowers into account. [↑](#footnote-ref-5)
5. The width of the ranges of the estimates reflects the difficulties businesses may have in assessing their likelihood of survival without the loan. [↑](#footnote-ref-6)
6. The Year 1 survey-based survival impacts are measured up to December 2020. [↑](#footnote-ref-7)
7. The Year 2 survey-based survival impacts are measured up to December 2021. [↑](#footnote-ref-8)
8. A statistically significant impact on CBILS/CLBILS borrowers’ turnover was detected, but this was not robust to the inclusion of important control variables (i.e., the impact was no longer statistically significant after these control variables were included in the econometric model). [↑](#footnote-ref-9)
9. In other words, given that non-borrowers that permanently closed are mostly absent from this analysis, any differences between borrowers and non-borrowers due to higher survival rates among borrowers would not be detected in this analysis. Instead, business survival impacts are estimated separately, as described above. [↑](#footnote-ref-10)
10. For more detail on the reference periods used in the secondary analysis of the Year 1 early impact evaluation, see “Approach” at the beginning of this report. [↑](#footnote-ref-11)
11. 5.7% with a 95% confidence interval of 5.0%-6.5% [↑](#footnote-ref-12)
12. 85,262 businesses with a 95% confidence interval of 74,158-96,367 [↑](#footnote-ref-13)
13. 4.4% with a 95% confidence interval of 4.0%-4.7% [↑](#footnote-ref-14)
14. 3,252 businesses with a 95% confidence interval of 2,974-3,530 [↑](#footnote-ref-15)
15. The associated point estimate is 290,713 within an estimated range of 255,721-325,704. The range reflects the level of uncertainty around the schemes’ impact on business closure rates but is not a confidence interval due to the complexity of the estimation method. See Annex 4 for details. [↑](#footnote-ref-16)
16. It should be noted that, due to the way that employment is reported in the IDBR, a business that permanently closed in the first year of the pandemic may show positive employment. Therefore, the impact of avoided business closure on jobs as estimated in this econometric analysis is unlikely to be fully captured. [↑](#footnote-ref-17)
17. Indeed, the counterfactual outcome in the absence of the covid-19 Loan Guarantee Schemes was estimated as the closure rate of a set of non-borrowers that were similar to borrowers based on a set of observable business characteristics. [↑](#footnote-ref-18)
18. Nevertheless, as the BICS analysis is purely descriptive, its results should not be interpreted as the causal impact of government-backed loans, but rather as providing additional context to results from other strands of the analysis. [↑](#footnote-ref-19)
19. Collected by the Office of National Statistics (ONS) and previously known as the Business Impact of Covid-19 Survey (BICS). [↑](#footnote-ref-20)
20. Pages 29-37. [↑](#footnote-ref-21)
21. British Business Bank (2021) Bounce Back Loan Scheme (BBLS). Available at: <https://www.british-business-bank.co.uk/ourpartners/coronavirus-business-interruption-loan-schemes/bounce-back-loans/>; British Business Bank (2021) Coronavirus Business Interruption Loan Schemes and Future Fund. Available at: <https://www.british-business-bank.co.uk/ourpartners/coronavirus-business-interruption-loan-scheme-cbils-2/>. [↑](#footnote-ref-22)
22. Labour productivity, measured as turnover divided by employment, is not included as a business outcome in previous years because employment figures include furloughed staff under the Government’s Coronavirus Job Retention Scheme (CJRS). Indeed, businesses that have reduced their production and furloughed some of their employees will have experienced a reduction in turnover, but their employment may have remained constant (as furloughed workers are still employees). Hence, their labour productivity, as proxied by turnover divided by employment, may appear misleadingly low. The impact of the Covid-19 Loan Guarantee Schemes on that outcome will therefore be estimated for reference year 2022/2023. [↑](#footnote-ref-23)
23. The first year process evaluation findings for the Bounce Back Loan Scheme, Coronavirus Business Interruption Loan Scheme, and Coronavirus Large Business Interruption Loan Scheme are available at: <https://www.british-business-bank.co.uk/wp-content/uploads/2022/06/Evaluation_of_BBLS_CBILS_and_CLBILS___Yr1_Report__accessible_.pdf>. See pages 44-92. [↑](#footnote-ref-24)
24. The data which has been published can be seen at: <https://www.gov.uk/government/publications/covid-19-loan-guarantee-schemes-repayment-data> [↑](#footnote-ref-25)
25. It has not been possible to access data on the number of lender challenges or volume of disputes. [↑](#footnote-ref-26)
26. Figure 5 only includes the value of fully repaid facilities and the remaining outstanding balance. It does not include the value of facilities that have been partially repaid – this data is not published. It should not be concluded that the remaining percentages for each scheme will not be repaid. [↑](#footnote-ref-27)
27. Experian (2023) Experian UK SME Credit Trends Index (January to March 2023) [↑](#footnote-ref-28)
28. The research team have not been able to access objective data on the appropriateness of repayment processes used by lenders. These were assessed in the lender audit, but due to commercial sensitivities, the results from the lender audit were not available to the research team. [↑](#footnote-ref-29)
29. It has not been possible to access objective data on the number of guarantees which have been removed or the number of guarantees which have been discussed and not removed by accredited lenders. [↑](#footnote-ref-30)
30. The assessment of suspected cases of fraud is presented here in terms of monetary value, rather than actual cases. This is due to the research team only accessing the value of fraud for the BBLS. [↑](#footnote-ref-31)
31. It has not been possible to objectively measure the additional impact of this exercise, as it would require a complete list of facilities suspected of fraud identified by lenders, then the complete list of facilities identified by the modelling work to compare the two lists. This centralised data does not exist. [↑](#footnote-ref-32)
32. Information provided by NATIS in October 2023. [↑](#footnote-ref-33)
33. Experian (2023) Experian UK SME Credit Trends Index (January to March 2023) [↑](#footnote-ref-34)
34. There were 954 telephone responses and 7 online responses. [↑](#footnote-ref-35)
35. This process was also followed in the Year 1 impact evaluation. [↑](#footnote-ref-36)
36. Technical details of the primary data collection are provided in Annex 2. [↑](#footnote-ref-37)
37. Businesses that did not know if they experienced challenges or opportunities arising from the pandemic were also screened out. [↑](#footnote-ref-38)
38. Being affected by the Covid-19 pandemic was one of the eligibility criteria of the Covid-19 Loan Guarantee Schemes. [↑](#footnote-ref-39)
39. See Annex 3 for details. [↑](#footnote-ref-40)
40. The use of self-reported data carries limitations – for instance, businesses may not recall precisely their financial situation during the reference period, and may remember it as having been worse or better than it was in practice. [↑](#footnote-ref-41)
41. The 95% confidence interval for the lower bound is 8% to 18% and for the upper bound is 36% to 51%. [↑](#footnote-ref-42)
42. The 95% confidence interval for the lower bound is 3 % to 13% and for the upper bound is 26% to 45%. [↑](#footnote-ref-43)
43. The share of respondents expecting that they would have permanently closed in the absence of funding from BBLS is 29%-88% for businesses with turnover under £50,000, 10%-46% for businesses with turnover between £50,000 and £250,000, 11%-37% for businesses with turnover between £250,000 and £1m, and 0%-14% for businesses with turnover over £1m. The share of respondents expecting that they would have permanently closed in the absence of funding from CBILS/CLBILS is 14%-31% for businesses with turnover under £500,000, 3%-40% for businesses with turnover between £500,000 and £5m, 7%-24% for businesses with turnover between £5m and £25m, and 0%-11% for businesses with turnover over £25m. [↑](#footnote-ref-44)
44. The share of respondents expecting they would have permanently closed in the absence of funding from BBLS is 13%-43% for businesses majority owned by females and 13%-46% for other businesses. [↑](#footnote-ref-45)
45. The share of respondents expecting they would have permanently closed in the absence of funding from CBILS/CLBILS is 4%-26% for businesses majority owned by females and 6%-38% for other businesses. [↑](#footnote-ref-46)
46. The share of respondents expecting they would have permanently closed in the absence of funding from BBLS is 28%-50% for businesses majority owned by ethnic minority individuals and 11%-44% for other businesses. The share of respondents expecting they would have permanently closed in the absence of funding from CBILS/CLBILS is 41%-86% for businesses majority owned by ethnic minority individuals and 4%-31% for other businesses. [↑](#footnote-ref-47)
47. Northern Irish businesses borrowing from BBLS had the lowest counterfactual closure rate (in terms of lower bound) with an estimated counterfactual closure rate of 0%. With regards to CBILS/CLBILS, both Northern Irish and Welsh businesses had the lowest counterfactual closure rate (in terms of lower bound) of 0%. Scottish businesses borrowing from BBLS (20%), and London based businesses borrowing from CBILS/CLBILS (14%) had the highest counterfactual closure rate (in terms of lower bound). In terms of the lower bound, BBLS businesses in the Construction sector had the lowest counterfactual closure rate (8%) and BBLS businesses in the Production sector had the highest counterfactual closure rate (19%). In terms of the lower bound, CBILS/CLBILS businesses in the Business Services sector had the lowest counterfactual closure rate (0%) and CBILS/CLBILS businesses in the Distribution sector had the highest counterfactual closure rate (12%). [↑](#footnote-ref-48)
48. This is based on a total BBLS borrower population of 1,479,362 businesses. [↑](#footnote-ref-49)
49. This is based on a total CBILS/CLBILS borrower population of 73,572 businesses. [↑](#footnote-ref-50)
50. The calculation is explained in more detail in Annex 3. [↑](#footnote-ref-51)
51. Brown, R., and Cowling, M. (2020). *Did you save some cash for a rainy Covid-19 day? The crisis and SMEs.* [↑](#footnote-ref-52)
52. Calabrese, R., Cowling, M., and Liu, W. (2022). *Understand the Dynamics of UK Covid-19 SME Financing.* [↑](#footnote-ref-53)
53. BEIS. (2023). *Business population estimates 2023*. Available at: <https://www.gov.uk/government/collections/business-population-estimates> [↑](#footnote-ref-54)
54. BEIS. (2023). *Business population estimates for the UK and regions 2023: methodology note.* Available at: <https://www.gov.uk/government/statistics/business-population-estimates-2023> [↑](#footnote-ref-55)
55. Office for National Statistics. (2022). *Business* *demography, UK: 2021*. Available at: <https://www.ons.gov.uk/businessindustryandtrade/business/activitysizeandlocation/bulletins/businessdemography/2021> [↑](#footnote-ref-56)
56. Office for National Statistics. (2023). *Business demography, quarterly experimental statistics, UK.* Available at: <https://www.ons.gov.uk/businessindustryandtrade/business/activitysizeandlocation/datasets/businessdemographyquarterlyexperimentalstatisticsuk> [↑](#footnote-ref-57)
57. Indeed, being affected by the Covid-19 pandemic was one of the eligibility criteria of the Covid-19 Loan Guarantee Schemes. [↑](#footnote-ref-58)
58. Table 43 and Table 44 compare the incidence of various characteristics across the borrower and non-borrower samples both before and after PSM, and show that the matching reduced differences across both samples. [↑](#footnote-ref-59)
59. This is because the number of respondents to the survey receiving a loan under CLBILS was insufficient to conduct analysis distinct from CBILS. [↑](#footnote-ref-60)
60. At the 10% level, so the hypothesis that the gap between borrowers and non-borrowers did not change after the introduction of the Covid-19 Loan Guarantee Schemes could not be rejected with 90% confidence. [↑](#footnote-ref-61)
61. This analysis involved introducing interaction terms between these characteristics (sector, region, protected characteristics) and the explanatory variable of interest. [↑](#footnote-ref-62)
62. Other coefficients are also statistically significant at conventional levels (i.e. 10% or lower). However, to account for multiple hypothesis testing, coefficients reported in the main text are significant based on a lower threshold – namely 10% divided by the number of hypotheses being tested. This is known as a Bonferroni correction. In the regressions exploring the impacts by sector, region and protected characteristics, the thresholds for reporting are 2%, 1.4% and 5%. [↑](#footnote-ref-63)
63. ONS. (2022). *Labour Market Overview,* March 2022. [↑](#footnote-ref-64)
64. As with the analysis of the impact of the schemes on turnover, a Bonferroni correction is applied such that results are only mentioned here exploring the impacts by sector, region and protected characteristics if they are significant at the 2%, 1.4% and 5% levels respectively. [↑](#footnote-ref-65)
65. More specifically, the Variance Inflation Factor of the coefficient of interest is more than 10 when sector-level CJRS funding is included in both the turnover and employment models, which is indicative of multicollinearity concerns. [↑](#footnote-ref-66)
66. The possibility of exploring the wider impacts of BBLS, CBILS and CLBILS separately was considered however this was not feasible due to the high correlation between sector-level funding from these schemes. [↑](#footnote-ref-67)
67. The correlation between the variables related to the average sector (SIC-1) level of funding per firm received under each scheme and the CJRS are all at least 0.78. [↑](#footnote-ref-68)
68. The IDBR is database of around 2.7 million businesses primarily compiled from VAT and PAYE records from HMRC. [↑](#footnote-ref-69)
69. In Annex 4, the incidence of various characteristics across the borrower and non-borrower samples is compared both before and after PSM, showing that the matching reduced differences across both samples. [↑](#footnote-ref-70)
70. See Annex 4 for more methodological detail on the secondary analysis of the survival analysis, and a discussion of the data sources used. [↑](#footnote-ref-71)
71. In the case of the BBLS, the estimated counterfactual closure rate is 13% for businesses with turnover under £50,000, 11% for businesses with turnover between £50,000 and £100,000, 10% for businesses with turnover between £100,000 and £250,000, 7% for businesses with turnover between £250,000 and £500,000, 6% for businesses with turnover between £500,000 and £1m, and 4% for businesses with turnover between £1m and £5m. Around 1% of firms included in the borrower population were firms with turnover higher than £5m. These outliers (as well as BBLS non-borrowers with turnover over £5m) have been excluded from the BBLS analysis.

    In the case of the CBILS/CLBILS, the estimated counterfactual closure rate is 13% for businesses with turnover under £50,000, 13% for businesses with turnover between £50,000 and £100,000, 8% for businesses with turnover between £100,000 and £250,000, 7% for businesses with turnover between £250,000 and £500,000, 5% for businesses with turnover between £500,000 and £1m, 4% for businesses with turnover between £1m and £5m, 2% for businesses with turnover between £5m and £25m, 1% for businesses with turnover between £25m and £50m, 1% for businesses with turnover between £50m and £200m, and 0% for businesses with turnover over £200m. [↑](#footnote-ref-72)
72. These averages are weighted, taking into account both the weightings assigned in the PSM, and the weights assigned to firms within each defined turnover band (based on the distribution of borrowers across turnover bands in BBB Management Information data). [↑](#footnote-ref-73)
73. The estimated closure rate among BBLS borrowers is 6% for businesses with turnover under £50,000, 6% for businesses with turnover between £50,000 and £100,000, 4% for businesses with turnover between £100,000 and £250,000, 2% for businesses with turnover between £250,000 and £500,000, 1% for businesses with turnover between £500,000 and £1m, and 1% for businesses with turnover between £1m and £5m. Around 1% of firms included in the borrower population were firms with turnover higher than £5m. These outliers have been excluded from the analysis. The estimated closure rate among CBILS/CLBILS borrowers is 4% for businesses with turnover under £50,000, 3% for businesses with turnover between £50,000 and £100,000, 2% for businesses with turnover between £100,000 and £250,000, and close to 0% for businesses with turnover over £250,000. [↑](#footnote-ref-74)
74. 5.7% with a 95% confidence interval of 5.0%-6.5%. [↑](#footnote-ref-75)
75. 85,262 businesses with a 95% confidence interval of 74,158-96,367 [↑](#footnote-ref-76)
76. This is based on a total BBLS borrower population (with 2019 turnover less than £5m) of 1,488,303 businesses. [↑](#footnote-ref-77)
77. 4.4% with a 95% confidence interval of 4.0%-4.7%. [↑](#footnote-ref-78)
78. 3,252 businesses with a 95% confidence interval of 2,974-3,530 [↑](#footnote-ref-79)
79. This is based on a total CBILS/CLBILS borrower population of 74,636 businesses. [↑](#footnote-ref-80)
80. The associated point estimate is 291,000. This range is not a technically defined confidence interval. It represents an estimate of the range of impact of the schemes on jobs based on the schemes’ impact on business closure rates. The width of the range (relative to the point estimate) is defined to be the same as that of the 95% confidence interval associated with the impact of the schemes on business closure rates. For instance, the 95% confidence interval in the case of the BBLS is defined as +/- 13% of the point estimate. Therefore, the lower (upper) bound of the range for the impact of the BBLS on jobs is defined to be 13% below (above) the point estimate. The range is calculated in a similar manner for the CBILS/CLBILS schemes. The overall range is obtained by adding the respective lower bounds (upper bounds) of the ranges for the BBLS and CBILS/CLBILS schemes. [↑](#footnote-ref-81)
81. This estimate is the sum of the separate estimates for the BBLS scheme (227,000) and the CBILS/CLBILS schemes (64,000). These estimates were calculated by turnover band using average pre-pandemic employment among the sample of borrowers in the IDBR, the total number of borrowers in BBB Management Information data, and the difference between the share of pre-pandemic employment among non-borrowers that permanently closed in by March 2021, and the share of pre-pandemic employment among borrowers that permanently closed by March 2021. This calculation is explained in more detail in Annex 4. [↑](#footnote-ref-82)
82. See Annex 4 for a full breakdown of the regional and sectoral disaggregation. [↑](#footnote-ref-83)
83. For more detail, see British Business Bank (2022) *Evaluation of the Bounce Back Loan Scheme, Coronavirus Business Interruption Loan Scheme, and Coronavirus Large Business Interruption Loan Scheme: Process evaluation and early impact assessment*, June 2022. [↑](#footnote-ref-84)
84. See Annex 4 for more methodological detail on the secondary analysis exercise. [↑](#footnote-ref-85)
85. In this example, the difference between treatment and control businesses is negative (as treated businesses have lower outcomes than non-treated businesses), but, because the pre-treatment difference is more negative than the post-treatment difference, the impact of the intervention is positive: the margin of outperformance of non-treated businesses was reduced by the intervention. [↑](#footnote-ref-86)
86. This is to allow for comparability with the Year 1 survey analysis. [↑](#footnote-ref-87)
87. Usually, DiD models would also include a variable indicating whether businesses are borrowers – this would denote the estimate of pre-intervention differences between borrowers and non-borrowers. However, these differences are accounted for by the business-level fixed effects, so it is not included in the estimation. See Annex 4 for further details on business-level fixed effects. [↑](#footnote-ref-88)
88. Other support could have included business grants funded by the UK or any devolved government; business rates holidays, or HMRC Time to Pay (among others). [↑](#footnote-ref-89)
89. In other words, the hypothesis that the gap between borrowers and non-borrowers did not change after the introduction of the Covid-19 Loan Guarantee Scheme can be rejected with sufficient confidence. In this case, a ‘sufficient’ level of confidence is indicated by the fact that, with 99% probability, the coefficient estimates are not different from zero simply due to chance. [↑](#footnote-ref-90)
90. Propensity score matching is used to ensure that the characteristics of borrowers and non-borrowers in the sample are similar, but this is not done for CJRS users and businesses that did not use CJRS. As a result, the CJRS coefficient should not be interpreted causally. [↑](#footnote-ref-91)
91. See Annex 4. Given that the dependent variable is expressed in logarithmic form, the percentage change in turnover associated with the variable “Used CJRS in 2020” taking the value of 1 is approximately equal to , where is the regression coefficient of that variable. [↑](#footnote-ref-92)
92. This analysis involved introducing interaction terms between the characteristics (sector, region) and the explanatory variables of interest. [↑](#footnote-ref-93)
93. As reported in Annex 4, some of these coefficients listed as insignificant are statistically significant at conventional levels (i.e. 10% or lower). However, to account for multiple hypothesis testing, coefficients reported in the main text are significant based on a lower threshold – namely 10%, divided by the number of hypotheses being tested (Bonferroni correction). In the regressions exploring impacts by sector and region, the thresholds for reporting are respectively 2% and 1.4%. [↑](#footnote-ref-94)
94. In other words, the hypothesis that the gap between borrowers and non-borrowers did not change after the introduction of the Covid-19 Loan Guarantee Scheme can be rejected with sufficient confidence. In this case, a ‘sufficient’ level of confidence is indicated by the fact that, with 99% probability, the coefficient estimates are not different from zero simply due to chance. [↑](#footnote-ref-95)
95. See Annex 4. Given that the dependent variable is expressed in logarithmic form, the percentage change in turnover associated with the variable “Used CJRS in 2020” taking the value of 1 is approximately equal to , where is the regression coefficient of that variable. [↑](#footnote-ref-96)
96. As reported in Annex 4, some of these coefficients listed as insignificant are statistically significant at conventional levels (i.e. 10% or lower). However, to account for multiple hypothesis testing, coefficients reported in the main text are significant based on a lower threshold – namely 10%, divided by the number of hypotheses being tested (Bonferroni correction). In the regressions exploring impacts by sector and region, the thresholds for reporting are respectively 2% and 1.4%. [↑](#footnote-ref-97)
97. For further details of the methodology, see Annex 4. [↑](#footnote-ref-98)
98. It should be noted that, due to the way that employment is reported in the IDBR (for example when based on PAYE, employment is usually the average of the latest four quarters of returns), a business that permanently closed in the first year of the pandemic may show positive employment. Therefore, the impact of avoided business closure on jobs as captured in this econometric analysis is unlikely to be fully captured (as control businesses that permanently closed in the first year of the pandemic – against which treated businesses are compared – may show positive employment in the first year of the pandemic). [↑](#footnote-ref-99)
99. In other words, the hypothesis that the gap between borrowers and non-borrowers did not change after the introduction of the Covid-19 Loan Guarantee Scheme can be rejected with sufficient confidence. In this case, a ‘sufficient’ level of confidence is indicated by the fact that, with 99% probability, the coefficient estimates are not different from zero simply due to chance. [↑](#footnote-ref-100)
100. Given that the dependent variable is expressed in logarithmic form, the percentage change in turnover associated with the variable “Borrower, post-intervention” taking the value of 1 is approximately equal to , where is the regression coefficient of that variable. [↑](#footnote-ref-101)
101. This estimate must be considered as separate to, rather than additional to the estimated 291,000 pre-pandemic jobs among borrowers that would have permanently closed by March 2021 in the absence of the Covid-19 Loan Guarantee Schemes. This calculation is explained in more detail in Annex 4. [↑](#footnote-ref-102)
102. It is not possible to separately estimate (a) job losses prevented due to avoided business closures and (b) job losses avoided due to surviving businesses having higher employment than in the absence of the schemes. Nevertheless, this distinction is conceptually useful as it highlights that the schemes affected employment in two different ways. [↑](#footnote-ref-103)
103. Indeed, higher displacement factors are mapped to more competitive outcomes. [↑](#footnote-ref-104)
104. The observed measure of market competition is calculated using the Business Structure Database (<https://doi.org/10.57906/7kh0-0910>), which is published by the ONS. [↑](#footnote-ref-105)
105. The alternative measure of product market displacement is presented as a range, which represents different cut-offs chosen when mapping the HHIs to percentage values. Further details are provided in Annex 6. [↑](#footnote-ref-106)
106. Any comparisons between the current displacement estimates and that from the EFG evaluation should be

     made with caution, given differences in methodologies, and general economic context. London Economics (2017). Economic impact evaluation of the Enterprise Finance Guarantee (EFG) scheme. [↑](#footnote-ref-107)
107. Data from the Business Insights and Conditions Survey (<https://doi.org/10.57906/rar8-nk26>) were accessed through the Secure Research Service, part of the Office for National Statistics. [↑](#footnote-ref-108)
108. In this section, borrowers refer to businesses that used a government-backed loan. [↑](#footnote-ref-109)
109. Indeed, non-borrowers are not selected to be similar to borrowers as was done in the IDBR analysis presented earlier in the report. [↑](#footnote-ref-110)
110. Questions are generally analysed in this report by taking the average (mean) of the percentage of respondents which answered each response to the question in all waves in which a) the question was asked and b) there is data available on whether the business used a government-backed loan. See Annex 5 for further methodological information. [↑](#footnote-ref-111)
111. For instance, the difference between the percentage of borrowers and non-borrowers that indicated that government support helped them continue trading could be due to other factors than the use (or not) of government-backed loans. For instance, businesses that did not access government-backed loans may have had a business model less likely to be disrupted by the pandemic, such that government support may not have been as important in helping them continue trading. [↑](#footnote-ref-112)
112. This statistic refers to the question ‘Was your business planning to expand its business before the coronavirus (COVID-19) pandemic?’. It shows the mean of the percentage of respondents which answered ‘Yes’, taken across waves 12, 13 and 15, which were conducted between and refer to the period between August and October 2020. Respondents which answered ‘not sure’ are not included in the percentages presented. [↑](#footnote-ref-113)
113. This analysis is based on the question ‘How does your business's capital expenditure for the last two weeks compare to normal expectations for this time of year?’, focusing on waves 25 (referring to February 2021) and 48 (referring to December 2021). Respondents which answered ‘not sure’ or ‘not applicable’ are not included in the percentages presented. [↑](#footnote-ref-114)
114. <https://www.bankofengland.co.uk/speech/2021/march/michael-saunders-bank-hosted-speech-supply-and-demand-during-and-after-the-pandemic>. [↑](#footnote-ref-115)
115. This is sample where the number was in a valid format, but which turned out to be wrong numbers, fax numbers or disconnected. [↑](#footnote-ref-116)
116. This includes sample where there was communication difficulty making it impossible to carry out the survey (either a bad line, or language difficulty), as well as numbers called multiple times over fieldwork without ever being picked up. [↑](#footnote-ref-117)
117. This includes sample that had a working telephone number but where the respondent was unreachable or unavailable for an interview during the fieldwork period, so eligibility could not be assessed. [↑](#footnote-ref-118)
118. This includes non-borrowers who did not face any financial challenges or those who obtained finance through one of the schemes/multiple schemes or non-borrowers with a turnover under £8,000. [↑](#footnote-ref-119)
119. This is sample where the number was in a valid format, but which turned out to be wrong numbers, fax numbers or disconnected. [↑](#footnote-ref-120)
120. This includes sample where there was communication difficulty making it impossible to carry out the survey (either a bad line, or language difficulty), as well as numbers called multiple times over fieldwork without ever being picked up. [↑](#footnote-ref-121)
121. This includes sample that had a working telephone number but where the respondent was unreachable or unavailable for an interview during the fieldwork period, so eligibility could not be assessed. [↑](#footnote-ref-122)
122. This includes non-borrowers who did not face any financial challenges or those who obtained finance through one of the schemes/multiple schemes or non-borrowers with a turnover under £8,000. [↑](#footnote-ref-123)
123. The cooperation rate has been calculated as: (completed interviews + incomplete interviews) / (completed interviews + incomplete interviews + refusals). This is the proportion who took part in the survey, among those who were reached and screened. [↑](#footnote-ref-124)
124. Figures on total number of loans taken from government figures here: <https://www.gov.uk/government/collections/hm-treasury-coronavirus-covid-19-business-loan-scheme-statistics#Coronavirus-Business-Interruption-Loan-Scheme>

     Figures on sector and turnover of loan recipients are only available from Jan 2021 and taken from here: <https://www.british-business-bank.co.uk/press-release/coronavirus-loan-schemes-continue-to-support-businesses-evenly-across-the-uk-new-analysis-shows/> The weighting uses the new totals and assumes that the population turnover / region / sector distribution did not change much between Jan 2021 and March 2021. We feel this is a reasonable assumption as the bulk of the loans were agreed earlier in the scheme. [↑](#footnote-ref-125)
125. There may be some discrepancies due to the BBB figures being the number of facilities. [↑](#footnote-ref-126)
126. For example, 8% of BBLS loan volume is estimated to be fraudulent, whereas ‘immaterial levels of fraud and error’ are found in both CBILS and CLBILS. BEIS (2022) *Annual Report and Accounts 2021-2022.* [↑](#footnote-ref-127)
127. BEIS (2022) *Annual Report and Accounts 2021-2022.* [↑](#footnote-ref-128)
128. An introduction to PSM can be found in Caliendo, M., & Kopeinig, S. (2008). Some practical guidance for the implementation of propensity score matching. *Journal of economic surveys*, 22(1), 31-72. [↑](#footnote-ref-129)
129. The combined effect of the calliper and the restrictions on the propensity scores of the borrowers and the extent to which the turnover or employment data is populated is to exclude 12 and 8 borrowers for the turnover and employment BBLS models respectively and 19 and 17 borrowers from the turnover and employment CBILS/CLBILS models respectively. [↑](#footnote-ref-130)
130. Ideally, the treated and control samples would have been identical before the pandemic. However, given that is not possible to observe all relevant characteristics and incorporate these into the PSM process and because the analysis is based on a limited sample size, it is possible that differences between the samples remain after the PSM. [↑](#footnote-ref-131)
131. From this net effect, and as when considering a single coefficient, the percentage change is calculating by taking the exponential and subtracting 1. [↑](#footnote-ref-132)
132. The log transformation is widely used in the literature when studying these types of variables as the transformed distributions of these variables are better behaved (for example when the maxima have less extreme values). [↑](#footnote-ref-133)
133. Based on the number of businesses before the pandemic. [↑](#footnote-ref-134)
134. Based on the number of businesses before the pandemic. [↑](#footnote-ref-135)
135. A variable indicating the value of support (per firm, both including and excluding CJRS) flowing to other sectors was also included in alternative specifications and the effect on the magnitude and significance of the key coefficient of interest. The possibility of including separate variables for each scheme was considered however not possible due to the high correlation at the sector level between BBLS, CBILS, CLBILS and CJRS support. [↑](#footnote-ref-136)
136. The possible values for this variable were Primary/Manufacturing (SIC section A, B, C, D and E), Construction (SIC section F), Distribution (SIC section G, H, and I), Business Services (J, K, L, M, N) and Other Services (P, Q, R, S). [↑](#footnote-ref-137)
137. To allow for the possibility that the relationship between the Treatment and size is not strictly increasing or decreasing, these variables were coded into bands for the Propensity Score Matching. For the number of staff, the bands were 1, 2-4, 5-9, 10-24, 25-49, 50-249, 250-999, 1,000-2,499, 2,500-4,999 and 5000 or more. For turnover, the bands were less than £50,000, at least £50,000 but less than £100,000, at least £100,000 but less than £250,000, at least £250,000 but less than £500,000, at least £500,000 but less than £1 million, at least £1 million but less than £5 million, at least £5 million but less than £10 million, at least £10 million but less than £25 million, at least £25 million but less than £45 million, at least £45 million but less than £100 million, at least £100 million but not more than £500 million and more than £500 million. [↑](#footnote-ref-138)
138. It was specified that this referred to all ownerships and legal statuses, the acquiring enterprise in the case of acquisition and the largest enterprise as measured by employment in the case of a merger. [↑](#footnote-ref-139)
139. Responses were recorded in bands of Less than 1 year, 1 year, 2 years, 3 years, 4 years, 5 years, 6-9 years, 10-15 years, 16-20 years, and more than 20 years. [↑](#footnote-ref-140)
140. This indicator is also likely to capture businesses’ exposure to Brexit, thereby minimizing the risk that results may be driven by exit from the European Union. [↑](#footnote-ref-141)
141. In order to reduce the likelihood of outliers and possible misreported values influencing the results, some observations were excluded from the analysis. In the BBLS model, businesses reporting at least 10 million in turnover in either year were not included in the analysis (such businesses accounted for approximately 1 percent of observations). Businesses were also excluded from the CBILS and CLBILS analysis on the basis of turnover. Based on BBB management information, CBILS borrowers or controls with pre-pandemic turnover more than 50 million were excluded and CLBILS borrowers or controls with pre-pandemic turnover of less than 25 million were excluded. Additionally, CBILS borrowers or controls with over 200 million in turnover in their latest financial year and CLBILS borrowers or controls with less than 1 million in turnover in their latest financial year were excluded. [↑](#footnote-ref-142)
142. Staff numbers were provided for the end of the relevant years. [↑](#footnote-ref-143)
143. <https://www.gov.uk/government/collections/business-population-estimates> [↑](#footnote-ref-144)
144. Decision Maker Panel survey – 2021 Q4. Available at: <https://www.bankofengland.co.uk/agents-summary/2021/2021-q4/latest-results-from-the-decision-maker-panel-survey-2021-q4>. [↑](#footnote-ref-145)
145. <https://www.gov.uk/guidance/claim-for-wage-costs-through-the-coronavirus-job-retention-scheme> [↑](#footnote-ref-146)
146. Propensity score matching is implemented to ensure that the characteristics of borrowers and non-borrowers in the sample are similar, but this is not done for CJRS users and businesses that did not use CJRS. As a result, the CJRS coefficient should not be interpreted causally. [↑](#footnote-ref-147)
147. Given that the dependent variable is expressed in logarithmic form, the percentage change in turnover associated with the variable “Used CJRS” taking the value of 1 is approximately equal to , where is the regression coefficient of that variable. [↑](#footnote-ref-148)
148. Given that the dependent variable is expressed in logarithmic form, the percentage change in employment associated with the variable “Used CJRS” taking the value of 1 is approximately equal to , where is the regression coefficient of that variable. [↑](#footnote-ref-149)
149. Given that the dependent variable is expressed in logarithmic form, the percentage change in employment associated with the variable “Used VAT Deferral” taking the value of 1 is approximately equal to , where is the regression coefficient of that variable. [↑](#footnote-ref-150)
150. Businesses defined as having majority female (or ethnic minority) representation are sole traders run by females (ethnic minority individuals) and other businesses which are majority owned by women (ethnic minority individuals). [↑](#footnote-ref-151)
151. Businesses defined as having majority female (or ethnic minority) representation are sole traders run by females (ethnic minority individuals) and other businesses which are majority owned by women (ethnic minority individuals). [↑](#footnote-ref-152)
152. An introduction to PSM can be found in Caliendo, M., & Kopeinig, S. (2008). Some practical guidance for the implementation of propensity score matching. *Journal of economic surveys*, 22(1), 31-72. [↑](#footnote-ref-153)
153. Specifically, if any September extract of the IDBR from 2017 to 2022 (inclusive) recorded a deathdate associated with a given enterprise between 1st April 2020 and 31st March 2021, this was recorded as a company closure for the purposes of this analysis.

     A business is removed from the IDBR if information from HMRC, ONS business surveys, Companies House or the Insolvency Service indicates that the business is no longer active. The date that a business is removed from the IDBR is recorded in the “deathdate” variable. If a company is removed from the Companies House active register, the IDBR uses that as the closure date. In other cases, a year of no VAT or PAYE activity will have a business marked as dead. Sometime a business recorded as active at Companies House may be assigned a “deathdate” on the IDBR if other sources of information indicate a lack of recent activity.

     Due to Covid-19, changes relating to Companies House dissolutions mean that, for businesses that ceased trading in 2020 or 2021, the lag between the cessation of trading and this being recorded on the IDBR will grow. [↑](#footnote-ref-154)
154. Strictly speaking, the range of propensity scores is slightly larger than the range between the lowest and highest propensity scores of non-borrowers. Indeed, the range is extended by allowing borrowers with a propensity score of within a small constant (0.00001) below the lowest propensity score of non-borrowers or above the largest propensity score of non-borrowers to be matched. This constant is chosen to be arbitrarily small. This approach avoids the exclusion of businesses that are “tied” in propensity score with the lowest/highest non-borrower. [↑](#footnote-ref-155)
155. The combined effect of the calliper, the restriction on the propensity scores of the borrowers, and the matching to only active firms is to exclude 1 borrower from the main BBLS sample and 1 borrower from the main CBILS/CLBILS sample. [↑](#footnote-ref-156)
156. Specifically, two consecutive years of one-year pre-pandemic growth rates. The inclusion of two one-year growth rates in the PSM means that firms that do not have data for the three years prior to the pandemic are not included in the analysis. The results may therefore not be representative of businesses that do not have three years of turnover and employment history prior to the pandemic. [↑](#footnote-ref-157)
157. Indeed, based on private sector Business Population Estimates, companies had an average turnover of £2.0m at the start of 2020 whereas ordinary partnerships and sole proprietorships respectively had average turnover of £0.2m and £0.1m. BEIS (2020) *Business Population Estimates for the UK and Regions 2020*. [Online] Available at: <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/922793/BPE__2020_detailed_tables.xlsx>. [↑](#footnote-ref-158)
158. The number of firms in each turnover band was obtained from BBB Management Information data. [↑](#footnote-ref-159)
159. With a 95% confidence interval of 5.0%-6.5%. [↑](#footnote-ref-160)
160. With a 95% confidence interval of 4.0%-4.7%. [↑](#footnote-ref-161)
161. A point estimate of 226,560 within a range of 197,054-256,066. Due to the complexity of the estimation method, this range is not a confidence interval but reflects the uncertainty around the schemes’ impact on business closure rates. More specifically, the width of the range (relative to the point estimate) is defined to be the same as that of the 95% confidence interval associated with the impact of the schemes on business closure rates. For instance, the 95% confidence interval in the case of the BBLS is defined as +/- 13% of the point estimate. Therefore, the lower (upper) bound of the range for the impact of the BBLS on jobs is defined to be 13% below (above) the point estimate. The range is calculated in a similar manner for the CBILS/CLBILS schemes. [↑](#footnote-ref-162)
162. A point estimate of 64,153 within a range of 58,667-69,638 [↑](#footnote-ref-163)
163. This approach implicitly assumes that the distribution of borrowers’ turnover bands does not change across sectors. [↑](#footnote-ref-164)
164. This approach implicitly assumes that the distribution of borrowers’ turnover bands does not change across regions. [↑](#footnote-ref-165)
165. An introduction to PSM can be found in Caliendo, M., & Kopeinig, S. (2008). Some practical guidance for the implementation of propensity score matching. *Journal of economic surveys*, 22(1), 31-72. [↑](#footnote-ref-166)
166. An introduction to difference-in-differences can be found in Fredriksson, A., & Oliviera, G. (2019). Impact evaluation using Difference-in-Differences. *RAUSP Management Journal*, 55(4), 519-532. [↑](#footnote-ref-167)
167. The loosening of this restriction expands the sample size by less than 0.1% in each case. See Annex 4 for further details. [↑](#footnote-ref-168)
168. Ideally, the treated and control samples would be similar to the extent that their turnover and employment before the pandemic would be identical. However, given that it is not possible to observe all relevant characteristics and incorporate these into the PSM, it is possible that differences in outcomes remain between both groups even after the matching. [↑](#footnote-ref-169)
169. To deal with the problem of zeros in the dependent variable, the log(y+1) transformation was implemented. The need for this transformation arises because log(0) is undefined. The choice of the constant 1 is discretionary and may arbitrarily bias the estimates and their standard errors. However, the log(y+1) transformation is considered to be the most popular solution to the problem of zeros in the academic literature. For a discussion of this issue, see Bellégo, Benatia and Pape (2022). Dealing with Logs and Zeros in Regression Models, Working Papers 2022-08, Center for Research in Economics and Statistics. [↑](#footnote-ref-170)
170. Given that pre-pandemic turnover and employment is used in the PSM, it must not be influenced by the treatment (i.e. participation in the Covid-19 Loan Guarantee Schemes). Therefore pre-pandemic turnover and employment must refer to a period entirely before the pandemic. [↑](#footnote-ref-171)
171. Specifically, given lags between the time at which the IDBR is updated and the reference period of the data, the September 2020 extract was used for pre-pandemic turnover data, while the September 2019 extract was used for pre-pandemic employment data. The September 2021 extract was used for post-pandemic turnover and employment data.

     Different extracts are used for pre-pandemic turnover and employment data because of the need to cover a period entirely before the pandemic, and the fact that turnover and employment data in a given extract refer to different periods due to differences in data sources. The post-pandemic period was chosen as the first period that primarily refers to post pandemic data.

     Information on the data sources and reference periods of turnover and employment data in the IDBR was gathered from internal BEIS documentation, discussions with BEIS and the ONS, as well as documentation available online (see, for instance, ONS (2006) *Business Structure Database User Guide*, available at <http://doc.ukdataservice.ac.uk/doc/6697/mrdoc/pdf/6697_user_guide.pdf>). [↑](#footnote-ref-172)
172. It should be noted that the magnitude of growth rates is also likely to be associated with size, though the PSM regression specification also controls for size. [↑](#footnote-ref-173)
173. In addition, the variables included in the main regressions were included – namely a time dummy for the first year of the pandemic, an interaction between that dummy and the treatment indicator, and an indicator for CJRS use. Firm fixed effects were also used. [↑](#footnote-ref-174)
174. The possible values for the sector variable on the basis of which standard errors were clustered were Primary/Manufacturing (SIC section A, B, C, D and E), Construction (SIC section F), Distribution (SIC section G, H, and I), Business Services (J, K, L, M, N) and Other Services (P, Q, R, S). [↑](#footnote-ref-175)
175. Actual post-pandemic employment is equal to potential post-pandemic employment in the absence of the Covid-19 Loan Guarantee Schemes plus any changes in employment that occurred as a result of the Covid-19 Loan Guarantee Schemes. As the change in employment due to the Loan Guarantee Schemes is equal to potential employment multiplied by , actual post-pandemic employment is equal to potential post-pandemic employment multiplied by , or multiplied by . Therefore, potential post-pandemic employment in the absence of the Covid-19 Loan Guarantee Schemes is obtained by dividing estimated actual post-pandemic employment by [↑](#footnote-ref-176)
176. There were 11 duplicate observations within the September 2019 extract. These were removed in the data cleaning. [↑](#footnote-ref-177)
177. Some businesses had facilities under both the BBLS and CBILS schemes. Indeed, it was possible for businesses to use a BBLS facility to refinance a CBILS facility in full, or to take out a CBILS facility having previously repaid a BBLS facility. [↑](#footnote-ref-178)
178. In the Year 1 analysis, the possible values for this variable were East / Midlands, London, North / Yorkshire, Northern Ireland, Scotland, South, and Wales. In the secondary analysis exercise, the sample size of the secondary data was much larger the Year 1 survey data sample size. The values for this variable used in the PSM were at a more disaggregated level in order to improve the potential quality of matches. The regions used for the PSM in the secondary analysis were East Midlands, East of England, West Midlands, North East, North West, Yorkshire and The Humber, South East, South West, London, Northern Ireland, Scotland, and Wales. [↑](#footnote-ref-179)
179. In the Year 1 analysis, the possible values for this variable were Primary/Manufacturing (SIC section A, B, C, D and E), Construction (SIC section F), Distribution (SIC section G, H, and I), Business Services (J, K, L, M, N) and Other Services (P, Q, R, S). In the secondary analysis, the values for this variable used in the PSM were at a more disaggregated level in order to improve the potential quality of matches. The Year 1 secondary analysis sectoral disaggregation used in the PSM was therefore at the level of each of the SIC sections A through to U separately. [↑](#footnote-ref-180)
180. Turnover or employment must not be influenced by the treatment (i.e. participation in the Covid-19 Loan Guarantee Schemes). Therefore pre-pandemic turnover and employment must refer to a period entirely before the pandemic. [↑](#footnote-ref-181)
181. To allow for the possibility that the relationship between the Treatment and size is not strictly increasing or decreasing, these variables were coded into bands for the Propensity Score Matching. For employment, the bands were 1, 2-3, 4-5, 6-7, 8-9, 10-14, 15-24, 25-49, 50-249 and 250 or more. For turnover, the bands were less than £25,000, at least £25,000 but less than £50,000, at least £50,000 but less than £75,000, at least £75,000 but less than £100,000, at least £100,000 but less than £125,000, at least £125,000 but less than £150,000, at least £150,000 but less than £175,000, at least £175,000 but less than £200,000, at least £200,000 but less than £250,000, at least £250,000 but less than £350,000, at least £350,000 but less than £500,000, at least £500,000 but less than £1 million, at least £1 million but less than £5 million, at least £5 million but less than £25 million, at least £25 million but less than £100 million, and more than £100 million. [↑](#footnote-ref-182)
182. Turnover data in the IDBR is based on a set of priority rules, prioritising (in order) data from the Annual Business Survey (ABS), VAT returns and then imputation from PAYE data. In the majority of cases, ABS and VAT data refers to the preceding calendar year and is typically uploaded annually in September of each year. The September extract of the IDBR should therefore refer to turnover in the previous calendar year for the majority of records based on the ABS or VAT returns (the bulk of turnover data is based on the ABS or VAT returns).

     Employment data in the IDBR is based on a set of priority rules, prioritising (in order) data from the Business Registers Employment Survey (BRES), the Short Term Employment Survey (STES), PAYE data, imputation from VAT, and imputation from other sources. BRES data is brought onto the IDBR on a monthly basis and refers to mid-September, with other sources updated quarterly, annually and at other intervals (for example PAYE employment is usually the average of the latest four quarters of returns). In many cases, the September extract of the IDBR should therefore refer to employment in September of the previous year (in the case of records based on the BRES) or the four quarters from July of the previous year to June of the extract year (assuming a one-quarter lag).

     Given lags between the time at which the IDBR is updated and the reference period of the data, the September 2020 extract was used for pre-pandemic turnover data, while the September 2019 extract was used for pre-pandemic employment data. Different extracts are used for pre-pandemic turnover and employment data because of the need to cover a period entirely before the pandemic, and the fact that turnover and employment data in a given extract refer to different periods due to differences in data sources. Information on the data sources and reference periods of turnover and employment data in the IDBR was gathered from internal BEIS documentation, discussions with BEIS and the ONS, as well as documentation available online (see, for instance, ONS (2006) Business Structure Database User Guide, available at <http://doc.ukdataservice.ac.uk/doc/6697/mrdoc/pdf/6697_user_guide.pdf>). [↑](#footnote-ref-183)
183. Similar to the employment and turnover variables, the age variable was coded into bands for the Propensity Score Matching. The bands were less than 2 years old, 3-5 years old, 6-10 years old, 11-15 years old, 16-20 years old, 21-40 years old, and more than 40 years old. [↑](#footnote-ref-184)
184. For example, if the last period that was entirely before the pandemic (and for which data was available) was the calendar year 2019 (for example in the case of turnover based on VAT returns provided by September 2020), then growth rates were calculated for both turnover and employment for the periods 2017-2018 and 2018-2019. Similar to the age, employment, and turnover variables, these growth rates were then coded into bands for the Propensity Score Matching. For turnover growth rates in both periods, the bands were a decrease of more than 50%, a decrease of between 25% and 50%, a decrease of between 10% and 25%, a decrease of less than 10%, no growth or an increase of less than 5%, an increase of between 5% and 25%, an increase of between 25% and 50%, and an increase of more than 50%. For employment growth rates in both periods, the bands were a decrease of more than 50%, a decrease of less than 50%, no change, an increase of less than 50%, and an increase of more than 50%. [↑](#footnote-ref-185)
185. Other support could have included business grants funded by the UK or any devolved government; business rates holidays, or HMRC Time to Pay (among others). [↑](#footnote-ref-186)
186. The September 2020 extract was used for pre-pandemic turnover data. The September 2019 extract was used for pre-pandemic employment data. The September 2021 extract was used for post-pandemic turnover and employment data. [↑](#footnote-ref-187)
187. It should be noted that the data available within the financial year 2020-2021 was limited to the period from December 2020 to March 2021 and therefore does not capture all businesses that received support through the CJRS scheme in that financial year. [↑](#footnote-ref-188)
188. Data from the Business Insights and Conditions Survey were accessed through the Secure Research Service, part of the Office for National Statistics. The use of ONS statistical data in this analysis does not imply the endorsement of the ONS in relation to the interpretation or analysis of the statistical data. This work uses research datasets which may not exactly reproduce National Statistics aggregates. [↑](#footnote-ref-189)
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192. The analysis of the Business Structure Database, which is published by the ONS, was carried out through the Secure Research Service. The Secure Research Service is part of the Office for National Statistics. Statistical data from the ONS is Crown Copyright and the use of ONS statistical data in this analysis does not imply the endorsement of the ONS in relation to the interpretation or analysis of the statistical data. This analysis uses research datasets which may not exactly reproduce National Statistics aggregates. [↑](#footnote-ref-193)
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194. Information on the data sources and reference periods of turnover data in the IDBR was gathered from internal BEIS documentation, discussions with BEIS and the ONS, as well as documentation available online (see, for instance, ONS (2006) Business Structure Database User Guide, available at http://doc.ukdataservice.ac.uk/doc/6697/mrdoc/pdf/6697\_user\_guide.pdf). [↑](#footnote-ref-195)
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